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

FORM 10-Q

☒ **QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2020

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____.

Commission file number: 001-36284

Biocept, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**80-0943522**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

5810 Nancy Ridge Drive, San Diego, California
(Address of principal executive offices)

92121
(Zip Code)

(858) 320-8200
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $.0001 per share	BIOC	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

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 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of August 7, 2020, there were 133,934,314 shares of the Registrant’s common stock outstanding.

BIOCEPT, INC.
FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED
JUNE 30, 2020

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IMPORTANT NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q, or Quarterly Report, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements included or incorporated by reference in this Quarterly Report other than statements of historical fact, are forward-looking statements. You can identify these and other forward-looking statements by the use of words such as "may," "will," "could," "anticipate," "expect," "intend," "believe," "continue" or the negative of such terms, or other comparable terminology. Forward-looking statements also include the assumptions underlying or relating to such statements.

Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth in our other filings with the Securities and Exchange Commission, or the SEC. Moreover, we operate in an evolving environment. New risk factors and uncertainties emerge from time to time and it is not possible for us to predict all risk factors and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Readers are cautioned not to place undue reliance on forward-looking statements. The forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they are made except as required by law. Readers should, however, review the factors and risks we describe in the reports we file from time to time with the SEC. In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date the statement is made, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely upon these statements.

Item 1. Financial Statements

Biocept, Inc.

Condensed Balance Sheets

	December 31, 2019	June 30, 2020 (unaudited)
Current assets:		
Cash	$ 9,301,406	$ 24,053,269
Accounts receivable, net	3,527,078	3,179,217
Inventories, net	767,986	973,684
Prepaid expenses and other current assets	296,127	852,067
Total current assets	13,892,597	29,058,237
Fixed assets, net	1,504,330	1,336,726
Lease right-of-use assets - operating	729,330	587,839
Lease right-of-use assets - finance	1,606,387	2,035,610
Total assets	$ 17,732,644	$ 33,018,412
Current liabilities:		
Accounts payable	$ 2,011,827	$ 1,933,025
Accrued liabilities	1,980,204	1,871,798
Current portion of lease liabilities - operating	842,452	603,999
Current portion of lease liabilities - finance	724,329	787,361
Supplier financings	—	435,376
Total current liabilities	5,558,812	5,631,559
Non-current portion of lease liabilities - finance	973,189	1,301,910
Total liabilities	6,532,001	6,933,469
Commitments and contingencies (see Note 10)		
Shareholders' equity:		
Preferred stock, $0.0001 par value, 5,000,000 authorized; 2,133 shares issued and outstanding at December 31, 2019 and June 30, 2020.	—	—
Common stock, $0.0001 par value, 150,000,000 authorized; 54,738,485 issued and outstanding at December 31, 2019; 131,213,237 issued and outstanding at June 30, 2020.	5,474	13,121
Additional paid-in capital	256,912,358	286,622,426
Accumulated deficit	(245,717,189)	(260,550,604)
Total shareholders' equity	11,200,643	26,084,943
Total liabilities and shareholders' equity	$ 17,732,644	$ 33,018,412

The accompanying notes are an integral part of these unaudited condensed financial statements.

Biocept, Inc.

Condensed Statements of Operations and Comprehensive Loss

(Unaudited)

	For the three months ended June 30,		For the six months ended June 30,	
	2019	2020	2019	2020
Net revenues	$ 1,191,323	$ 917,471	$ 2,215,562	$ 2,364,020
Costs and expenses:				
Cost of revenues	2,673,323	2,517,902	5,272,687	5,464,760
Research and development expenses	1,148,280	1,588,716	2,371,571	2,901,392
General and administrative expenses	1,676,310	1,911,239	3,358,147	3,815,672
Sales and marketing expenses	1,614,732	1,333,271	2,989,292	2,798,386
Total costs and expenses	7,112,645	7,351,128	13,991,697	14,980,210
Loss from operations	(5,921,322)	(6,433,657)	(11,776,135)	(12,616,190)
Other income/ (expense):				
Interest expense	(63,574)	(55,646)	(125,548)	(112,342)
Warrant inducement expense	(1,831,116)	—	(1,831,116)	(2,102,109)
Total other income/ (expense):	(1,894,690)	(55,646)	(1,956,664)	(2,214,451)
Loss before income taxes	(7,816,012)	(6,489,303)	(13,732,799)	(14,830,641)
Income tax expense	—	—	—	—
Net loss and comprehensive loss	$ (7,816,012)	$ (6,489,303)	$ (13,732,799)	$ (14,830,641)
Deemed dividend related to warrants down round provision	—	—	(99,743)	(2,774)
Net loss attributable to common shareholders	$ (7,816,012)	$ (6,489,303)	$ (13,832,542)	$ (14,833,415)
Weighted-average shares outstanding used in computing net loss per share attributable to common shareholders:				
Basic	20,466,224	127,173,744	16,670,184	103,086,834
Diluted	20,466,224	127,173,744	16,670,184	103,086,834
Net loss per common share:				
Basic	$ (0.38)	$ (0.05)	$ (0.83)	$ (0.14)
Diluted	$ (0.38)	$ (0.05)	$ (0.83)	$ (0.14)

The accompanying notes are an integral part of these unaudited condensed financial statements.

Biocept, Inc.

Condensed Statements of Shareholders' Equity
(Unaudited)

	Common Stock		Series A Convertible Preferred Stock		Additional	Accumulated	
	Shares	Amount	Shares	Amount	Paid-in Capital	Deficit	Total
Balance at December 31, 2018	4,629,174	$ 463	4,417	$ —	$ 223,499,634	$ (220,457,578)	$ 3,042,519
Stock-based compensation expense	—	—	—	—	102,459	—	102,459
Shares issued upon exercise of common stock warrants	5,985	1	—	—	4,747	—	4,748
Deemed dividends related to warrants downround provision	—	—	—	—	99,743	(99,743)	—
Shares issued for January 2019 financing transaction, net of issuance costs	990,000	99	—	—	2,032,212	—	2,032,311
Shares and warrants issued for February 2019 financing transaction, net of issuance costs	6,250,000	625	—	—	6,602,110	—	6,602,735
Shares issued for January 2019 financing transaction overallotment, net of issuance costs	538,867	54	—	—	592,252	—	592,306
Shares and warrants issued for March 2019 financing transaction, net of issuance costs	5,950,000	595	—	—	7,553,198	—	7,553,793
Shares issued upon conversion of preferred stock	503,438	50	(2,278)	—	(50)	—	—
Net loss	—	—	—	—	—	(5,916,787)	(5,916,787)
Balance at March 31, 2019	18,867,464	$ 1,887	2,139	$ —	$ 240,486,305	$ (226,474,108)	$ 14,014,084
Stock-based compensation expense	—	—	—	—	224,641	—	224,641
Shares issued upon exercise of common stock warrants	4,149,445	415	—	—	4,845,307	—	4,845,722
Shares issued upon conversion of preferred stock	1,326	—	(6)	—	—	—	—
Warrant inducement expense	—	—	—	—	1,831,116	—	1,831,116
Net loss	—	—	—	—	—	(7,816,012)	(7,816,012)
Balance at June 30, 2019	23,018,235	$ 2,302	2,133	$ —	$ 247,387,369	$ (234,290,120)	$ 13,099,551

The accompanying notes are an integral part of these unaudited condensed financial statements.

Biocept, Inc.

Condensed Statements of Shareholders' Equity
(Unaudited)
(Continued)

	Common Stock		Series A Convertible Preferred Stock		Additional	Accumulated	
	Shares	Amount	Shares	Amount	Paid-in Capital	Deficit	Total
Balance at December 31, 2019	54,738,485	$ 5,474	2,133	$ —	$ 256,912,358	$ (245,717,189)	$ 11,200,643
Stock-based compensation expense	—	—	—	—	142,964	—	142,964
Shares issued upon exercise of common stock warrants	6,961,407	696	—	—	2,306,012	—	2,306,708
Shares issued upon cashless exercise of common stock warrants	6,080,000	608	—	—	(608)	—	—
Deemed dividends related to warrants downround provision	—	—	—	—	2,774	(2,774)	—
Shares issued for March 2, 2020 financing transaction, net of issuance costs	23,000,000	2,300	—	—	8,563,200	—	8,565,500
Shares issued for March 4, 2020 financing transaction, net of issuance costs	16,000,000	1,600	—	—	6,091,961	—	6,093,561
Shares issued for exercise of December 2019 overallotment warrants, net of issuance costs	1,927,500	193	—	—	659,765	—	659,958
Warrant inducement expense	—	—	—	—	2,102,109	—	2,102,109
Net loss	—	—	—	—	—	(8,341,338)	(8,341,338)
Balance at March 31, 2020	108,707,392	$ 10,871	2,133	$ —	$ 276,780,535	$ (254,061,301)	$ 22,730,105
Stock-based compensation expense	—	—	—	—	194,236	—	194,236
Shares issued upon exercise of common stock warrants	205,845	20	—	—	72,588	—	72,608
Shares issued for April 2020 financing transaction, net of issuance costs	22,300,000	2,230	—	—	9,575,067	—	9,577,297
Net loss	—	—	—	—	—	(6,489,303)	(6,489,303)
Balance at June 30, 2020	131,213,237	$ 13,121	2,133	$ —	$ 286,622,426	$ (260,550,604)	$ 26,084,943

The accompanying notes are an integral part of these unaudited condensed financial statements.

Biocept, Inc.

Condensed Statements of Cash Flows

(Unaudited)

	For the six months ended June 30,	
	2019	**2020**
Cash Flows from Operating Activities		
Net loss	$ (13,732,799)	$ (14,830,641)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	450,984	477,396
Amortization of right-of-use assets	(75,613)	(96,962)
Inventory reserve	8,872	54,202
Stock-based compensation	327,100	337,200
Warrant inducement expense	1,831,116	2,102,109
Loss on disposal of fixed assets	—	459
Increase/(decrease) in cash resulting from changes in:		
Accounts receivable, net	(634,630)	347,861
Inventory	(27,122)	(259,900)
Prepaid expenses and other current assets	233,153	11,232
Accounts payable	(71,720)	(4,916)
Accrued liabilities	(279,244)	(108,406)
Net cash used in operating activities	(11,969,903)	(11,970,366)
Cash Flows from Investing Activities:		
Purchases of fixed assets	(86,476)	(35,457)
Net cash used in investing activities	(86,476)	(35,457)
Cash Flows from Financing Activities:		
Net proceeds from issuance of common stock and warrants	16,779,772	24,236,358
Proceeds from exercise of common stock warrants	2,513,172	2,379,316
Proceeds from warrant exercise inducement, net	2,337,298	—
Proceeds from exercise of overallotment warrants	—	659,958
Payments on finance leases	(277,250)	(311,576)
Payments on supplier and other third-party financings	(129,389)	(206,370)
Net cash provided by financing activities	21,223,603	26,757,686
Net increase in Cash	9,167,224	14,751,863
Cash at Beginning of Period	3,423,373	9,301,406
Cash at End of Period	$ 12,590,597	$ 24,053,269
Supplemental Disclosures of Cash Flow Information:		
Cash paid during the period for:		
Interest	$ 125,548	$ 112,342
Income taxes	$ —	$ —

Non-cash Investing and Financing Activities:

During the six months ended June 30, 2019 and 2020, Biocept, Inc., or the Company, financed insurance premiums of approximately $393,000 and $567,000, respectively, through third-party financings.

Fixed assets purchased totaling approximately $149,000 and $703,000 during the six months ended June 30, 2019 and 2020, respectively, were recorded as finance lease obligations and were excluded from cash purchases in the Company's statements of cash flows (see Note 6).

The amount of unpaid fixed assets excluded from cash purchases in the Company's statements of cash flows increased from approximately $25,000 at December 31, 2018 to approximately $53,000 at June 30, 2019 and increased from approximately $32,000 at December 31, 2019 to approximately $57,000 at June 30, 2020.

On January 1, 2019, the Company adopted the accounting rules in ASC Topic 842, Leases (ASC 842), and as a result, recorded net lease right-of-use assets of $1.9 million related to its operating lease, and recorded operating lease liabilities of $2.2 million. In addition, in accordance with the guidance, $1.4 million of assets under capital leases previously classified in the property, plant, and equipment section of the balance sheet were reclassified to lease right-of-use assets.

On January 18, 2019, the Company completed an offering of 990,000 shares of the Company's common stock. The shares were sold at a purchase price of $2.25 per share and the net proceeds to the Company from this offering were approximately $2.0 million, after deducting expenses related to the offering including dealer-manager fees and expenses.

On February 12, 2019, the Company received net cash proceeds of approximately $6.6 million as a result of the closing of a follow-on public offering of 6,250,000 shares of its common stock and warrants to purchase up to an aggregate of 6,250,000 shares of its common stock at a combined offering price of $1.20 per unit. All warrants sold in this offering have an exercise price of $1.20 per share, are exercisable immediately and expire five years from the date of issuance. In addition, the Company sold warrants to purchase up to an aggregate of 937,500 shares of the Company's common stock in connection with the partial exercise of the over-allotment option granted to the underwriters. Upon closing of the transaction, warrants to purchase 915,000 shares were issued pursuant to the placement agents' partial exercise of their overallotment. The estimated aggregate grant date fair value on a relative fair value basis of approximately $6.8 million associated with these warrants was recorded as an offset to additional paid-in capital (see Note 4).

Pursuant to the down round adjustment feature of the January 2018 warrants, the exercise price of these warrants was adjusted to the $1.20 offering price per share in the February 2019 financing transaction and it resulted in recording a deemed dividend of $99,000.

On March 19, 2019, the Company received net cash proceeds of approximately $7.5 million as a result of completing a registered direct offering of 5,950,000 shares at a negotiated purchase price of $1.37 per share. In addition, in a concurrent private placement, the Company issued to purchasers a warrant to purchase one share of the Company's common stock for each share purchased for cash in the offering. All warrants issued in this offering have an exercise price of $1.25 per share, are exercisable immediately upon issuance and expire 5.5 years following the date of issuance. The estimated aggregate grant date fair value on a relative fair value basis of approximately $6.0 million associated with these warrants was recorded as an offset to additional paid-in capital (see Note 4).

In January 2020, the Company issued an aggregate of 6,927,258 shares of its common stock pursuant to the exercise of certain warrants issued by the Company in February 2019 and March 2019, as part of a warrant repricing and exchange transaction. As part of the warrant repricing and exchange transaction, the Company issued an aggregate of 6,927,258 new warrants in exchange for the exercise of the February 2019 and March 2019 warrants and received net proceeds of approximately $2.3 million. As a result of the warrant repricing, the exercise price of warrants to purchase an aggregate of 896,578 shares of common stock issued by the Company in January 2018 was adjusted from $0.405 to $0.3495 per share.

In January 2020, the Company issued 1,927,500 shares of common stock pursuant to the partial exercise of the underwriters' overallotment option from the Company's December 2019 public offering. The net proceeds to the Company from the overallotment closing, was approximately $700,000.

In June 2020, the Company entered into an amendment of its facility lease relating to its current facility in San Diego, California to extend the term of the lease originally set to expire in July 2020 to November 2020. Pursuant to the extension of the lease term, the Company recorded an additional lease right-of-use asset and lease liability of $482,000 (see Note 6).

The accompanying notes are an integral part of these unaudited condensed financial statements.

1. The Company, Business Activities and Basis of Presentation

The Company and Business Activities

The Company was founded in California in May 1997 and is 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. The Company's 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. The Company's 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. Additionally, commencing in October 2017, the Company's pathology partnership program, branded as Empower TC™, 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 the Company's proprietary blood collection tubes commenced in June 2018, which allow for the intact transport of liquid biopsy samples for research use only, or RUO, from regions around the world.

The Company operates a clinical laboratory that is CLIA-certified (under the Clinical Laboratory Improvement Amendment of 1988) and CAP-accredited (by the College of American Pathologists), and manufactures cell enrichment and extraction microfluidic channels, related equipment and certain reagents to perform the Company's diagnostic assays in a facility located in San Diego, California. CLIA certification and accreditation are required before any clinical laboratory may perform testing on human specimens for the purpose of obtaining information for the diagnosis, prevention, treatment of disease, or assessment of health. The assays the Company offers are classified as laboratory developed tests under the CLIA regulations.

In July 2013, the Company effected a reincorporation to Delaware by merging itself with and into Biocept, Inc., a Delaware corporation, which had been formed to be and was a wholly-owned subsidiary of the Company since July 23, 2013.

Basis of Presentation

The accompanying unaudited condensed financial statements and notes are prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP, and on the basis that the Company will continue as a going concern (see Note 2). The accompanying unaudited condensed financial statements and notes do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the possible inability of the Company to continue as a going concern.

The unaudited condensed financial statements included in this Form 10-Q have been prepared in accordance with the U.S. Securities and Exchange Commission, or SEC, instructions for Quarterly Reports on Form 10-Q. Accordingly, the condensed financial statements are unaudited and do not contain all the information required by GAAP to be included in a full set of financial statements. The balance sheet at December 31, 2019 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by GAAP for a complete set of financial statements. The audited financial statements for the year ended December 31, 2019, filed with the U.S. Securities and Exchange Commission, or SEC, with our Annual Report on Form 10-K on March 27, 2020 include a summary of our significant accounting policies and should be read in conjunction with this Form 10-Q. In the opinion of management, all material adjustments necessary to present fairly the results of operations for such periods have been included in this Form 10-Q. All such adjustments are of a normal recurring nature. The results of operations for interim periods are not necessarily indicative of the results of operations for the entire year.

Significant Accounting Policies

During the three and six months ended June 30, 2020, there were no changes to our significant accounting policies as described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, except as described in Recent Accounting Pronouncements below.

Revenue Recognition and Accounts Receivable

The Company's commercial revenues are generated from diagnostic services provided to patient's physicians and billed to third-party insurance payers such as managed care organizations, Medicare and Medicaid and patients for any deductibles, coinsurance or copayments that may be due. Commencing on January 1, 2018, the Company recognizes revenue in accordance with ASC 606, Revenue from Contracts with Customers, or ASC 606, which requires that an entity recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services.

Contracts

For its commercial revenues, while the Company markets directly to physicians, its customer is the patient. Patients do not enter into direct agreements with the Company, however, a patient's insurance coverage requirements would dictate whether or not any portion of the cost of the tests would be patient responsibility. Accordingly, the Company establishes contracts with commercial insurers in accordance with customary business practices, as follows:

- Approval of a contract is established via the order and accession, which are submitted by the patient's physician.
- The Company is obligated to perform its diagnostic services upon receipt of a sample from a physician, and the patient and/or applicable payer are obligated to reimburse the Company for services rendered based on the patient's insurance benefits.
- Payment terms are a function of a patient's existing insurance benefits, including the impact of coverage decisions with CMS and applicable reimbursement contracts established between the Company and payers, unless the patient is a self-pay patient, whereby the Company bills the patient directly after the services are provided.
- Once the Company delivers a patient's assay result to the ordering physician, the contract with a patient has commercial substance, as the Company is legally able to collect payment and bill an insurer and/or patient, regardless of payer contract status or patient insurance benefit status.
- Consideration associated with commercial revenues is considered variable and constrained until fully adjudicated, with net revenues recorded to the extent that it is probable that a significant reversal will not occur.

The Company's development services revenues are supported by contractual agreements and generated from assay development services provided to entities, as well as certain other diagnostic services provided to physicians, and revenues are recognized upon delivery of the performance obligations in the contract.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service, or a bundle of goods or services, to the customer. For its commercial and development services revenues, the Company's contracts have a single performance obligation, which is satisfied upon rendering of services, which culminates in the delivery of a patient's assay result(s) to the ordering physician or entity. The duration of time between accession receipt and delivery of a valid assay result to the ordering physician or entity is typically less than two weeks. Accordingly, the Company elected the practical expedient and therefore, does not disclose the value of unsatisfied performance obligations.

Transaction Price

The transaction price is the amount of consideration that the Company expects to collect in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties, such as sales taxes. The consideration expected from a contract with a customer may include fixed amounts, variable amounts, or both. The Company's gross commercial revenues billed, and corresponding gross accounts receivable, are subject to estimated deductions for such allowances and reserves to arrive at reported net revenues, which relate to differences between amounts billed and corresponding amounts estimated to be subsequently collected, and is deemed to be variable although the variability is not explicitly stated in any contract. Rather, the implied variability is due to several factors, such as the payment history or lack thereof for third-party payers, reimbursement rate changes for contracted and non-contracted payers, any patient co-payments, deductibles or compliance incentives, the existence of secondary payers and claim denials. The Company estimates the amount of variable consideration using the most likely amount approach to estimating variable consideration for third-party payers, including direct patient bills, whereby the estimated reimbursement for services are established by payment histories on CPT codes for each payer, or similar payer types. When no payment history is available, the value of the account is estimated at Medicare rates, with additional other payer-specific reserves taken as appropriate. Collection periods for billings on commercial revenues range from less than 30 days to several months, depending on the contracted or non-contracted nature of the payer, among other variables. The estimates of amounts that will ultimately be realized from commercial diagnostic services for non-contracted payers require significant judgment by management.

The Company limits the amount of variable consideration included in the transaction price to the unconstrained portion of such consideration. Revenue is recognized up to the amount of variable consideration that is not subject to a significant reversal until

additional information is obtained or the uncertainty associated with the additional payments or refunds is subsequently resolved. Differences between original estimates and subsequent revisions, including final settlements, represent changes in the estimate of variable consideration and are included in the period in which such revisions are made. The Company monitors its estimates of transaction price to depict conditions that exist at each reporting date. If the Company subsequently determines that it will collect more consideration than it originally estimated for a contract with a customer, it will account for the change as an increase in the estimate of the transaction price in the period identified as an increase to revenue. Similarly, if the Company subsequently determines that the amount it expects to collect from a customer is less than it originally estimated, it will generally account for the change as a decrease in the estimate of the transaction price as a decrease to revenue, provided that such downward adjustment does not result in a significant reversal of cumulative revenue recognized. Revenue recognized from changes in transaction prices was not significant during the three and six months ended June 30, 2019 and 2020.

Allocate Transaction Price

For the Company's commercial revenues, the entire transaction price is allocated to the single performance obligation contained in a contract with a customer. For the Company's development services revenues, the contracted transaction price is allocated to each single performance obligation contained in a contract with a customer as performed.

Point-in-time Recognition

The Company's single performance obligation is satisfied at a point in time, and that point in time is defined as the date a patient's successful assay result is delivered to the patient's ordering physician or entity. The Company considers this date to be the time at which the patient obtains control of the promised diagnostic assay service.

Contract Balances

The timing of revenue recognition, billings and cash collections results in accounts receivable recorded in the Company's condensed balance sheets. Generally, billing occurs subsequent to delivery of a patient's test result to the ordering physician or entity, resulting in an account receivable.

Practical Expedients

The Company does not adjust the transaction price for the effects of a significant financing component, as at contract inception, the Company expects the collection cycle to be one year or less.

The Company expenses sales commissions when incurred because the amortization period is one year or less, which are recorded within sales and marketing expenses.

The Company incurs certain other costs that are incurred regardless of whether a contract is obtained. Such costs are primarily related to legal services and patient communications. These costs are expensed as incurred and recorded within general and administrative expenses.

Disaggregation of Revenue and Concentration of Risk

The composition of the Company's net revenues recognized during the three and six months ended June 30, 2019 and 2020, disaggregated by source and nature, are as follows:

	For the three months ended June 30,		For the six months ended June 30,	
	2019	2020	2019	2020
Net revenues from contracted payers*	$ 489,901	$ 261,620	$ 971,320	$ 761,808
Net revenues from non-contracted payers	628,477	579,398	1,125,847	1,396,811
Development services revenues	45,081	38,453	87,579	98,782
Kits and Blood Collection Tubes (BCT)	27,864	38,000	30,816	106,619
Total net revenues	$ 1,191,323	$ 917,471	$ 2,215,562	$ 2,364,020

*Includes Medicare and Medicare Advantage, as reimbursement amounts are fixed.

	For the three months ended June 30,		For the six months ended June 30,	
	2019	2020	2019	2020
Net commercial revenues recognized upon delivery	$ 1,118,378	$ 841,018	$ 2,009,364	$ 2,158,619
Development services revenues recognized upon delivery	45,081	38,453	87,579	98,782
Commercial revenues recognized upon cash collection	—	—	87,803	—
Kits and Blood Collection Tubes (BCT)	27,864	38,000	30,816	106,619
Total net revenues	$ 1,191,323	$ 917,471	$ 2,215,562	$ 2,364,020

Concentrations of credit risk with respect to revenues are primarily limited to geographies to which the Company provides a significant volume of its services, and to specific third-party payers of the Company's services such as Medicare, insurance companies, and other third-party payers. The Company's client base consists of many geographically dispersed clients diversified across various customer types.

The Company's third-party payers that represent more than 10% of total net revenues in any period presented, as well as their related net revenue amount as a percentage of total net revenues, during the three and six months ended June 30, 2019 and 2020 were as follows:

	For the three months ended June 30,		For the six months ended June 30,	
	2019	2020	2019	2020
Medicare and Medicare Advantage	43%	30%	45%	34%
Blue Cross Blue Shield	20%	29%	17%	29%
United Healthcare	8%	8%	10%	6%

The Company's third-party payers that represent more than 10% of total net accounts receivable, and their related net accounts receivable balance as a percentage of total net accounts receivable, at December 31, 2019 and June 30, 2020 were as follows:

	December 31, 2019	June 30, 2020
Blue Cross Blue Shield	26%	30%
Medicare and Medicare Advantage	17%	13%
United Healthcare	12%	11%
Aetna	7%	11%

Recent Accounting Pronouncements

In November 2018, the FASB issued authoritative guidance clarifying the interaction between Collaborative Arrangements (Topic 808) and Revenue from Contracts with Customers (Topic 606) to address diversity in practice related to how companies account for collaborative arrangements. For public companies, this guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within that fiscal year. Early adoption is permitted, but no earlier than an entity's adoption date of Revenue from Contracts with Customers (Topic 606). The Company adopted this guidance for the fiscal year beginning on January 1, 2020, and determined that the adoption of this guidance does not have a material impact on its financial statements or disclosures.

2. Liquidity and Going Concern Uncertainty

As of June 30, 2020, the Company had $24.1 million of cash and an accumulated deficit of $260.6 million. For the year ended December 31, 2019 and the six months ended June 30, 2020, the Company incurred net losses of $25.1 million and $14.8 million, respectively. At June 30, 2020, the Company had aggregate net interest-bearing indebtedness of $2.1 million, of which $787,000 was due within one year, in addition to $2.4 million of other non-interest-bearing current liabilities. While Management believes that, absent the COVID-19 pandemic, based on historical and planned cash usage, the Company's current cash would have supported its operations through most of 2021, due to the uncertainty introduced by the impact of COVID-19 on revenues and cash usage, there is uncertainty as to the period of time for which existing cash can support the Company's ongoing operations. These factors raise substantial doubt about the Company's ability to continue as a going concern for the one-year period following the date that these financial statements were issued. The accompanying condensed financial statements and notes have been prepared assuming that the Company will continue as a going concern. The accompanying condensed financial statements and notes do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the possible inability of the Company to continue as a going concern.

While the Company is currently in the commercialization stage of operations, the Company has not yet achieved profitability and anticipates that it will continue to incur net losses and negative cash flows from operations for the foreseeable future. Historically, the Company's principal sources of cash have included proceeds from the issuance of common and preferred stock, proceeds from the

exercise of warrants to purchase common stock, proceeds from the issuance of debt, and revenues from laboratory services. The Company's principal uses of cash have included cash used in operations, payments relating to purchases of property and equipment and repayments of borrowings. The Company expects that the principal uses of cash in the future will be for continuing operations, hiring of sales and marketing personnel and increased sales and marketing activities, funding of research and development, capital expenditures, and general working capital requirements. The Company expects that, as revenues grow, sales and marketing and research and development expenses will continue to grow, albeit at a slower rate and, as a result, the Company will need to generate significant growth in net revenues to achieve and sustain income from operations. These factors raise substantial doubt about the Company's ability to continue as a going concern for the one-year period following the date that these financial statements were issued. The accompanying financial statements and notes have been prepared assuming that the Company will continue as a going concern. The accompanying financial statements and notes do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the possible inability of the Company to continue as a going concern.

On March 11, 2020 the World Health Organization declared COVID-19 a global pandemic and recommended containment and mitigation measures worldwide. In addition, as we are located in California, we are currently under a shelter in place mandate and many of our clients worldwide are similarly impacted. As a healthcare provider, we are allowed to remain open in compliance with the shelter in place mandate and continue to provide critical information for patients diagnosed with cancer. However, the COVID-19 pandemic continues to evolve, and the extent to which COVID-19 may impact our business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease. We estimate that the COVID-19 pandemic led to an approximate 15 to 25% decline in commercial volume from current customers, and also impacted opportunities for us to gain new customers with the closing of many physician offices and labs. We are continuing to vigilantly monitor the situation with our primary focus on the health and safety of our employees and clients.

In January 2020, the Company issued an aggregate of 6,927,258 shares of its common stock pursuant to the exercise of certain warrants issued by the Company in February 2019 and March 2019, as part of a warrant repricing and exchange transaction. As part of the warrant repricing and exchange transaction, the Company issued an aggregate of 6,927,258 new warrants in exchange for the exercise of the February 2019 and March 2019 warrants and received net proceeds of approximately $2.3 million. As a result of the warrant repricing, the exercise price of warrants to purchase an aggregate of 896,578 shares of common stock issued by the Company in January 2018 was adjusted from $0.405 to $0.3495 per share.

In January 2020, the Company issued 1,927,500 shares of common stock pursuant to the partial exercise of the underwriters' overallotment option from the Company's December 2019 public offering. The net proceeds to the Company from the overallotment closing, was approximately $700,000.

On March 2, 2020, the Company received net cash proceeds of approximately $8.6 million from a registered direct offering to certain institutional investors of 23,000,000 shares of common stock at a negotiated purchase price of $0.40 per share.

On March 4, 2020, the Company received net cash proceeds of approximately $6.1 million from a registered direct offering to certain institutional investors of 16,000,000 shares of common stock at a negotiated purchase price of $0.41 per share.

On April 16, 2020, the Company received net cash proceeds of approximately $9.6 million from a registered direct offering to certain institutional investors of 22,300,000 shares of common stock at a negotiated purchase price of $0.46 per share.

Management's Plan to Continue as a Going Concern

In order to continue as a going concern, the Company will need, among other things, additional capital resources. Until the Company can generate significant cash from operations, including assay revenues, management's plans to obtain such resources for the Company include proceeds from offerings of the Company's equity securities or debt, cash received from the exercise of outstanding common stock warrants, or transactions involving product development, technology licensing or collaboration. Management can provide no assurances that any sources of a sufficient amount of financing will be available to the Company on favorable terms, if at all. Based on the above, the Company's management concluded that the going concern uncertainty has not been alleviated and as such, there is substantial doubt about the Company's ability to continue as a going concern as of June 30, 2020.

3. Sales of Equity Securities

On January 18, 2019, the Company completed an offering of 990,000 shares of its common stock. The shares were sold at a purchase price of $2.25 per share and the net proceeds to the Company from this offering were approximately $2.0 million, after deducting expenses related to the offering including dealer-manager fees and expenses.

On February 12, 2019, the Company received net cash proceeds of approximately $6.6 million as a result of the closing of a follow-on public offering of 6,250,000 shares of its common stock and warrants to purchase up to an aggregate of 6,250,000 shares of its

common stock at a combined offering price of $1.20 per unit. All warrants sold in this offering have an exercise price of $1.20 per share, are exercisable immediately and expire five years from the date of issuance. In addition, the Company sold warrants to purchase up to an aggregate of 937,500 shares of the Company's common stock in connection with the partial exercise of the over-allotment option granted to the underwriters. Upon closing of the transaction, warrants to purchase 915,000 shares were issued pursuant to the placement agents' partial exercise of their overallotment. Subsequent to the closing of this offering, no additional cash proceeds have been received from the exercise of warrants sold in this offering. On March 11, 2019, the underwriters exercised their overallotment option for 538,867 shares of the Company's common stock related to the February 12, 2019 follow-on offering, purchasing shares at $1.20 per share for net cash proceeds of approximately $592,000.

Pursuant to the down round adjustment feature of the January 2018 warrants, the exercise price of these warrants was adjusted to the $1.20 price per share offering price in the February 2019 financing transaction.

On March 19, 2019, the Company received net cash proceeds of approximately $7.5 million as a result of completing a registered direct offering of 5,950,000 shares at a negotiated purchase price of $1.37 per share. In addition, in a concurrent private placement, the Company issued to purchasers a warrant to purchase one share of the Company's common stock for each share purchased for cash in the offering. All warrants issued in this offering have an exercise price of $1.25 per share, are exercisable immediately upon issuance and expire 5.5 years following the date of issuance.

In May 2019, the Company received cash proceeds of approximately $2.5 million from the exercise of 2,086,479 February 2019 warrants at $1.20 per share.

On May 28, 2019, the Company entered into Warrant Exercise Agreements, or the Exercise Agreements, with certain of the holders of its existing warrants, or the Exercising Holders. Pursuant to the Exercise Agreements, the Exercising Holders and the Company agreed that, subject to any applicable beneficial ownership limitations, the Exercising Holders would cash exercise up to 20% of their Existing Warrants, or the Investor Warrants, into shares of common stock underlying such Existing Warrants, or the Exercised Shares. In order to induce the Exercising Holders to cash exercise the Investor Warrants, the Exercise Agreements provided for the issuance of new warrants, or Inducement Warrants, with such Inducement Warrants to be issued in an amount equal to 75% of the number of Exercised Shares underlying any Investor Warrants that was cash exercised by July 15, 2019. The Inducement Warrants were exercisable upon issuance and terminate on the date that is five-years and six-months following the initial exercise date. The Inducement Warrants have an exercise price per share of $1.31. A total of 2,062,966 Investor Warrants were exercised contemporaneously with the execution of the Exercise Agreements resulting in total proceeds to the Company of $2.3 million, net of investment banking fees. The Inducement Warrants issued in connection with the Exercise Agreement were considered inducement warrants and are classified in equity. The fair value of the warrants issued was approximately $1.8 million (see valuation assumptions in Note 4). The fair value of the Inducement Warrants of $1.8 million was expensed as warrant inducement expense in the accompanying condensed statements of operations for the three and six months ended June 30, 2019.

In January 2020, the Company issued an aggregate of 6,927,258 shares of its common stock pursuant to the exercise of certain warrants issued by the Company in February 2019 and March 2019, as part of a warrant repricing and exchange transaction. As part of the warrant repricing and exchange transaction, the Company issued an aggregate of 6,927,258 new warrants in exchange for the exercise of the February 2019 and March 2019 warrants and received net proceeds of approximately $2.3 million. As a result of the warrant repricing, the exercise price of warrants to purchase an aggregate of 896,578 shares of common stock issued by the Company in January 2018 was adjusted from $0.405 to $0.3495 per share. In January 2020, the Company issued 1,927,500 shares of common stock pursuant to the partial exercise of the underwriters' overallotment option from the Company's December 2019 public offering. The net proceeds to the Company from the overallotment closing, was approximately $700,000. The warrants issued in connection with the warrant repricing and exchange transaction were considered inducement warrants and are classified in equity. In addition, the modification expense associated with the change in fair value due to the repricing of February and March 2019 warrants is recorded as inducement expense, which was approximately $191,000. The fair value of the warrants issued was approximately $1.9 million. The fair value of the inducement warrants and warrant modification of $2.1 million was expensed as warrant inducement expense in the accompanying condensed statements of operations for the six months ended June 30, 2020.

On March 2, 2020, the Company sold and issued 23,000,000 shares of its common stock at a negotiated purchase price of $0.40 per share in a registered direct offering and received net cash proceeds of approximately $8.6 million after deducting placement agent fees and other expenses.

On March 4, 2020, the Company sold and issued 16,000,000 shares of its common stock at a negotiated purchase price of $0.41 per share in a registered direct offering and received net cash proceeds of approximately $6.1 million after deducting placement agent fees and other expenses.

On April 16, 2020, the Company sold and issued 22,300,000 shares of its common stock at a negotiated purchase price of $0.46 per share in a registered direct offering and received net cash proceeds of approximately $9.6 million after deducting placement agent fees and other expenses.

4. Fair Value Measurement

The estimated nonrecurring fair value measurements associated with fixed asset purchases recorded as right-of-use asset finance lease obligations totaling approximately $703,000 during the six months ended June 30, 2020 were calculated as the present value of the lease payments based on contractual payment amounts and estimated market rates. Upon adoption of guidance in ASC Topic 842 Leases, the estimated fair value of the right-of-use operating lease asset was recorded based on present value of future lease payments based contractual payment amounts and estimated market rates in effect.

Other Fair Value Measurements

As of the closing of the Company's February 12, 2019 offering, the estimated grant date fair value of approximately $0.95 per share associated with the warrants to purchase up to 7,165,000 shares of common stock issued in this offering, or a total of approximately $6.8 million, was recorded as an offset to additional paid-in capital on a relative fair value basis. All warrants sold in this offering have an exercise price of $1.20 per share, are exercisable immediately and expire five years from the date of issuance. The fair value of the warrants was estimated using a Black-Scholes model with the following assumptions:

Beginning stock price	$	1.05
Exercise price	$	1.20
Expected dividend yield		0.00%
Discount rate-bond equivalent yield		2.49%
Expected life (in years)		5.00
Expected volatility		147.7%

As of the closing of the Company's March 19, 2019 offering, the estimated grant date fair value of approximately $1.01 per share associated with the warrants to purchase up to 5,950,000 shares of common stock issued in this offering, or a total of approximately $6.0 million, was recorded as an offset to additional paid-in capital on a relative fair value basis. All warrants sold in this offering have an exercise price of $1.25 per share, are exercisable immediately and expire 5.5 years from the date of issuance. The fair value of the warrants was estimated using a Black-Scholes model with the following assumptions:

Beginning stock price	$	1.12
Exercise price	$	1.25
Expected dividend yield		0.00%
Discount rate-bond equivalent yield		2.44%
Expected life (in years)		5.50
Expected volatility		140.0%

As of the closing of the Company's May 2019 warrant inducement transaction, the estimated grant date fair value of approximately $1.18 per share associated with the Inducement Warrants to purchase up to 1,547,226 shares of common stock issued in the transaction, or a total of approximately $1.8 million, was recorded as a warrant inducement expense with an offset to additional paid-in capital. The Inducement Warrants have an exercise price of $1.31 per share, are exercisable immediately and expire 5.5 years from the date of issuance. The fair value of the Inducement Warrants was estimated using a Black-Scholes model with the following assumptions:

Beginning stock price	$	1.29
Exercise price	$	1.31
Expected dividend yield		0.00%
Discount rate-bond equivalent yield		2.05%
Expected life (in years)		5.50
Expected volatility		145.9%

As of the closing of the Company's January 2020 warrant repricing and exchange transaction, the estimated grant date fair value of approximately $0.28 per share associated with the warrants to purchase up to 6,927,258 shares of common stock issued in the transaction, or a total of approximately $1.9 million, was recorded as a warrant inducement expense with an offset to additional paid-in capital. All warrants issued in this warrant inducement transaction have an exercise price of $0.3495 per share, became exercisable beginning 6 months from issuance and expire 5.5 years from the date of issuance. The fair value of the warrants was estimated using a Black-Scholes model with the following assumptions:

Beginning stock price	$	0.30
Exercise price	$	0.3495
Expected dividend yield		0.00%

Discount rate-bond equivalent yield	1.66%
Expected life (in years)	5.50
Expected volatility	150.33%

In addition to the inducement warrants issued in the Company's January 2020 warrant repricing and exchange transaction, the Company adjusted the exercise prices of the February 2019 and March 2019 warrants from $1.20 and $1.25, respectively, to $0.3495 to induce exercise of these warrants. This price modification triggered the requirement for modification accounting of these warrants. Based on the applicable guidance, the modification required the Company to value the modified February 2019 and March 2019 warrants immediately prior to the modification of the exercise price and immediately following the modification and record the difference between the resulting two values as warrant inducement expense.

The estimated fair value prior to modification of the February 2019 and March 2019 warrants was approximately $0.27 per share, whereas the estimated fair value of the February 2019 warrants increased to $0.29 due to the adjustment of the exercise price, and the estimated fair value of the March 2019 warrants increased to $0.30 per share. There were 2,167,258 February 2019 warrants and 4,760,000 March 2019 warrants eligible for this price modification and the resulting modification expense recorded as warrant inducement expenses were $60,000 and $130,000, respectively.

5. Balance Sheet Details

The following provides certain balance sheet details:

	December 31, 2019	June 30, 2020
Fixed Assets		
Machinery and equipment	$ 2,857,538	$ 2,925,530
Furniture and office equipment	156,987	156,987
Computer equipment and software	1,552,891	1,552,891
Leasehold improvements	570,173	570,173
Construction in process	625,038	570,208
Total fixed assets, gross	5,762,627	5,775,789
Less accumulated depreciation and amortization	(4,258,297)	(4,439,063)
Total fixed assets, net	$ 1,504,330	$ 1,336,726
Accrued Liabilities		
Accrued payroll	$ 298,855	$ 312,306
Accrued vacation	622,792	799,203
Accrued bonuses	748,742	525,034
Accrued sales commissions	89,562	88,546
Accrued other	220,253	146,709
Total accrued liabilities	$ 1,980,204	$ 1,871,798

6. Leases

Effective January 1, 2019, the Company adopted US GAAP accounting rules in ASC Topic 842, Leases (ASC 842), using the modified retrospective method. The Company elected to follow the package of practical expedients provided under the transition guidance within ASC 842, and accordingly, did not reassess whether any expired or existing contracts are or contain leases, did not reassess expired or existing leases, and did not reassess initial direct costs for any existing leases. Upon adoption, the Company recorded an operating lease right-of-use asset and an operating lease liability on the balance sheet. In addition, assets under equipment leases previously classified as capital leases within Property, Plant and Equipment on the Company's balance sheet were reclassified to finance lease right-of-use assets upon adoption of the guidance. Right-of-use assets and obligations were recognized based on the present value of remaining lease payments over the lease term. As the Company's operating lease does not provide an implicit rate, an estimated incremental borrowing rate was used based on the information available at the adoption date in determining the present value of lease payments. Operating lease expense is recognized on a straight-line basis over the lease term. Variable lease costs such as common area costs and other operating costs are expensed as incurred. Leases with an initial term of 12 months or less are not recorded on the balance sheet.

Finance Leases

The Company leases certain laboratory equipment under arrangements previously accounted for as capital leases, classified on the Company's balance sheet as fixed assets and related lease liabilities and depreciated on a straight-line basis over the lease term. Upon adoption of ASC 842, leased equipment previously classified as fixed assets totaling $1.4 million in net book value were reclassified to lease right-of-use assets in accordance with the guidance. The equipment under finance leases is depreciated on a straight-line basis over periods ranging from approximately 3 to 7 years. The total gross value of equipment capitalized under such lease arrangements was approximately $3,125,000 and $3,917,000 at December 31, 2019 and June 30, 2020, respectively. Total accumulated depreciation related to equipment under finance leases was approximately $1,606,000 and $1,885,000 at December 31, 2019 and June 30, 2020, respectively. Total depreciation expense related to equipment under finance leases during the three months ended June 30, 2019 and 2020 was approximately $89,000 and $130,000, and was approximately $231,000 and $274,000 during the six months ended June 30, 2019 and 2020, respectively.

On January 31, 2019, the Company executed an equipment financing commitment with a third-party lender for total proceeds of approximately $149,000, which was funded by the lender on February 1, 2019. Under the terms of the equipment financing agreement, which was accounted for as a finance lease transaction, the principal balance plus interest for the equipment are to be repaid in full after 36 monthly installments of $5,013 totaling approximately $180,000 through February 2022.

In February 2020, the Company entered into finance leases for a total capitalized amount of $197,000 for three pieces of equipment. Under the terms of the equipment financing agreement, which was accounted for as a finance lease transaction, the principal balance plus interest for the equipment are to be repaid in full in installments ranging from 48 to 60 monthly installments of $4,532 totaling approximately $265,000 through January 2025. In addition, in March 2020, the Company entered into a finance lease for a capitalized amount of $11,000 for an additional piece of equipment. Under the term of the equipment financing agreement, the principal amount plus interest are to be repaid in 48 monthly installments of $288 totaling approximately $14,000 through February 2024.

In April 2020, the Company entered into finance leases for a capitalized amount of $161,000 for laboratory testing equipment and manufacturing tooling. Under the terms of the equipment financing agreement, which was accounted for as a finance lease transaction, the principal balance plus interest for the equipment are to be repaid in full in 60 monthly installments of $3,337 totaling approximately $185,000 through March 2025.

In June 2020 the Company entered into finance leases for a capitalized amount of $334,000 for equipment and laboratory management software. Under the terms of the equipment financing agreement, which was accounted for as a finance lease transaction, the principal balance plus interest for the equipment are to be repaid in full in installments ranging from 36 to 60 monthly installments of $8,966 totaling approximately $469,000 through June 2025.

Operating Lease

The Company leases its primary laboratory and office facilities in San Diego, California. This lease is classified as an operating lease in accordance with the ASC 842 guidance. The average monthly cash payment for the operating lease is approximately $120,000 per month, with the original lease term initially scheduled to end on July 31, 2020. The Company recorded a lease right-of-use asset and lease liability of $1,930,000 and $2,201,000, respectively, as of January 1, 2019, based on present value of payments and an incremental borrowing rate of 4.5%.

On June 5, 2020, the Company entered into a fifth amendment (the "Amendment") to its lease agreement with ARE-SC Region No. 18, LLC, dated March 31, 2004, relating to its current facility in San Diego, California. Pursuant to the Amendment, the expiration date of the Lease was extended from July 31, 2020 to November 30, 2020. The monthly base rent during the extended term will be the current monthly rate paid by the Company. The Company will also pay additional rent and all other charges as set forth in the Lease through the expiration date. During the six months ended June 30, 2020, pursuant to the extension of the expiration date of the lease, the Company recorded an additional lease right-of-use asset and lease liability of $482,000.

On June 1, 2020, the Company entered into a lease for a 39,000 square foot headquarters, manufacturing and laboratory facility in San Diego, California. The lease is anticipated to commence on December 1, 2020 and is for a term of 127 months from the commencement date. The average monthly cash payment for the lease is approximately $128,000 per month with initial monthly lease payments at $111,000 per month.

In addition, the Company reviews agreements at inception to determine if they include a lease, and when they do, uses its incremental borrowing rate or implicit interest rate to determine the present value of the future lease payments.

The following schedule sets forth the components of right-of-use lease assets as of December 31, 2019 and June 30, 2020 as follows:

	December 31, 2019	June 30, 2020
Lease right-of-use assets:		
Operating	729,330	$ 587,839
Finance	1,606,387	2,035,610
Total	$ 2,335,717	$ 2,623,449

The following schedule sets forth the current portion of operating and finance lease liabilities as of December 31, 2019 and June 30, 2020:

	December 31, 2019	June 30, 2020
Current portion of lease liability:		
Operating	842,452	$ 603,999
Finance	724,329	787,361
Total	$ 1,566,781	$ 1,391,360

The following schedule sets forth the long-term portion of operating and finance lease liabilities as of December 31, 2019 and June 30, 2020:

	December 31, 2019	June 30, 2020
Long-term portion of lease liability:		
Operating	$ —	$ —
Finance	973,189	1,301,910
Total	$ 973,189	$ 1,301,910

The following schedule represents the components of lease expense for the three and six months ended June 30, 2019 and 2020:

	For the three months ended June 30,		For the six months ended June 30,	
	2019	2020	2019	2020
Lease cost				
Finance lease cost				
Amortization of right-of-use assets	$ 119,599	$ 129,576	$ 229,929	$ 274,106
Interest on lease liabilities	63,574	50,975	125,548	107,672
Operating lease cost	318,005	318,005	636,010	636,010
Total	$ 501,178	$ 498,556	$ 991,487	$ 1,017,788

The following schedule sets forth the remaining future minimum lease payments outstanding under finance and operating leases, as well as corresponding remaining sales tax and maintenance obligation payments that are expensed as incurred and due within each respective year ending December 31, as well as the present value of the total amount of the remaining minimum lease payments as of June 30, 2020:

	Finance		Operating
	Minimum Lease Payments	Maintenance and Sales Tax Obligation Payments	Minimum Lease Payments
2020	$ 471,266	$ 49,161	$ 610,810
2021	730,247	81,035	—
2022	606,797	69,481	—
2023	466,170	70,231	—
Thereafter	255,733	23,163	—
Total payments	2,530,213	293,071	610,810
Less amount representing interest	(440,942)	—	(6,811)
Present value of payments	$ 2,089,271	$ 293,071	$ 603,999

The following schedule sets forth supplemental cash flow information related to operating and finance leases as of June 30, 2020:

	For the six months ended June 30,	
	2019	2020
Other information		
Operating cash flows from finance leases	$ 125,548	$ 107,672
Operating cash flows from operating leases	$ 711,624	$ 732,973
Financing cash flows from finance leases	$ 277,250	$ 311,576

The aggregate weighted average remaining lease term was 3.41 years on finance leases and 0.09 years on operating leases as of June 30, 2020. The aggregate weighted average discount rate was 19.69% on finance leases and 4.5% on operating leases as of June 30, 2020. During the six months ended June 30, 2020, the Company added $703,000 of right of use assets in exchange for finance lease liabilities. In addition, upon adoption of the accounting guidance in ASC 842, $1.4 million of net machinery and equipment was reclassified to lease right-of-use assets related to assets under finance leases and $1.9 million of right-of-use facility lease was recorded under operating lease.

7. Stock-Based Compensation

Equity Incentive Plans

The Company maintains two equity incentive plans: The Amended and Restated 2013 Equity Incentive Plan, or the 2013 Plan, and the 2007 Equity Incentive Plan, or the 2007 Plan. The 2013 Plan includes a provision that shares available for grant under the Company's 2007 Plan become available for issuance under the 2013 Plan and are no longer available for issuance under the 2007 Plan.

At the Company's annual meeting of stockholders held on June 5, 2020, the Company's stockholders approved amendments to the 2013 Plan, which included an increase in the number of non-inducement shares of common stock authorized for issuance under the 2013 Plan by 7,300,000 shares. As of June 30, 2020, 124,211 shares of the Company's common stock were authorized exclusively for the issuance of stock awards to employees who have not previously been an employee or director of the Company, except following a bona fide period of non-employment, as an inducement material to the individual's entering into employment with the Company, as defined under applicable Nasdaq Listing Rules.

As of June 30, 2020, under all plans, a total of 10,364,098 non-inducement shares were authorized for issuance, 2,571,712 shares had been issued with 2,453,885 non-inducement stock options and restricted stock units, or RSUs, underlying outstanding awards, and 7,919,339 non-inducement shares were available for grant. As of June 30, 2020, 118,368 inducement shares were authorized for issuance, 118,368 inducement shares had been issued under the 2013 Plan, with 117,534 inducement stock options and RSUs underlying outstanding awards and no inducement shares available for grant.

Stock Options

A summary of stock option activity for the six months ended June 30, 2020 is as follows:

	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term in Years
Outstanding at December 31, 2019	2,732,023	$ 3.66	9.25
Granted	86,739	$ 0.43	
Exercised	—	—	
Cancelled/forfeited/expired	(247,050)	$ 1.78	
Outstanding at June 30, 2020	2,571,712	$ 3.73	8.80
Vested and unvested expected to vest at June 30, 2020	2,514,856	$ 3.80	8.62

The intrinsic values of options outstanding, options exercisable, and options vested and unvested expected to vest at December 31, 2019 and June 30, 2020 were each approximately zero.

The assumptions used in the Black-Scholes pricing model for stock options granted during the six months ended June 30, 2020 were as follows:

Stock and exercise prices	$0.27 - $0.71
Expected dividend yield	0.00%
Discount rate-bond equivalent yield	0.38% – 1.37%
Expected life (in years)	5.0 – 5.96
Expected volatility	146.1% - 171.1%

Restricted Stock

A summary of RSU activity for the six months ended June 30, 2020 is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2019	360	$ 415.80
Granted	—	—
Vested and issued	—	—
Forfeited	—	—
Outstanding at June 30, 2020	360	$ 415.80
Vested and unvested expected to vest at June 30, 2020	360	$ 415.80

At June 30, 2020, the intrinsic values of RSUs outstanding and RSUs unvested and expected to vest were each approximately $100. Of the 360 RSUs outstanding at June 30, 2020, all were fully vested.

Stock-based Compensation Expense

The following table presents the effects of stock-based compensation related to equity awards to employees and nonemployees on the unaudited condensed statements of operations and comprehensive loss during the periods presented:

	For the three months ended June 30,		For the six months ended June 30,	
	2019	2020	2019	2020
Stock Options				
Cost of revenues	$ 17,073	$ 30,752	$ 25,220	$ 53,565
Research and development expenses	36,922	29,082	65,116	53,517
General and administrative expenses	145,037	103,345	192,618	197,759
Sales and marketing expenses	25,609	31,057	44,146	32,359
Total expenses related to stock options	$ 224,641	$ 194,236	$ 327,100	$ 337,200

Stock-based compensation expense was recorded net of estimated forfeitures of 0% - 8% per annum during each of the three and six months ended June 30, 2019 and 2020. As of June 30, 2020, total unrecognized share-based compensation expense related to unvested stock options and RSUs, adjusted for estimated forfeitures, was $1,547,918 and is expected to be recognized over a weighted-average period of approximately 2.8 years.

8. Common Stock Warrants Outstanding

A summary of equity-classified common stock warrant activity for the six months ended June 30, 2020 is as follows:

	Number of Shares	Weighted Average Exercise Price Per Share	Average Remaining Contractual Term in Years
Outstanding at December 31, 2019	27,484,249	$ 1.86	4.6
Issued	8,854,758	0.36	
Exercised	(21,254,752)	0.67	
Expired	(19,339)	140.40	
Outstanding at June 30, 2020	15,064,916	$ 2.47	4.2

All warrants outstanding at June 30, 2020 are exercisable, except for the warrants issued in January 2020 pursuant to the repricing and exchange transaction, which have a term of 5.5 years and became exercisable on the six-month anniversary of issuance, July 10, 2020. The intrinsic value of equity-classified common stock warrants outstanding at June 30, 2020 was zero.

9. Net Loss per Common Share

Basic and diluted net loss per common share is determined by dividing net loss applicable to common shareholders by the weighted-average common shares outstanding during the period. Because there is a net loss attributable to common shareholders for the three and six months ended June 30, 2019 and 2020, the outstanding RSUs, warrants, and common stock options have been excluded from the calculation of diluted loss per common share because their effect would be anti-dilutive. Therefore, the weighted-average shares used to calculate both basic and diluted loss per share are the same.

The following potentially dilutive securities have been excluded from the computations of diluted weighted-average shares outstanding for the periods presented, as they would be anti-dilutive:

	For the six months ended June 30,	
	2019	2020
Preferred warrants outstanding (number of common stock equivalents)	17	—
Common warrants outstanding	15,197,249	15,064,916
RSUs outstanding	360	360
Convertible preferred stock outstanding (number of common stock equivalents)	471,393	471,393
Common options outstanding	2,768,443	2,571,712
Total anti-dilutive common share equivalents	18,437,462	18,108,381

10. Commitments and Contingencies

In the normal course of business, the Company may be involved in legal proceedings or threatened legal proceedings. The Company is not party to any legal proceedings or aware of any threatened legal proceedings that are expected to have a material adverse effect on its financial condition, results of operations or liquidity.

During the three months ended June 30, 2019 and 2020, total expense recorded in the Company's unaudited condensed statements of operations and comprehensive loss for sales tax and maintenance obligations associated with equipment financing arrangements was approximately $23,000 and $30,000, respectively, with approximately $47,000 and $62,000 recorded during the six months ended June 30, 2019 and 2020, respectively. At December 31, 2019 and June 30, 2020, approximately $78,000 and $75,000, respectively, of such sales tax and maintenance obligations incurred but not paid were recorded in accrued other liabilities in the Company's balance sheet (see Note 5). Future amounts totaling approximately $293,000 for sales tax and maintenance obligations associated with financed equipment were due under equipment financing arrangements at June 30, 2020, which will be expensed as incurred (see Note 6).

11. Related Party Transactions

A member of the Company's management is the controlling person of Aegea Biotechnologies, Inc., or Aegea. On September 2, 2012, the Company entered into an Assignment and Exclusive Cross-License Agreement, or the Cross-License Agreement, with Aegea. The Company received payments totaling approximately $19,000 and $26,000 during the years ended December 31, 2018 and 2019, respectively, from Aegea as reimbursements for shared patent costs under the Cross-License Agreement. On December 11, 2019, the Company entered into a First Amendment to Assignment and Exclusive Cross-License Agreement with Aegea pursuant to which the Company obtained a royalty bearing license for a certain patent. The Company agreed to pay Aegea, effective January 1, 2019, a royalty of 10% on the Company's sale of research use only, or RUO, and import research use only reagents and kits in the field of oncology, where the sample types are tissue, whole blood, bone marrow, cerebrospinal fluid or derivatives of any of the foregoing. As of December 31, 2019 and June 30, 2020, the Company has accrued approximately $7,500 and $3,000 for royalty expenses, respectively, related to this arrangement. On June 3, 2020, the Company announced entering into a development agreement with Aegea focused on the co-development by Biocept and Aegea of a highly sensitive PCR-based assay designed by Aegea for detecting the COVID-19 virus. Pursuant to the agreement, the Company will receive compensation for development services performed based on time and materials expended. During the three months ended June 30, 2020, the Company recorded development service revenues of approximately $2,100 and had approximately $2,100 accounts receivable due from Aegea as of June 30, 2020, related to this agreement.

12. Subsequent Events

In July 2020, the warrants issued in the January 2020 Warrant Exercise Inducement offering became exercisable. During the period between July 10, 2020 and August 7, 2020, holders exercised 5,027,667 warrants in cashless exercise transactions for 2,687,744 shares of the Company's common stock. In addition, on August 7, 2020, holders of the Company's January 2018 warrant exercised 33,333 warrants for $0.3495 per share.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed financial statements and related notes included in this Quarterly Report on Form 10-Q and the audited financial statements and notes thereto as of and for the year ended December 31, 2019 and the related Management's Discussion and Analysis of Financial Condition and Results of Operations, both of which are contained in our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission on March 27, 2020. Past operating results are not necessarily indicative of results that may occur in future periods.

Company Overview

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, show progression or be 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-Selector™ liquid biopsy technology platform for the biomarker analysis of CTCs and ctDNA from a standard blood sample. Our patented Target-Selector™ CTC platform assays are 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. In January 2020, we announced that our molecular and CTC technologies were validated on cerebral spinal fluid, or CSF, in order to provide information for patients with central nervous system, or CNS, tumors both primary and metastatic. Our patented Target-Selector™ molecular 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, or tissue (surgical resections and/or biopsies). Our Target-Selector™ CTC and molecular 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 and various chemistries utilized in our testing process, however, we have identified and have been working with a manufacturer to outsource 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, our pathology partnership program, branded as Empower TC™, 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 patented blood collection tubes, or BCTs, commenced in June 2018, which allow for the intact transport of liquid biopsy samples for research use only from regions around the world.

Our revenue generating efforts are focused in three areas:

- providing laboratory services to 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, including our BCTs, 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 molecular 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, 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.

Assays, Products and Services

We currently offer and conduct our commercialized diagnostic assays and offer our clinical trial services at our CLIA-certified, CAP-accredited and state-licensed laboratory. We have commercialized our Target-Selector™ assays for a number of solid tumor indications such as: breast cancer, NSCLC, gastric cancer, colorectal cancer, prostate cancer, pancreaticobiliary cancer, and ovarian cancer. These assays utilize our dual CTC and ctDNA technology platforms and provide biomarker analysis from a patient's blood sample.

Our current assays and clinical trial services include:

- *CTC and ctDNA Testing*. Our current assays and our other planned cancer diagnostic assays are based on our Target-Selector™ technologies. After completing testing, we or our partners provide our customers with an easy to understand report that describes the results of the analyses performed, which is designed to help medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians make better decisions about the treatment of their patients.
- *Clinical Trial Services.* We plan to utilize our clinical laboratory and translational research capabilities to provide clinical trial and research services to pharmaceutical and biopharmaceutical companies and clinical research organizations to improve the efficiency and economic viability of their clinical studies. Our clinical studies and translational research services could leverage our knowledge of CTCs and ctDNA and our ability to develop and implement new cytogenetic, immunocytochemical and molecular diagnostic assays. Our current assays can, and our other planned cancer diagnostic assays and biomarker assays are anticipated to be able to, help optimize clinical trial patient selection and/or monitor cancer drivers during the course of treatment or disease progression. Demonstration of clinical utility of our assays would more easily enable these tests to be adopted in standard clinical practice, helping physicians select the most appropriate therapy for their patients.

In the case of our breast and gastric cancer offerings, biomarker analysis involves fluorescence *in situ* hybridization, or FISH, for the detection and quantitation of the human epidermal growth factor receptor 2, or *HER2*, gene copy number as well as immunocytochemical, or ICC, analysis of estrogen receptor, or ER, protein, progesterone receptor, or PR, protein, and androgen receptor, or AR, protein in breast cancer; all of these tests are currently available commercially. We have also validated and offer a Next Generation sequencing assay for use in breast cancer. A patient's *HER2* status provides the physician with information about the appropriateness of therapies such as Herceptin® or Tykerb®. ER and PR status provides the physician with information about the appropriateness of endocrine therapies such as tamoxifen and aromatase inhibitors.

Our lung cancer biomarker analysis offering currently includes FISH testing for *ALK*, *ROS1*, *RET, MET* and *FGFR1* gene rearrangements, as well as analysis for the T790M, Deletion 19, and L858R mutations of the epidermal growth factor receptor, or *EGFR* gene, as well as *BRAF and KRAS*. The L858R mutation of the *EGFR* gene and Exon 19 deletions as activators of *EGFR* kinase activity. For lung cancer, we also offer a resistance profile assay consisting of the biomarkers *MET, HER2* (both of which we perform using our technology for CTCs), *KRAS*, and T790M (both of which are performed using ctDNA in plasma). These assays can be used by physicians to identify the mechanism causing disease progression for patients with NSCLC who are being treated with tyrosine kinase inhibitor, or TKI, therapy and therefore may qualify patients for inclusion in a clinical trial. We have also validated and offer a Next Generation sequencing assay for use in NSCLC.

Fibroblast growth receptor 1, or *FGFR1*, amplification is offered using our CTC technology. *FGFR1* is present in several tumor types, including both NSCLC and small cell lung cancer, or SCLC, and has been shown to be a prognostic indicator of progression. *FGFR1* is also a key target for several drugs undergoing clinical development.

We analytically validated PD-L1 testing utilizing our CTC technology in 2016. PD-L1 is a biomarker that is informative for immuno-oncology therapies currently marketed for lung cancer and melanoma, as well as therapies in development for multiple tumor types.

We collaborated with David Rimm, M.D., Ph.D., a pathologist at Yale Medical School and a scientific advisor to us, on the analytical development of this assay.

We plan to release additional blood-based biomarker assays, such as those that test for *ESR1*, to our current menu of liquid biopsy assays using blood samples. In addition, we plan to complete the development and offer multiplexed biomarker tests, which will allow the detection and quantitative monitoring of multiple biomarkers in a single assay.

In August 2017, we announced that we had executed a distribution agreement for our proprietary blood collection tubes with VWR International, LLC which can preserve intact cells (such as CTCs) for up to 96 hours and ctDNA for up to 8 days, allowing for the intact transport of RUO liquid biopsy samples from regions around the world.

In October 2017, we launched our pathology partnership initiative, branded as Empower TC, expanding access of our proprietary liquid biopsy testing to community pathologists and hospitals throughout the United States. The aim of this program is to incorporate community pathologists into the review of biomarkers found in liquid biopsy for patients diagnosed with cancer. Pathologists are now enabled to interpret our liquid biopsy results locally, while patient specimens will continue to be sent to us for processing in our CLIA-certified, CAP-accredited high complexity laboratory. In February 2019 we launched Version 2 of Empower TC which is intended to expand the capabilities of the program to allow for more tests to be interpreted by local pathologists.

We intend to continue to commercialize cancer diagnostic assays in the United States as LDTs performed in our CLIA-certified, CAP-accredited, and state-licensed laboratory. We plan to evaluate potential opportunities for the commercialization of our products in other countries. We believe the Target-Selector™ technology can be used for molecular biomarker screening, marked as RUO test kits.

We launched the first of our RUO Target Selector kit products, ctDNA *EGFR*, in January 2019. Additionally, we plan to evaluate opportunities for licensing of our products and proprietary technologies to partners in the United States and abroad.

In December 2018, we entered into a Software License and Laboratory Data Supply Agreement with Prognos, Inc., an innovator in predicting disease by applying artificial intelligence, or AI, to clinical laboratory diagnostics. Under the agreement, we will supply de-identified data from its liquid biopsy testing to Prognos, which will leverage its AI capabilities to help its pharmaceutical clients ensure that the right patients receive the right therapies. This agreement could provide revenue sharing opportunities in future periods.

In May 2019 we announced launch of the Oncomine NGS lung cancer panel in collaboration with Thermo Fisher Scientific. This panel requires a local coverage determination, or LCD, for reimbursement and we started that process with a meeting with MOLDx in November 2018. In the absence of a national coverage policy, an item or service may be covered at the discretion of the Medicare contractors based on an LCD. We have applied for LCD's in several categories as the initial step for national coverage.

In June 2019 we announced launch of the Oncomine NGS breast cancer panel, a multi-gene liquid biopsy panel specifically developed for breast cancer, in collaboration with Thermo Fisher Scientific. This panel is being marketed to physicians and researches for the detection and monitoring of actionable genomic biomarkers associated with breast cancer.

In November 2019 we announced launch of our liquid biopsy test to detect TRK biomarkers in the blood of patients diagnosed with cancer. Identification of TRK protein enables physicians to rapidly and cost-effectively identify the potential presence of NTRK fusions used to inform on treatment options.

In April 2020, we announced the availability of RUO kits that can allow molecular laboratories around the world to utilize Biocept's Target-Selector™ molecular assay kits to detect key oncogene mutations through the analysis of both Formalin-Fixed Paraffin-Embedded (FFPE) tissue gained from surgical biopsies as well as circulating tumor DNA (ctDNA) gained from blood-based liquid biopsies. In addition, we announced the award of CE (Conformité Européene)-IVD Mark for our Target-Selector™ molecular assay EGFR kit.

In May 2020, we announced the availability of a Target-Selector™ molecular assay RUO kit for the detection of BRAF mutations.

We also expanded our prostate panel offerings as a key element for growing the demand for our testing among urologists, including the AR-V7 assay which helps physicians determine if patient should stay on hormone therapy or switch to chemotherapy, as well as *PTEN*, *MET*, *MYC*, and *EGFR* FISH assays which provide valuable prognostic information to the aggressiveness of a patient's prostate cancer.

Pharmaceutical and Research Collaborations

We continue to execute on our strategies intended to expand our business globally, as well as to engage with pharmaceutical companies on clinical trials and assay development. We have preferred provider agreements in place in Mexico with Quest

Diagnostics to support testing for Astra Zeneca. In addition, we have distribution agreements in place in Mexico, Uruguay, Turkey, Columbia, Israel and Canada.

As a follow up to the CTC findings published in *Cancer Medicine*, we were involved in a clinical study led by investigators at the Dana-Farber Cancer Institute. Study enrollment was completed. During the screening phase of this study, our CLIA-certified, CAP accredited laboratory tested blood samples from a cohort of patients with *HER2* negative tissue status, with the aim to identify individuals with *HER2* amplified CTCs. These patients were then assigned to chemotherapy plus Herceptin®. Additional CTC testing with *HER2* FISH biomarker analyses were performed at subsequent time points. At the December 2014 San Antonio Breast Cancer Symposium, we presented findings of 311 patients tested with *HER2* negative tissue status, where 22% had CTCs with *HER2* gene amplification at disease progression. *HER2* gene amplification subsequently categorized these patients as potential candidates for anti-*HER2* therapy as the cancer evolved. Moreover, our multi-antibody CTC capture method identified a substantial subset of patients who would not likely have had detectable CTCs with commonly used CTC capture technologies. This added 10% (included in the 22%) to the number of women who were candidates for this highly specific targeted therapy.

With our cooperation, researchers at Columbia University published a study in the journal *Clinical and Translational Oncology* in January 2015. The study demonstrated the high correlation (79%) of circulating tumor cells, primary tumor tissue biopsy and metastatic tumor tissue biopsy in the determination of hormone receptor status, or ER/PR, of breast cancer patients. The investigators also found that this high correlation was strongest when comparing metastatic tissue biopsy to CTCs (83%). The conclusion of the study was that determining ER/PR status in CTCs using our platform is feasible, with high concordance in ER/PR between tumor tissue (as determined with immunohistochemistry, or IHC) and CTCs (as determined with immunocytochemistry, or ICC). The authors suggest a larger trial to determine the prognostic significance of these findings.

In September 2015, we presented the clinical validation data of our ctDNA assay in collaboration with the University of California, San Diego. The results demonstrated a very high level of concordance to tissue results (88%), together with >95% analytical sensitivity and 99% analytical specificity, supporting our offering of a validated, robust non-invasive solution for mutation identification and monitoring in patients with lung cancer. Subsequent FDA approval of Tagrisso®, a third-generation tyrosine kinase inhibitor, presented an opportunity for patients to be monitored using a ctDNA assay.

During 2016, we announced a pharmaceutical collaboration agreement that provides testing for a clinical trial, which includes metastatic lung cancer patients with leptomeningeal or brain metastases. In this exploratory trial, we tested both cerebrospinal fluid and blood for molecular alterations that could be impacted by treatment. A second pharmaceutical collaboration was announced in 2016, which entails a milestone-based assay development project focused on hepatocellular carcinoma, or HCC, or liver cancer. Custom assays utilizing both our CTC and ctDNA technologies were developed for identifying specified biomarkers and capturing HCC CTCs for potential clinical trial use.

In April 2016, we announced a study collaboration with Dr. Giuseppe Giaccone at the MedStar Georgetown University Hospital to assess resistance biomarkers in non-small cell lung cancer, or NSCLC, patients treated with *EGFR* inhibitors or chemotherapy. Later in 2016, we announced another collaboration involving a study presented at the European Society for Medical Oncology, or ESMO, Annual Congress in October 2016, evaluating the detection of EGFR alterations (del19, L858R and T790M) by our Target-Selector™ liquid biopsy. Subsequent to this study, we have earned business in both Mexico and Columbia for EGFR gene mutation testing in blood to qualify patients for a pharmaceutical company's targeted therapy. The relationship also resulted in a study initiated during the following year that includes peripheral blood CTC assessment of PD-L1 protein expression in patients undergoing chemotherapy as a monotherapy or in combination with a checkpoint inhibitor. In December 2016, we announced a clinical study agreement with Columbia University Medical Center to evaluate the clinical utility of our Target-Selector™ platform to diagnose leptomeningeal metastases, or LM, in breast cancer patients. This work was expanded in the fourth quarter of 2018 to include patients with other primary solid tumor types. Dr. Kevin Kalinsky leads this study to test CTCs in cerebrospinal fluid and blood, where CTC analysis will be compared to standard methods for confirming LM diagnosis.

In May 2017, we entered into a clinical study agreement with the University of Texas Southwestern Medical Center. Led by recognized oncologist and ALK alteration researcher, Dr. Saad Khan, the study is designed to evaluate the clinical utility of our Target-Selector™ platform for patients diagnosed with ALK-positive NSCLC and treated with ALK-inhibitor therapy. A second arm of the study evaluated patients with rare cancers such as anaplastic thyroid cancer to determine if genetic drivers such as *ALK* gene rearrangements can be identified and treated with targeted therapy to improve patient outcomes.

In November 2017, we announced a collaboration involving 100 patients in a clinical study with the University of California, San Diego. The study entails clinical validation of specified PD-L1 antibody clones on our Target-Selector™ CTC platform. Concordance of PD-L1 protein expression in tissue biopsy versus liquid biopsy, as well as correlation of therapeutic response with PD-L1 liquid biopsy status, are the study objectives.

Two complementary posters on the highly sensitive Target Selector ctDNA assays were presented in 2018. The first poster entitled "Biocept Study Shows Incorporation of Thermo Fisher QuantStudio 5 PCR Instrument into Target Selector Platform Improves

Sensitivity and Specificity in Detection of Lung Cancer Biomarkers" was presented in January 2018 at the Fifth AACR-IASLC International Joint Conference: Lung Cancer Translational Science from the Bench to the Clinic. The related poster, entitled "Validation of highly sensitive TargetSelector™ ctDNA assays for *EGFR*, *BRAF*, and *KRAS* mutations" was presented at the April 2018 American Association for Cancer Research annual meeting. Together, these posters highlight improvements to the Target Selector ctDNA platform, enabling more sensitive mutation detection down to a single copy, thereby increasing the likelihood of identifying actionable molecular drivers towards guiding targeted therapy decisions and better management of a patient's cancer.

In collaboration with Dr. Shilpa Gupta from the Masonic Cancer Center at the University of Minnesota, a poster was presented at the April 2018 American Association for Cancer Research annual meeting. The results demonstrated proof-of-concept use of our Target-Selector™ CTC platform, correlating CTC count with clinical responses in refractory testicular cancer patients undergoing therapy. This work is part of a Phase 2 clinical trial of brentuximab vedontin (an anti-CD-30 antibody) with bevacizumab in refractory CD-30 + germ cell tumors. The capability for our Target-Selector™ CTC platform to monitor this rare cancer type presents the potential for a precision medicine-based approach to guide treatment decisions for these patients.

During the first half of 2018, three key case studies were published in peer-reviewed journals. In April, the 2018 Spring issue of *Oncology & Hematology Review* featured a case report demonstrating the clinical utility of our CTC platform whereby identification of an *ALK* rearrangement enabled sequential targeted therapy and improved quality of life in a patient with NSCLC. This case illustrated the use of our technology to monitor therapeutic response and early detection of drug resistance to manage patient disease through the course of treatment with various ALK inhibitors. A Letter to the Editor in the May 2018 issue of *Journal of Thoracic Oncology* described the identification of a *ROS1* rearrangement by Biocept CTC analysis using FISH (fluorescent in situ hybridization). The *ROS1* translocation was concordant with tissue biopsy. In contrast, next-generation sequencing analysis of plasma by another vendor failed to detect the genetic alteration in the patient with lung cancer. Also, in May 2018, a case report describing the application of our CTC technology in the management of metastatic breast cancer was published in *Clinics in Oncology.* This work described a patient with recurrent breast cancer where numerous tissue-based evaluations of the individual's bone-only metastases had repeated challenges or inclusive results. *HER2* amplification detected in CTCs from blood provided crucial information towards changing treatment strategies to include anti-HER therapy, consequently extending and improving the patient's quality of life. Each of the three published cases provide real-life examples in lung and breast cancer towards establishing the importance of liquid biopsy to identify and monitor clinically actionable biomarkers to improve outcomes of patients with cancer.

In July 2018, we announced a collaboration involving two studies with the University of California, San Diego. Each of the two studies will enroll 100 patients with solid tumors, for a total of 200 patients. One study will assess the feasibility of using our CTC and ctDNA methodologies to predict post-resection disease recurrence in patients with Stage II or III cancer, and the other study will use our technology to predict response to therapy in patients with metastatic disease. Dr. Rebecca Shatsky and Dr. Razelle Kurzrock are the investigators key to both studies.

In August 2018, we announced a Quality Improvement Initiative with Highmark Health to help improve molecular testing rates of NCCN Category I Guidelines for NSCLC. The Initiative aims to improve health outcomes by using liquid biopsy to more rapidly assess a patient's actionable biomarker status towards selecting appropriate therapy, while reducing the overall cost of care. The project will evaluate at least 100 patients in the Highmark Health-affiliated Allegheny Health Network, or AHN, Cancer Institute. Patients will receive our CTC and ctDNA testing in addition to tissue biopsy with the goal of obtaining biomarker status results for a higher percentage of patients compared to standard testing.

Two scientific posters featuring the Target Selector™ CTC and ctDNA platforms were presented in September 2018 at the International Association for the Study of Lung Cancer, or IASLC, 19th World Conference on Lung Cancer. Data from these clinical studies demonstrate the ability of our technology to detect and monitor CTC counts and actionable biomarkers in both blood and cerebrospinal fluid, or CSF, of patients with advanced NSCLC. The first poster described interim results of a collaboration with Dr. Janakiraman Subramanian at the Saint Luke's Cancer Institute in Kansas City, Missouri. This study evaluates CTC enumeration in advanced stage NSCLC patients before and during the course of chemotherapy. Interim data suggest that CTC counts may have prognostic and predictive potential to assess therapeutic benefit. The second poster was in collaboration with Kadmon Corporation, featuring CTC and ctDNA analyses and monitoring in the CSF of NSCLC patients with leptomeningeal metastases who were treated with tesevatib in Kadmon's clinical trial KD019-206. In this study, alterations detected in the CSF of patients were concordant with original tissue biopsies, and serial monitoring of CTCs and ctDNA biomarkers in CSF were consistent with the overall clinical.

A case series was published in the January 2019 issue of the peer reviewed journal, *Clinics in Oncology*. The work highlights the clinical utility of liquid biopsy to stratify patients who may benefit from targeted therapy, describing three patients with metastatic NSCLC for whom tissue biopsy was insufficient for molecular profiling. In all three cases, our ctDNA liquid biopsy analyses detected an activating *EGFR* mutation. EGFR tyrosine kinase inhibitor therapy subsequently was initiated. Complete response lasting approximately two years was observed in one patient. For two patients, our ctDNA testing was performed at signs of clinical progression and Osimertinib was administered upon our liquid biopsy identification of the *EGFR* T790M resistance marker. In sum, patient survival was dramatically extended in all cases presented where targeted therapies were prescribed based on liquid biopsy results.

In April 2019, we presented a poster at the annual meeting of the American Association for Cancer Research. The work describes analytical validation of Target Selector *ESR1* Next Generation Sequencing, or NGS, ctDNA assays with single copy mutant detection. The assays have a limit of detection, or LOD, 0.03% or better, with >99% sensitivity for mutant allele fractions, or MAF, ranging from greater than 5% down to 0.03%. *ESR1* gene mutations are associated with acquired drug resistance in up to 55% of patients with estrogen receptor, or ER, positive metastatic breast cancer, or mBC, who received anti-estrogen treatment. Detection of *ESR1* mutations may enable the prediction of treatment failure and disease progression in these patients. As new therapies are developed that antagonize ER activity by mechanisms that differ from current drug treatments, *ESR1* mutation testing can be a helpful tool to identify patients who may benefit from these alternative agents.

In October 2019 we announced the publication of a peer-reviewed journal article featuring the analytical validation results demonstrating the high sensitivity of our Target Selector™ testing for EGFR, BRAF, and KRAS mutation in plasma circulating tumor DNA (ctDNA). The article was published in the journal, *PLOS ONE, Volume 14, October 2019*, and will also be included as part of a special collection of topical articles, entitled *Targeted Anticancer Therapies and Precision Medicine In Cancer*.

In November 2019 we presented clinical data highlighting performance of our Target Selector™ tests and kits for detecting actionable oncology biomarkers at the 2019 Association for Molecular Pathology, or AMP, Annual Meeting held at the Baltimore Convention Center, in Baltimore, MD. The content of our posters will be published in *The Journal of Molecular Diagnostics*.

In December 2019 we presented clinical data supporting the use of our Target Selector ™ CTC platform as an aid in the monitoring and treatment of breast cancer in a poster session at the 2019 San Antonio Breast Cancer Symposium, or SABS. The data demonstrated the Target Selector™ platform's ability to accurately detect, enumerate, and interrogate circulating tumor cells, or CTCs, in a cohort of over 1,500 patients, representing various clinical and treatment stages of breast cancer.

In March 2020 we announced publication of clinical data in the peer-reviewed Journal of Clinical Pathology that further validates the Company's Target Selector™ qPCR Assay using "Switch Blocker" technology to identify cancer-related mutations in liquid biopsy samples. The study examined 127 clinical assays for mutations commonly associated with cancer found in the EGFR, BRAF and KRAS genes. Each Target Selector™ assay in the study demonstrated extremely high accuracy, sensitivity and specificity when compared to results obtained from tissue samples, showing a 93%-96% concordance to blinded tissue samples across all assays.

Provider Agreements

In January 2017, we announced that we had secured an in-network provider agreement with Blue Cross Blue Shield of Texas, the largest provider of health benefits in Texas. In addition, we entered into a national master business agreement with the Blue Cross Blue Shield Association, a not-for-profit trade association that provides multiple services for its 38-member Blue Cross and Blue Shield health plan companies across the U.S., including forming national strategic vendor partnerships. We were selected by the Blue Cross Blue Shield Association based on a rigorous request-for-proposal progress. This agreement establishes pricing for our Target-Selector™ liquid biopsy testing service through the Blue Cross Blue Shield Association's group purchasing organization, CareSourcing Workgroup. The pricing offered by the CareSourcing Workgroup group purchasing organization is available to those Blue Cross and Blue Shield member health plans that have, or may seek, in-network agreements with us.

In June 2017, we entered into a participating provider agreement with MediNcrease Health Plans, LLC and a preferred provider agreement with Scripps Health Plan Services, Inc., both establishing pricing for our Target-Selector™ liquid biopsy testing service.

In December 2017, we signed an agreement with Wellmark, Inc., the largest health insurer in Iowa and South Dakota. The agreement marks our third Blue Cross Blue Shield contract and enables patients diagnosed with cancer the ability to access our proprietary testing services in-network under their Wellmark health plan.

In August 2018, we entered into a quality initiative program with Highmark and Alleghany Health Network as a result of the Caresourcing Workgroup. The focus is to improve access to molecular testing to members with a diagnosis of lung cancer. Enrollment began in August 2018 and has been steadily increasing.

In July 2019 we announced that we entered into a Laboratory Services Provider Agreement with Beacon Laboratory Benefit Solutions, Inc., a nationally recognized premier provider of laboratory benefit management technology solutions to health and managed care companies in the United States.

In February 2020 we announced that we entered into an agreement with a California-based independent physician association, or IPA, to provide our liquid biopsy testing services to physicians and patients in their network. Our Target Selector™ offering includes the choice of individual biomarker tests or a larger liquid biopsy panel, enabling physicians to select the best approach for each patient.

In June 2020 we announced that we entered into a managed care provider agreement with Medical Cost Containment Professional LLC (MCCP), to process out-of-network claims for Biocept's Target Selector™ liquid biopsy testing. MCCP is a reference-based pricing insurance network that includes more than 150,000 providers nationwide.

We are currently contracted with nine preferred provider organization networks, three large health plans, and five regional independent physician associations, and expect to continue to gain contracts in order to be considered as an “in-network” provider with additional plans.

Patents and Technology

The proprietary nature of, and protection for, our products, services, processes, and know-how are important to our business. Our success depends in part on our ability to protect the proprietary nature of our products, services, technology, and know-how, to operate without infringing on the proprietary rights of others, and to prevent others from infringing our proprietary rights. We seek patent protection in the United States and internationally for our products, services and other technology. Our policy is to patent or in-license the technology, inventions and improvements that we consider important to the development of our business.

We also rely on trade secrets, know-how, and continuing innovation to develop and maintain our competitive position. We cannot be certain that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents granted to us in the future will be commercially useful in protecting our technology.

Our success depends on an intellectual property portfolio that supports our future revenue streams and erects barriers to our competitors. We are maintaining and building our patent portfolio through filing new patent applications, prosecuting existing applications, and licensing and acquiring new patents and patent applications.

We have issued patents with broad claims covering our blood collection tube, antibody cocktail approach, microchannel, CTC detection methodologies, and ctDNA analysis. In addition to issued patents in the U.S., we have patents for our proprietary microchannel in China, South Korea, Europe, Hong Kong, Canada and Japan, and for our antibody cocktail in Australia, Europe, Canada, China, Hong Kong and Japan. Our patent estate continues to evolve, and in addition to the broad patent estate around our CTC platform, we also have issued patents in the U.S., Australia, Brazil, Europe, Japan, China and South Korea for our novel switch blocker technology, solidifying our proprietary enrichment methodology for detecting ctDNA with very high sensitivity. Our CTC platform patents were filed from 2005 through 2012, and we expect to have patent protection into the 2030s. Our CTC patents and applications cover not only cancer as a target, but also prenatal and other rare cells of interest. Recently allowed patents in the U.S. cover the capture of “any target of interest on any solid surface” using our antibody capture approach. The patent for our proprietary specimen collection tubes expire in 2031, and the patents for our ctDNA technology expire in the early 2030s.

As of June 30, 2020, we owned 40 issued patents and 10 patents pending related to our current technologies. Of these, 10 were issued and 3 were pending patents in the U.S., while 30 were issued and 9 were pending patents in non-U.S. territories. Separately, we also owned 7 issued patents related to our earlier microarray and cell analysis technology.

COVID-19 Pandemic

On March 11, 2020 the World Health Organization declared the disease cause by the novel strain of COVID-19 a global pandemic and recommended containment and mitigation measures worldwide. In addition, as we are located in California, we are currently under a shelter-in-place mandate and many of our clients worldwide are similarly impacted. The COVID-19 pandemic continues to evolve, and the extent to which COVID-19 may impact our business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease. We estimate that the COVID-19 pandemic led to an approximate 15 to 25% decline in commercial volume from current customers, and also impacted opportunities for us to gain new customers with the closing of many physician offices and labs. We are continuing to vigilantly monitor the situation with our primary focus on the health and safety of our employees and clients.

In April 2020, we announced that we verified a COVID-19 molecular diagnostic test and that we will begin accepting physician-ordered testing requests. The testing volume has initially been limited by the national shortage of specimen collection kits. On June 22, 2020, we announced the availability of 10,000 specimen collection kits for COVID-19 testing for physician ordering. Collected specimens are shipped to our high-complexity, CLIA-certified, CAP-accredited and BSL-2 safety level laboratory in San Diego with results returned to ordering physicians in an estimated 24 to 48 hours. In addition, we announced that we are developing and will manufacture our own collection kits and expect them to be available in the third quarter of 2020. On June 3, 2020, we announced entering into a development agreement with Aegea focused on the co-development by Biocept and Aegea of a highly sensitive PCR-based assay designed by Aegea for detecting the COVID-19 virus.

Results of Operations

Three Months Ended June 30, 2019 and 2020

The following table sets forth certain information concerning our results of operations for the periods shown:

	Three months ended June 30,		Change	
	2019	2020	$	%
(dollars in thousands)				
Net revenues	$ 1,191	$ 917	$ (274)	(23%)
Cost of revenues	2,673	2,517	(156)	(6%)
Research and development expenses	1,148	1,589	441	38%
General and administrative expenses	1,676	1,911	235	14%
Sales and marketing expenses	1,615	1,333	(282)	(17%)
Loss from operations	(5,921)	(6,433)	(512)	9%
Interest expense	(64)	(56)	8	(13%)
Warrant inducement expense	(1,831)	—	1,831	(100%)
Loss before income taxes	(7,816)	(6,489)	1,327	(17%)
Income tax expense	—	—	—	0%
Net loss	$ (7,816)	$ (6,489)	$ 1,327	(17%)

Net Revenues

Net revenues were approximately $917,000 for the three months ended June 30, 2020, compared with approximately $1,191,000 for the same period in 2019, a decrease of $274,000, or 23%, which is primarily due to a decrease in accession volume over the same period in the prior year. The decrease in accession volume is attributable to the impact of the COVID-19 pandemic on our oncology testing volume which is partially offset by our launch of COVID-19 testing in the second quarter of 2020.

The net estimated revenue per commercial accession delivered during the three months ended June 30, 2020 was $830, based on 1,013 commercial accessions delivered, while during the three months ended June 30, 2019 it was approximately $1,041, based on 1,074 commercial accessions delivered. The decrease in net estimated revenue per commercial accession delivered as compared to the prior year is primarily the result of lower net revenue per accession delivered from the portion of our accession volume related to COVID-19 testing.

The following table sets forth certain information regarding commercial accessions received, excluding the COVID-19 accessions, during the three months ended June 30, 2019 and 2020:

	Three months ended June 30,		Change	
	2019	2020	# / $	%
# Commercial accessions received	1,066	897	(169)	(16%)
$ Value estimated per commercial accession received	$ 1,145	$ 1,336	$ 191	17%

*Commercial value per accession received is reflected as expected reimbursement (gross billed less contractual allowance).

Additionally, overall development revenues stayed relatively flat as compared to the same period in the prior year. The net revenue per accession increased primarily due to the higher number of biomarkers ordered during period as compared to the same period in the prior year, partially offset by a lower number of development services accessions delivered as follows:

	Three months ended June 30,		Change	
	2019	2020	# / $	%
# Development services accessions delivered	127	90	(37)	(29%)
$ Value per development services accession delivered	$ 355	$ 427	72	20%

Costs and Expenses

Cost of Revenues. Cost of revenues was approximately $2,517,000 for the three months ended June 30, 2020, compared with approximately $2,673,000 for the same period in 2019, representing a decrease of $156,000 or 6%, primarily due to lower volumes in the three months ended June 30, 2020 as compared to the same period in the prior year, which we believe is primarily attributable to

the COVID-19 pandemic. Cost of revenues are comprised of, but not limited to, expenses related to personnel costs, materials, shipping and other direct costs, as well as equipment depreciation and software amortization expenses.

Research and Development Expenses. Research and development expenses were approximately $1,589,000 for the three months ended June 30, 2020, compared with approximately $1,148,000 for the same period in 2019, representing an increase of $441,000, or 38%. The increase was primarily attributable to costs related to launching our COVID-19 testing during the three months ended June 30, 2020, ongoing development and validation costs related oncology liquid biopsy panels and laboratory testing automation projects. Research and development expenses are comprised of, but not limited to, personnel costs, material, shipping and other direct costs, computer and laboratory equipment maintenance and facility related costs.

General and Administrative Expenses. General and administrative expenses were approximately $1,911,000 for the three months ended June 30, 2020, compared with approximately $1,676,000 during the same period in 2019, representing an increase of $235,000 or 14% as compared to the same period in the prior year. The increase is primarily related to higher directors and officer's liability insurance and legal costs as compared to the prior year period. General and administrative expenses are comprised of, but not limited to, personnel costs, facilities, depreciation, repairs and maintenance costs, stock-based compensation expenses, patent and legal costs, accounting and audit fees, as well as insurance, office and other expenses.

Sales and Marketing Expenses. Sales and marketing expenses were approximately $1,333,000 for the three months ended June 30, 2020 compared with approximately $1,615,000 for the same period in 2019, representing a decrease of $282,000, or 17%. The decrease was primarily attributable to significant decrease in sales and marketing activities due to pandemic related shutdowns and travel restrictions. Sales and marketing expenses are comprised of, but not limited to, personnel costs, trade show and other marketing related expenses, as well as office and other costs.

Interest Expenses. Interest expenses were approximately $56,000 for the three months ended June 30, 2020 compared with approximately $64,000 for the same period in 2019, a decrease of $8,000 or 13% reflecting market interest rates on finance leases trending lower.

Warrant Inducement Expense. Warrant inducement expense was $0 for the three months ended June 30, 2020 compared with approximately $1,831,000 for the same period in 2019. Warrant inducement expense related in the three months ended June 30, 2019 related to recognizing the fair value of the inducement warrants issued in May 2019 in connection with the warrant exercise offering of $1.8 million in equity and recognizing as a warrant inducement expense.

Income Tax Expense

Over the past several years we have generated operating losses in all jurisdictions in which we may be subject to income taxes. As a result, we have accumulated significant net operating losses and other deferred tax assets. Because of our history of losses and the uncertainty as to the realization of those deferred tax assets, a full valuation allowance has been recognized. We do not expect to report a provision for income taxes until we have a history of earnings, if ever, that would support the realization of our deferred tax assets.

We have not completed a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since our formation, due to the complexity and cost associated with such a study, and the fact that there may be additional ownership changes in the future, however, we believe multiple ownership changes likely occurred. As a result, we have estimated that the use of our net operating loss is limited and the remaining net operating loss carryforwards and research and development credits we estimate can be used in the future remain fully offset by a valuation allowance to reduce the net asset to zero.

Results of Operations

Six Months Ended June 30, 2019 and 2020

The following table sets forth certain information concerning our results of operations for the periods shown:

	Six months ended June 30,		Change	
	2019	2020	$	%
(dollars in thousands)				
Net revenues	$ 2,216	$ 2,364	$ 148	7%
Cost of revenues	5,273	5,465	192	4%
Research and development expenses	2,372	2,902	530	22%
General and administrative expenses	3,358	3,816	458	14%
Sales and marketing expenses	2,989	2,798	(191)	(6%)
Loss from operations	(11,776)	(12,617)	(841)	7%
Interest expense	(126)	(113)	13	(10%)
Warrant inducement expense	(1,831)	(2,102)	(271)	15%
Loss before income taxes	(13,733)	(14,832)	(1,099)	8%
Income tax expense	—	—	—	0%
Net loss	$ (13,733)	$ (14,832)	$ (1,099)	8%

Net Revenues

Net revenues were approximately $2,364,000 for the six months ended June 30, 2020, compared with approximately $2,216,000 for the same period in 2019, an increase of $148,000, or 7%, which is primarily due to an increase in net revenues per accession partially offset by a decrease in accession volumes over the same period in the prior year, which we believe is primarily attributable to the COVID 19 pandemic.

The net estimated revenue per commercial accession delivered during the six months ended June 30, 2020 was $1,063, based on 2,031 commercial accessions delivered, while during the six months ended June 30, 2019 it was approximately $1,030, based on 2,035 commercial accessions delivered.

The following table sets forth certain information regarding commercial accessions received during the six months ended June 30, 2019 and 2020:

	Six months ended June 30,		Change	
	2019	2020	# / $	%
# Commercial accessions received	2,077	2,056	(21)	(1%)
$ Value estimated per commercial accession received	$ 1,108	$ 1,354	$ 246	22%

Additionally, overall development revenues stayed relatively flat as compared to the same period in the prior year. The net revenue per accession increased primarily due to the higher number of biomarkers ordered during period as compared to the same period in the prior year, partially offset by a lower number of development services accessions delivered as follows:

	Six months ended June 30,		Change	
	2019	2020	# / $	%
# Development services cases delivered	264	240	(24)	(9%)
$ Value per development services accession delivered	$ 330	$ 412	$ 82	25%

Costs and Expenses

Cost of Revenues. Cost of revenues was approximately $5,487,000 for the six months ended June 30, 2020 compared to approximately $5,273,000 for the same period in 2019, as we continued to leverage the fixed components of our costs. Cost of revenues as a percentage of net revenues decreased by approximately 7% for the six months ended June 30, 2020 as compared to the same period in the prior year. Cost of revenues are comprised of, but not limited to, expenses related to personnel costs, materials, shipping and other direct costs, as well as equipment depreciation and software amortization expenses.

Research and Development Expenses. Research and development expenses were approximately $2,902,000 for the six months ended June 30, 2020, compared with approximately $2,372,000 for the same period in 2019, an increase of $530,000, or 22%. The increase was primarily attributable to costs related to launching our COVID-19 testing during the six months ended June 30, 2020, ongoing development and validation costs related oncology liquid biopsy panels and laboratory testing automation projects. Research and development expenses are comprised of, but not limited to, personnel costs, material, shipping and other direct costs, computer and laboratory equipment maintenance and facility related costs.

General and Administrative Expenses. General and administrative expenses were approximately $3,816,000 for the six months ended June 30, 2020, compared with approximately $3,358,000 during the same period in 2019, an increase of $458,000, or 14%. The increase was due to reporting a department previously under sales and marketing under general and administrative costs beginning in mid-2019, as well as higher directors and officer's liability insurance and legal costs as compared to the prior year. General and administrative expenses are comprised of, but not limited to, personnel costs, facilities, depreciation, repairs and maintenance costs, stock-based compensation expenses, patent and legal costs, accounting and audit fees, as well as insurance, office and other expenses.

Sales and Marketing Expenses. Sales and marketing expenses were approximately $2,798,000 for the six months ended June 30, 2020 compared with approximately $2,989,000 for the same period in 2019, a decrease of $191,000, or 6%. The decrease was primarily attributable to significant decrease in our sales and marketing costs due to pandemic related shutdowns and travel restrictions. Sales and marketing expenses are comprised of, but not limited to, personnel costs, trade show and other marketing related expenses, as well as office and other costs.

Interest Expenses. Interest expenses were approximately $113,000 for the six months ended June 30, 2020 stayed relatively flat with approximately $126,000 for the same period in 2019. Interest expenses are comprised of interest incurred related to finance leases used to obtain equipment.

Warrant Inducement Expense. Warrant inducement expense was approximately $2,102,000 for the six months ended June 30, 2020 compared with approximately $1,831,000 for the same period in 2019, an increase of $271,000. The increase was due to a higher fair value recognized in the first quarter of 2020 for the inducement warrants issued in January 2020 and warrant modification costs than for the inducement warrants issued in the May 2019 in connection with the warrant exercise offering.

Income Tax Expense

Over the past several years we have generated operating losses in all jurisdictions in which we may be subject to income taxes. As a result, we have accumulated significant net operating losses and other deferred tax assets. Because of our history of losses and the uncertainty as to the realization of those deferred tax assets, a full valuation allowance has been recognized. We do not expect to report a provision for income taxes until we have a history of earnings, if ever, that would support the realization of our deferred tax assets.

We have not completed a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since our formation, due to the complexity and cost associated with such a study, and the fact that there may be additional ownership changes in the future, however, we believe multiple ownership changes likely occurred. As a result, we have estimated that the use of our net operating loss is limited and the remaining net operating loss carryforwards and research and development credits we estimate can be used in the future remain fully offset by a valuation allowance to reduce the net asset to zero.

Liquidity and Capital Resources

Cash Flows

Our net cash flow from operating, investing and financing activities for the periods below were as follows:

	Six months ended June 30,	
	2019	2020
(dollars in thousands)		
Cash provided by/ (used in):		
Operating activities	$ (11,970)	$ (11,970)
Investing activities	(86)	(35)
Financing activities	21,224	26,758
Net increase in cash	$ 9,168	$ 14,753

Cash Used in Operating Activities. Net cash used in operating activities was $12.0 million for the six months ended June 30, 2020, compared to net cash used in operating activities of $12.0 million for the same period in 2019. Cash used in operating activities was primarily related to cash used to fund our net loss.

Cash Used in Investing Activities. Net cash used in investing activities of approximately $35,000 and $86,000 during the six months ended June 30, 2020 and 2019, respectively, was related to purchases of fixed assets.

Cash Provided by Financing Activities. Net cash provided by financing activities was $26.8 million for the six months ended June 30, 2020, compared to net cash provided by financing activities of $21.2 million for the same period in 2019. Our primary sources of cash from financing activities during the six months ended June 30, 2020 consisted of $660,000 in net proceeds from exercise of overallotment warrants from the December 2019 warrants in January 2020, net proceeds of $24.2 million from our sale of common stock in three financing transactions in March and April 2020, and $2.4 million in proceeds from exercise of common stock warrants. Net proceeds from financing transactions were partially offset by $0.5 million of principal payments made on finance leases and indebtedness. Our primary sources of cash from financing activities during the six months ended June 30, 2019 consisted of $2.0 million in net proceeds from our offering of common stock in January 2019, $6.6 million in net proceeds from our sale of common stock and warrants in February 2019, $0.6 million in net proceeds from exercise of overallotment from the January 2019 transaction, $7.6 million in net proceeds from our sale of common stock and warrants in March 2019, and $4.9 million in proceeds from exercise of common stock warrants.

Liquidity, Capital Resources and Expenditure Requirements

We expect to continue to incur substantial operating losses in the future. It may take several years to achieve positive operational cash flow, or we may not ever achieve positive operational cash flow. We expect that we will use the net proceeds from our sale of equity securities, if any, cash received from the licensing of our technology, if any, and our revenues from operations to hire sales and marketing personnel, support increased sales and marketing activities, fund further research and development, clinical utility studies and future enhancements of our assays, acquire equipment, implement automation and scale our capabilities to prepare for significant assay volume, for general corporate purposes and to fund ongoing operations and the expansion of our business, including the increased costs associated with expanded commercial activities. We may also use the net proceeds from our sale of equity securities, if any, cash received from the licensing of our technology, if any, and our revenues from operations to acquire or invest in businesses, technologies, services or products, although we do not have any current plans to do so.

In January 2020, we completed a Warrant Exercise Inducement offering and received net proceeds of approximately $2.3 million, as well as an additional $700,000 from the underwriter exercising its overallotment warrants from the December 2019 underwritten financing transaction. In addition, as inducement for these exercises, we issued 6,927,258 warrants to purchase shares of common stock at $0.3495 per share. The warrants are exercisable on the six-month anniversary of issuance and expire in five years from the date first exercisable. On March 2, 2020, we sold and issued 23,000,000 shares of our common stock at a purchase price of $0.40 per share in a registered direct offering and received net proceeds of approximately $8.6 million, after deducting placement agent fees and other expenses. On March 4, 2020, we sold and issued 16,000,000 shares of our common stock at a purchase price of $0.41 per share in a registered direct offering and received net cash proceeds of approximately $6.1 million after deducting placement agent fees and other expenses. On April 16, 2020, we sold and issued 22.300,000 shares of our common stock at a purchase price of $0.46 per share in a registered direct offering and received net cash proceeds of approximately $9.6 million, after deducting placement agent fees and other expenses.

As of June 30, 2020, our cash totaled $24.1 million, and our outstanding net interest-bearing indebtedness totaled $2.1 million. While we currently are in the commercialization stage of operations, we have not yet achieved profitability and anticipate that we will continue to incur net losses for the foreseeable future. While we believe that, absent the COVID-19 pandemic, based on our historical and planned cash usage our current cash would have supported our operations through most of 2021, due to the uncertainty introduced by the impact of COVID-19 on revenues and cash usage, there is uncertainty as to the period of time for which existing cash can support our ongoing operations. We have determined that there is substantial doubt about our ability to continue as a going concern for the one-year period following the date that our unaudited condensed financial statements for the three and six months ended June 30, 2020 were issued, and we expect that we will need additional financing to execute on our current or future business strategies.

In May 2020, the SEC declared effective a shelf registration statement filed by us. The shelf registration statement allows us to issue any combination of our common stock, preferred stock, debt securities and warrants from time to time for an aggregate initial offering price of up to $100.0 million.

We expect that we will need additional financing to execute on our current or future business strategies. Until we can generate significant cash from operations, including assay revenues, we expect to continue to fund operations with the proceeds from offerings of our equity securities or debt, or transactions involving product development, technology licensing or collaboration. For example, we have an effective shelf registration statement on file with the SEC which allows us to issue any combination of our common stock,

preferred stock, debt securities and warrants from time to time until expiration in May 2023. The specific terms of additional future offerings, if any, under this shelf registration statement would be established at the time of such offerings. We can provide no assurances that any sources of a sufficient amount of financing will be available to us on favorable terms, if at all. If we are unable to raise a sufficient amount of financing in a timely manner, we would likely need to scale back our general and administrative activities and certain of our research and development activities. Our forecast pertaining to our current financial resources and the costs to support our general and administrative and research and development activities are forward-looking statements and involve risks and uncertainties. Actual results could vary materially and negatively as a result of a number of factors, including:

- the impact of the COVID-19 pandemic on our business;
- our ability to secure financing and the amount thereof;
- the costs of operating and enhancing our laboratory facilities;
- the costs of developing our anticipated internal sales and marketing capabilities;
- the scope, progress and results of our research and development programs, including clinical utility studies;
- the scope, progress, results, costs, timing and outcomes of the clinical utility studies for our diagnostic assays;
- our ability to manage the costs for manufacturing our microfluidic channels;
- the costs of maintaining, expanding and protecting our intellectual property portfolio, including potential litigation costs and liabilities;
- our ability to obtain adequate reimbursement from governmental and other third-party payers for our assays and services;
- the costs of additional general and administrative personnel, including accounting and finance, legal and human resources, as a result of becoming a public company;
- our ability to collect revenues; and
- other risks discussed in our other filings with the SEC.

We may raise additional capital to fund our current operations and to fund expansion of our business to meet our long-term business objectives through public or private equity offerings, debt financings, borrowings or strategic partnerships coupled with an investment in our company or a combination thereof. If we raise additional funds through the issuance of convertible debt securities, or other debt securities, these securities could be secured and could have rights senior to those of our common stock. In addition, any new debt incurred by us could impose covenants that restrict our operations. The issuance of any new equity securities will also dilute the interest of our current stockholders. Given the risks associated with our business, including our unprofitable operating history and our ability or inability to develop additional assays, additional capital may not be available when needed on acceptable terms, or at all. If adequate funds are not available, we will need to curb our expansion plans or limit our research and development activities, which would have a material adverse impact on our business prospects and results of operations.

Off-Balance Sheet Arrangements

We have not engaged in any off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K.

Critical Accounting Policies and Significant Judgments and Estimates

For a discussion of accounting policies that we consider critical to our business operations and understanding of our results of operations, and that affect the more significant judgments and estimates used in the preparation of our financial statements, please see the information listed in Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Significant Judgments and Estimates” contained in our Annual Report on Form 10-K for the year ended December 31, 2019. There have been no material changes to our critical accounting policies and estimates from the information provided in our Annual Report on Form 10-K for the year ended December 31, 2019.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Not applicable.

Item 4. Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic and current reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. In designing

and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable and not absolute assurance of achieving the desired control objectives. In reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. In addition, the design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, control may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

As of June 30, 2020, we carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of June 30, 2020. There were no changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

None.

Item 1A. Risk Factors

An investment in shares of our common stock involves a high degree of risk. You should carefully consider the following risk factors, as well as the other information contained elsewhere in this report, before deciding whether to purchase, hold or sell shares of our common stock. The occurrence of any of the following risks could harm our business, financial condition, results of operations and/or growth prospects or cause our actual results to differ materially from those contained in forward-looking statements we have made in this report and those we may make from time to time. You should consider all of the risk factors described when evaluating our business. We have marked with an asterisk (*) those risk factors that reflect changes from the risk factors included in our Annual Report on Form 10-K for the year ended December 31, 2019 filed with the Securities and Exchange Commission on March 27, 2020.

Risks Relating to Our Financial Condition and Capital Requirements

We are an early stage molecular oncology diagnostics company with a history of net losses; we expect to incur net losses in the future, and we may never achieve sustained profitability.

We have historically incurred substantial net losses, including net losses of $25.1 million for year ended December 31, 2019 and $14.8 million for the six months ended June 30, 2020, respectively, and we have never been profitable. At June 30, 2020, our accumulated deficit was approximately $260.6 million. Before 2008, we were pursuing a business plan relating to fetal genetic disorders and other fields, all of which were unrelated to cancer diagnostics. The portion of our accumulated deficit that relates to the period from inception through December 31, 2007 is approximately $66.5 million.

We expect our losses to continue as a result of costs relating to our laboratory operations as well as increased sales and marketing costs and ongoing research and development expenses. These losses have had, and will continue to have, an adverse effect on our working capital, total assets and stockholders' equity. Because of the numerous risks and uncertainties associated with our commercialization efforts, we are unable to predict when we will become profitable, and we may never become profitable. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our inability to achieve and then maintain profitability would negatively affect our business, financial condition, results of operations and cash flows.

We need to raise additional capital to continue as a going concern.

We expect to continue to incur losses for the foreseeable future and will have to raise additional capital to fund our planned operations and to meet our long-term business objectives. As a result, there is substantial doubt about our ability to continue as a going concern unless we are able to successfully raise additional capital. Until we can generate significant cash from operations, including product and assay revenues, we expect to continue to fund our operations with the proceeds from offerings of our equity securities or debt, or transactions involving product development, technology licensing or collaboration. We can provide no assurances that any sources of a sufficient amount of financing will be available to us on favorable terms, if at all. General market conditions resulting from ongoing issues arising from the COVID-19 pandemic, as well as market conditions affecting companies in the life sciences industry in general, may make it difficult for us to obtain financing from the capital markets on attractive terms, or at all. Failure to raise additional capital in sufficient amounts would significantly impact our ability to continue as a going concern. The actual amount of funds that we will need and the timing of any such investment will be determined by many factors, some of which are beyond our control.

Risks Relating to Our Business and Strategy

If we are unable to increase sales of our current products, assays and services or successfully develop and commercialize other products, assays and services, our revenues will be insufficient for us to achieve profitability.

We currently derive substantially all of our revenues from sales of diagnostic assays. We began offering our assays through our Clinical Laboratory Improvement Amendments of 1988, or CLIA, certified, CAP accredited, and state-licensed laboratory in 2014. Additionally, the sale of our proprietary blood collection tubes, or BCTs commenced in June 2018, which allow for the intact transport of liquid biopsy samples for research use only, or RUO, from regions around the world. We are in varying stages of research and development for other products and diagnostic assays that we may offer. If we are unable to increase sales of our existing products and diagnostic assays or successfully develop and commercialize other products and diagnostic assays, we will not produce sufficient revenues to become profitable.

If we are unable to execute our sales and marketing strategy for our products and diagnostic assays and are unable to gain acceptance in the market, we may be unable to generate sufficient revenue to sustain our business.

We are an early stage molecular oncology diagnostics company and have engaged in only limited sales and marketing activities for the diagnostic assays we currently offer through our CLIA-certified, CAP accredited, and state-licensed laboratory. To date, our revenue has been insufficient to fund operations.

Although we believe that our current assays and our planned future assays, as well as our BCT product, represent a promising commercial opportunity, our products or assays may never gain significant acceptance in the marketplace and therefore may never generate substantial revenue or profits for us. We will need to establish a market for our products and diagnostic assays and build that market through physician education, awareness programs and the publication of clinical trial results. Gaining acceptance in medical communities requires, among other things, publications in leading peer-reviewed journals of results from studies using our current products, assays and services and/or our planned future products, assays and services. The process of publication in leading medical journals is subject to a peer review process and peer reviewers may not consider the results of our studies sufficiently novel or worthy of publication. Failure to have our studies published in peer-reviewed journals would limit the adoption of our current products, assays and services and our planned future products, assays and services.

Our ability to successfully market the products and diagnostic assays that we have developed, and may develop in the future, will depend on numerous factors, including:

- conducting clinical utility studies of such assays in collaboration with key thought leaders to demonstrate their use and value in important medical decisions such as treatment selection;
- whether our current or future partners, vigorously support our offerings;
- the success of our sales force;
- whether healthcare providers believe such diagnostic assays provide clinical utility;
- whether the medical community accepts that such diagnostic assays are sufficiently sensitive and specific to be meaningful in-patient care and treatment decisions;
- our ability to continually source raw materials, BCTs, shipping kits and other products that we sell or consume in our manufacturing process that are of sufficient quality and supply;
- our ability to continue to fund planned sales and marketing activities; and
- whether private health insurers, government health programs and other third-party payers will adopt liquid biopsy-based assays in their guidelines, or cover such diagnostic assays and, if so, whether they will adequately reimburse us.

The COVID-19 pandemic may also increase the risk of certain of the events described above and delay our development timelines. Failure to achieve widespread market acceptance of our current products, assays and services, as well as our planned future products, assays and services, would materially harm our business, financial condition and results of operations.

If we cannot develop products, assays and services to keep pace with rapid advances in technology, medicine and science, our operating results and competitive position could be harmed.

In recent years, there have been numerous advances in technologies relating to the diagnosis and treatment of cancer. Several new cancer drugs have been approved, and a number of new drugs in clinical development may increase patient survival time. There have also been advances in methods used to identify patients likely to benefit from these drugs based on analysis of biomarkers. We must continuously develop new products and diagnostic assays and enhance any existing products, assays and services to keep pace with evolving standards of care. Our current products, assays and services and our planned future products, assays and services could become obsolete unless we continually innovate and expand them to demonstrate benefit in the diagnosis, monitoring or prognosis of patients with cancer. New cancer therapies typically have only a few years of clinical data associated with them, which limits our ability to develop products and diagnostic assays based on, for example, biomarker analysis related to the appearance or development of resistance to those therapies. If we cannot adequately demonstrate the applicability of our current products, assays and services and our planned future products, assays and services to new treatments, by incorporating important biomarker analysis, sales of our products, assays and services could decline, which would have a material adverse effect on our business, financial condition and results of operations. The COVID-19 pandemic may also increase the risk of certain of the events described above and delay our development timelines.

If our current products, assays and services and our planned future products, assays and services do not continue to perform as expected, our operating results, reputation and business will suffer.

Our success depends on the market's confidence that we can continue to provide reliable, high-quality products and assay results. We believe that our customers are likely to be particularly sensitive to product or assay defects and errors. As a result, the failure of our current or planned future products or assays to perform as expected, including with respect to our ability to maintain the sensitivity, specificity, concordance or reproducibility of such assays, would significantly impair our reputation and the public image of our products and cancer assays, and we may be subject to legal claims arising from any defects or errors.

If our sole laboratory facility becomes damaged or inoperable, or we are required to vacate the facility, our ability to sell and provide our products and diagnostic assays and pursue our research and development efforts may be jeopardized.

We currently derive our revenues from our diagnostic assays conducted in our CLIA-certified, CAP accredited, and state-licensed laboratory. We do not have any clinical reference laboratory facilities other than our facility in San Diego, California. Our facilities and equipment could be harmed or rendered inoperable by natural or man-made disasters, including fire, earthquake, flooding and power outages, which may render it difficult or impossible for us to sell our products or perform our diagnostic assays for some period of time. The inability to sell our current or planned future products, or to perform our current assays and our planned future assays, or the backlog of assays that could develop if our facility is inoperable for even a short period of time, may result in the loss of customers or harm to our reputation or relationships with scientific or clinical collaborators, and we may be unable to regain those customers or repair our reputation in the future. Furthermore, our facilities and the equipment we use to perform our research and development work could be costly and time-consuming to repair or replace.

The San Diego area has recently experienced serious fires and power outages and is considered to lie in an area with earthquake risk.

Additionally, a key component of our research and development process involves using biological samples as the basis for our diagnostic assay development. In some cases, these samples are difficult to obtain. If the parts of our laboratory facility where we store these biological samples were damaged or compromised, our ability to pursue our research and development projects, as well as our reputation, could be jeopardized. We carry insurance for damage to our property and the disruption of our business, but this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all.

Further, if our CLIA-certified, CAP accredited, and state-licensed laboratory became inoperable we may not be able to license or transfer our technology to another facility with the necessary qualifications, including state licensure and CLIA certification, under the scope of which our current assays and our planned future assays could be performed. Even if we find a facility with such qualifications to perform our assays, it may not be available to us on commercially reasonable terms.

****Our business is subject to risks arising from epidemic diseases, such as the recent global outbreak of COVID-19.***

COVID-19, which has been declared by the World Health Organization to be a pandemic, has spread across the globe and is impacting worldwide economic activity. A pandemic, including COVID-19 or other public health epidemic, poses the risk that we or our employees, contractors, suppliers, courier delivery services and other partners may be prevented from conducting business activities for an indefinite period of time, including due to spread of the disease within these groups or due to shutdowns that may be requested or mandated by governmental authorities. While it is not possible at this time to estimate the impact that COVID-19 could have on our business, the COVID-19 pandemic and mitigation measures have had and may continue to have an adverse impact on global economic conditions which could have an adverse effect on our business and financial condition, including impairing our ability to raise capital when needed. The continued spread of COVID-19 and the measures taken by the governments of countries affected could disrupt the supply chain of material needed for our assays, interrupt our ability to receive samples, impair our ability to perform or deliver the results from our tests, impede patient movement or interrupt healthcare services causing a decrease in test volumes, delay coverage decisions from Medicare and third party payors, delay ongoing and planned clinical trials involving our tests and have a material adverse effect on our business, financial condition and results of operations. In addition, as we are located in California, we are currently under a shelter-in-place mandate and many of our clients worldwide are similarly impacted. As a healthcare provider, we are allowed to remain open in compliance with the shelter-in-place mandate and continue to provide critical information for patients diagnosed with cancer. We estimate that the COVID-19 pandemic led to an approximate 15 to 25% decline in commercial volume from current customers, and also impacted opportunities for us to gain new customers with the closing of many physician offices and labs. Beginning the week of March 16, 2020, substantially all of our workforce began working from home either all or substantially all of the time, except for a limited number of staff in our clinical laboratory. The effects of the stay-at-home orders and our work-from-home policies may negatively impact productivity, disrupt our business and delay our development programs and regulatory timelines and negatively impact our commercial activities, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course. Moreover, the COVID-19 pandemic continues to evolve, and the extent to which the COVID-19 pandemic may impact our business, results of operations and financial position will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and social distancing

in the United States and other countries, business closures or business disruptions, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease.

If we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenues or achieve and sustain profitability.

Our principal competition comes from mainstream diagnostic methods, used by medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians for many years, which focus on tumor tissue analysis. The methods or behavior of medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians may be difficult to change regarding the use of our CTC and ctDNA assays, including molecular diagnostic assays, in their practices in conjunction with or instead of tissue biopsies and analysis. In addition, companies offering capital equipment, BCTs, and kits or reagents to local pathology laboratories or laboratory supply distributors represent another source of potential competition. These kits are used directly by the pathologist, which can facilitate adoption. Historically, we have focused our marketing and sales efforts on medical oncologists rather than pathologists, although commencing in October 2017, our Empower TC offering 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.

We also face competition from companies that offer products or are conducting research to develop products for CTC or ctDNA assays in various cancers. CTC and ctDNA products, assays and services represent a new area of science and we cannot predict what products or assays others will develop that may compete with or provide results similar or superior to the results we are able to achieve with the products or assays we develop. Competitors include but are not limited to companies such as Qiagen, Roche, Guardant Health, Cancer Genetics, Atossa, Agena Bioscience, Precipio, Illumina, Grail, Precision for Medicine, EPIC Sciences, Clearbridge Biomedics, Biodesix, Thermo Fisher Scientific, Foundation Medicine, Neogenomics, Cynvenio Biosystems, Genomic Health, Fluxion Biosciences, RareCells Diagnostics, ScreenCell, Menarini Silicon Biosystems, Alere (Adnagen), Sysmex, Natera, Inc., Circulogen, Angle PLC, Caris Life Sciences, Archer DX, DiaCarta and Tempus. Some of these groups, in addition to operating research and development laboratories, are establishing CLIA-certified testing laboratories while others are focused on selling equipment and reagents.

There are a number of companies which are focused on the oncology diagnostic market, who while not currently offering CTC or ctDNA assays are selling to the medical oncologists and pathologists and could develop or offer CTC or ctDNA assays. Large laboratory services companies such as Quest and LabCorp provide more generalized cancer diagnostic assays and testing but could also offer a CTC or ctDNA assay service. Companies like Abbott, Danaher and others could develop equipment or reagents in the future as well. Currently, companies like Streck, Roche and Exact Sciences offer BCTs, and in the future, companies like Covidien, Beckton Dickinson, Thermo Fisher, and other large medical device companies may develop BCTs as well.

There are a number of companies that are focused on the oncology diagnostic market such as Illumina, Biorad, Sysmex, Qiagen and Thermo Fisher Scientific that are selling equipment and reagents kits for ctDNA assays and assay panels to laboratories that are developing tests that are marketed to medical oncologists and pathologists.

Some of our present and potential competitors have widespread brand recognition and substantially greater financial and technical resources and development, production and marketing capabilities than we do. Others may develop lower-priced, less complex assays that payers, medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians could view as functionally equivalent to our current or planned future assays, which could force us to lower the list price of our assays and impact our operating margins and our ability to achieve and maintain profitability. In addition, technological innovations that result in the creation of enhanced products or diagnostic tools that are more sensitive or specific than ours may enable other clinical laboratories, hospitals, physicians or medical providers to provide specialized products or diagnostic assays similar to ours in a more patient-friendly, efficient or cost-effective manner than is currently possible. If we cannot compete successfully against current or future competitors, we may be unable to increase or create market acceptance and sales of our current or planned future products or assays, which could prevent us from increasing or sustaining our revenues or achieving or sustaining profitability.

We expect that biopharmaceutical companies will increasingly focus attention and resources on the personalized cancer diagnostic sector as the potential and prevalence of molecularly targeted oncology therapies approved by the FDA along with companion diagnostics increases. For example, the FDA has approved three such agents: Xalkori® from Pfizer Inc. along with its companion anaplastic lymphoma kinase FISH test from Abbott Laboratories, Inc., Zelboraf® from Daiichi-Sankyo/Genentech/Roche along with its companion BRAF kinase V600 mutation test from Roche Molecular Systems, Inc. and Tafinlar® from GlaxoSmithKline along with its companion BRAF kinase V600 mutation test from bioMerieux. Since companion diagnostic tests are part of FDA labeling, non-FDA cleared tests such as ours would be considered an off-label use and this may limit our access to this market segment.

Additionally, projects related to cancer diagnostics and particularly genomics have received increased government funding, both in the United States and internationally. As more information regarding cancer genomics becomes available to the public, we anticipate that more products aimed at identifying targeted treatment options will be developed and that these products may compete with ours. In

addition, competitors may develop their own versions of our current or planned future products or assays in countries where we did not apply for patents or where our patents have not issued and compete with us in those countries, including encouraging the use of their product or assay by physicians or patients in other countries.

We expect to continue to incur significant expenses to develop and market products and diagnostic assays, which could make it difficult for us to achieve and sustain profitability.

In recent years, we have incurred significant costs in connection with the development of our products and diagnostic assays. For the year ended December 31, 2019, and the six months ended June 30, 2020 our research and development expenses were $4.7 million and $2.8 million, respectively, and our sales and marketing expenses were $5.9 million and $2.8 million, respectively. We expect our expenses to continue to increase for the foreseeable future as we conduct studies of our current products, assays and services and our planned future products, assays and services, continue to establish our sales and marketing organization, drive adoption of and reimbursement for our products and diagnostic assays and develop new products, assays and services. As a result, we need to generate significant revenues in order to achieve sustained profitability.

If medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians decide not to order our current or planned future assays, or if laboratory supply distributors or their customers decide not to order our current or planned future products, we may be unable to generate sufficient revenue to sustain our business.

To generate demand for our current products, assays and services and our planned future products, assays and services, we will need to educate medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists, and other physicians and other health care professionals, as well as laboratory and medical equipment suppliers, on the clinical utility, benefits and value of the products, assays and services we provide through published papers, presentations at scientific conferences, educational programs and one-on-one education sessions by members of our sales force. In addition, we need to educate medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians of our ability to obtain and maintain coverage and adequate reimbursement from third-party payers. We need to hire additional commercial, scientific, technical and other personnel to support this process. Unless an adequate number of medical practitioners order our current assays and our planned future assays, or unless an adequate number of laboratory supply distributors order our current and planned future products, we will likely be unable to create demand in sufficient volume for us to achieve sustained profitability. Our ability to interface with physicians and other medical professionals has been impacted and will likely continue to be impacted by the ongoing COVID-19 pandemic.

Clinical utility studies are important in demonstrating to both customers and payers an assay's clinical relevance and value. If we are unable to identify collaborators willing to work with us to conduct clinical utility studies, or the results of those studies do not demonstrate that an assay provides clinically meaningful information and value, commercial adoption of such assay may be slow, which would negatively impact our business.

Clinical utility studies show when and how to use a clinical test or assay and describe the particular clinical situations or settings in which it can be applied and the expected results. Clinical utility studies also show the impact of the test or assay results on patient care and management. Clinical utility studies are typically performed with collaborating oncologists or other physicians at medical centers and hospitals, analogous to a clinical trial, and generally result in peer-reviewed publications. Sales and marketing representatives use these publications to demonstrate to customers how to use a clinical test or assay, as well as why they should use it. These publications are also used with payers to obtain coverage for a test or assay, helping to assure there is appropriate reimbursement.

We need to conduct additional studies for our assays, increase assay adoption in the marketplace and obtain coverage and adequate reimbursement. Should we not be able to perform these studies, or should their results not provide clinically meaningful data and value for medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians, adoption of our assays could be impaired, and we may not be able to obtain coverage and adequate reimbursement for them. The COVID-19 pandemic may also increase the risk of certain of the events described above and delay our development timelines.

The loss of key members of our executive management team could adversely affect our business.

Our success in implementing our business strategy depends largely on the skills, experience and performance of key members of our executive management team and others in key management positions. The collective efforts of each member of the executive team and others working with them as a team are critical to us as we continue to develop our technologies, products, services, assays and research and development and sales programs. As a result of the difficulty in locating qualified new management, the loss or incapacity of existing members of our executive management team could adversely affect our operations. If we were to lose one or more of these key employees, we could experience difficulties in finding qualified successors, competing effectively, developing our technologies and implementing our business strategy. Our executive management team each have employment agreements, however, the existence of an employment agreement does not guarantee retention of members of our executive management team and we may not be able to retain those individuals for the duration of or beyond the end of their respective terms. We do not maintain "key person" life insurance on any of our employees.

In addition, we rely on collaborators, consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our collaborators, consultants and advisors are generally employed by employers other than us and may have commitments under agreements with other entities that may limit their availability to us.

The loss of a key employee, the failure of a key employee to perform in his or her current position or our inability to attract and retain skilled employees could result in our inability to continue to grow our business or to implement our business strategy.

There is a scarcity of experienced professionals in our industry. If we are not able to retain and recruit personnel with the requisite technical skills, we may be unable to successfully execute our business strategy.

The specialized nature of our industry results in an inherent scarcity of experienced personnel in the field. Our future success depends upon our ability to attract and retain highly skilled personnel, including scientific, technical, commercial, business, regulatory and administrative personnel, necessary to support our anticipated growth, develop our business and perform certain contractual obligations. Given the scarcity of professionals with the scientific knowledge that we require and the competition for qualified personnel among life science businesses, we may not succeed in attracting or retaining the personnel we require to continue and grow our operations.

Our failure to continue to attract, hire and retain a sufficient number of qualified sales professionals would hamper our ability to increase demand for our products and diagnostic assays, to expand geographically and to successfully commercialize any other products or assays we may develop.

To succeed in selling our products and diagnostic assays and any other products or assays that we are able to develop, we must expand our sales force in the United States and/or internationally by recruiting additional sales representatives with extensive experience in oncology and established relationships with medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists, oncology nurses, and other physicians and hospital personnel, as well as laboratory supply distributors. To achieve our marketing and sales goals, we will need to continue to build our sales and commercial infrastructure. Sales professionals with the necessary technical and business qualifications are in high demand, and there is a risk that we may be unable to attract, hire and retain the number of sales professionals with the right qualifications, scientific backgrounds and relationships with decision-makers at potential customers needed to achieve our sales goals. We expect to face competition from other companies in our industry, some of whom are much larger than us and who can pay greater compensation and benefits than we can, in seeking to attract and retain qualified sales and marketing employees. If we are unable to hire and retain qualified sales and marketing personnel, our business will suffer.

Our dependence on commercialization partners for sales of products, assays and services could limit our success in realizing revenue growth.

We intend to grow our business through the use of commercialization partners for the sales, marketing and commercialization of our current products, assays and services, as well as our planned future products, assays and services, and to do so we must enter into agreements with these partners to sell, market or commercialize our products, assays and services. These agreements may contain exclusivity provisions and generally cannot be terminated without cause during the term of the agreement. We may need to attract additional partners to expand the markets in which we sell products or assays. These partners may not commit the necessary resources to market and sell our products and diagnostics assays to the level of our expectations, and we may be unable to locate suitable alternatives should we terminate our agreement with such partners or if such partners terminate their agreement with us.

If current or future commercialization partners do not perform adequately, or we are unable to locate commercialization partners, we may not realize revenue growth.

We depend on third parties for the supply of blood samples and other biological materials that we use in our research and development efforts. If the costs of such samples and materials increase or our third-party suppliers terminate their relationship with us, our business may be materially harmed.

We have relationships with suppliers and institutions that provide us with blood samples and other biological materials that we use in developing and validating our current assays and our planned future assays. If one or more suppliers terminate their relationship with us or are unable to meet our requirements for samples, we will need to identify other third parties to provide us with blood samples and biological materials, which could result in a delay in our research and development activities and negatively affect our business. In addition, as we grow, our research and academic institution collaborators may seek additional financial contributions from us, which may negatively affect our results of operations. To the extent that the third parties supplying us with blood samples or other biological materials are impacted by the COVID-19 pandemic, our costs and availability of such supplies may be impacted.

We currently rely on third-party suppliers for our BCTs, shipping kits, and critical materials needed to perform our current assays, as well as our planned future products, assays and services, and any problems experienced by them could result in a delay or interruption of their supply to us.

We currently purchase our BCTs and raw materials for our microfluidic channels and assay reagents under purchase orders and do not have long-term contracts with most of the suppliers of these materials. If suppliers were to delay or stop producing our BCTs, shipping kits, materials or reagents, or if the prices they charge us were to increase significantly, or if they elected not to sell to us, we would need to identify other suppliers. We could experience delays in obtaining BCTs and shipping kits, manufacturing the microfluidic channels, or performing assays while finding another acceptable supplier, which could impact our results of operations. The changes could also result in increased costs associated with qualifying the new BCTs, shipping kits, materials or reagents and in increased operating costs. Further, any prolonged disruption in a supplier's operations could have a significant negative impact on our ability to perform diagnostic assays in a timely manner and sell our products. If our third-party suppliers' operations are impacted by the COVID-19 pandemic, we may experience supply delays or interruptions.

Some of the components used in our current or planned future products are currently sourced from a supplier for which alternative suppliers exist but we have not validated the products of such alternative suppliers, and substitutes for these components might not be able to be obtained easily or may require substantial design or manufacturing modifications. Any significant problem experienced by any one of our suppliers may result in a delay or interruption in the supply of components to us until that supplier cures the problem or an alternative source of the component is located and qualified. Any delay or interruption would likely lead to a delay or interruption in our manufacturing operations or product sales. The inclusion of substitute components must meet our product specifications and could require us to qualify the new supplier with the appropriate government regulatory authorities.

If we were sued for product liability or professional liability, we could face substantial liabilities that exceed our resources.

The marketing, sale and use of our products and current assays, as well our planned future products, assays and services, could lead to the filing of product liability claims against us if someone alleges that our products or assays failed to perform as designed. We may also be subject to liability for errors in the assay results we provide to physicians or for a misunderstanding of, or inappropriate reliance upon, the information we provide. A product liability or professional liability claim could result in substantial damages and be costly and time-consuming for us to defend.

Although we believe that our existing product and professional liability insurance is adequate, our insurance may not fully protect us from the financial impact of defending against product liability or professional liability claims. Any product liability or professional liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability lawsuit could damage our reputation, result in the recall of products or assays, or cause current partners to terminate existing agreements and potential partners to seek other partners, any of which could impact our results of operations.

If we use biological and hazardous materials in a manner that causes injury, we could be liable for damages.

Our activities currently require the controlled use of potentially harmful biological materials and chemicals. We cannot eliminate the risk of accidental contamination or injury to employees or third parties from the use, storage, handling or disposal of these materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our resources or any applicable insurance coverage we may have. Additionally, we are subject to, on an ongoing basis, federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. The cost of compliance with these laws and regulations may become significant and could have a material adverse effect on our financial condition, results of operations and cash flows. In the event of an accident or if we otherwise fail to comply with applicable regulations, we could lose our permits or approvals or be held liable for damages or penalized with fines.

We may acquire other businesses or form joint ventures or make investments in other companies or technologies that could harm our operating results, dilute our stockholders' ownership, increase our debt or cause us to incur significant expense.

As part of our business strategy, we may pursue acquisitions of businesses and assets. We also may pursue strategic alliances and joint ventures that leverage our core technology and industry experience to expand our offerings or distribution. We have no experience with acquiring other companies and limited experience with forming strategic alliances and joint ventures. We may not be able to find suitable partners or acquisition candidates, and we may not be able to complete such transactions on favorable terms, if at all. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Any future acquisitions also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could have a material adverse effect on our financial condition, results of operations and cash flows. Integration of an acquired company also may disrupt ongoing operations and require management resources that would otherwise focus on developing our existing business. We may experience losses related to investments in other companies, which could have a material negative effect on our results of operations. We may not identify or complete these transactions in a timely

manner, on a cost-effective basis, or at all, and we may not realize the anticipated benefits of any acquisition, technology license, strategic alliance or joint venture.

To finance any acquisitions or joint ventures, we may choose to issue shares of our common stock as consideration, which would dilute the ownership of our stockholders. If the price of our common stock is low or volatile, we may not be able to acquire other companies or fund a joint venture project using our stock as consideration. Alternatively, it may be necessary for us to raise additional funds for acquisitions through public or private financings. Additional funds may not be available on terms that are favorable to us, or at all.

If we cannot support demand for our current products, assays and services, as well as our planned future products, assays and services, including successfully managing the evolution of our laboratory service, our business could suffer.

As our product and assay volume grows, we will need to increase our assay capacity, implement automation, increase our scale and related processing, customer service, billing, collection and systems process improvements and expand our internal quality assurance program and technology to support assays on a larger scale. Examples of challenges we may face include, but are not limited to, maintaining the same validated sensitivity in our assays for both CTC and ctDNA analysis as our assay volume increases. We will also need additional clinical laboratory scientists and other scientific and technical personnel to process these additional assays. Any increases in scale, related improvements and quality assurance may not be successfully implemented and appropriate personnel may not be available. As additional products, assays and services are commercialized, we may need to bring new equipment on line, implement new systems, technology, controls and procedures and hire personnel with different qualifications. Failure to implement or maintain necessary procedures or to hire the necessary personnel could result in a higher cost of processing or an inability to meet market demand. We cannot assure you that we will be able to perform assays on a timely basis, or procure BCTs, shipping kits or other materials we sell, at a level consistent with demand, that our efforts to scale our commercial operations will not negatively affect the quality of our assay results, or that we will respond successfully to the growing complexity of our operations. If we encounter difficulty meeting market demand or quality standards for our current products, assays and services and our planned future products, assays and services, including with respect to our assays our ability to maintain the sensitivity, specificity, concordance and reproducibility of such assays, our reputation could be harmed, and our future prospects and business could suffer, which may have a material adverse effect on our financial condition, results of operations and cash flows.

Billing for our diagnostic assays is complex, and we must dedicate substantial time and resources to the billing process to be paid.

Billing for clinical laboratory assay services is complex, time-consuming and expensive. Depending on the billing arrangement and applicable law, we bill various payers, including Medicare, insurance companies and patients, all of which have different billing requirements. We generally bill third-party payers for our diagnostic assays and pursue reimbursement on a case-by-case basis where pricing contracts are not in place. To the extent laws or contracts require us to bill patient co-payments or co-insurance, we must also comply with these requirements. We may also face increased risk in our collection efforts, including potential write-offs of doubtful accounts and long collection cycles, which could adversely affect our business, results of operations and financial condition.

Several factors make the billing process complex, including:

- differences between the list price for our assays and the reimbursement rates of payers;
- compliance with complex federal and state regulations related to billing Medicare;
- risk of government audits related to billing Medicare;
- disputes among payers as to which party is responsible for payment;
- differences in coverage and in information and billing requirements among payers, including the need for prior authorization and/or advanced notification;
- the effect of patient co-payments or co-insurance;
- changes to billing codes and/or coverage policies that apply to our assays;
- incorrect or missing billing information; and
- the resources required to manage the billing and claims appeals process.

We use standard industry billing codes, known as Current Procedural Terminology, or CPT, codes, to bill for our diagnostic assays. These codes can change over time. When codes change, there is a risk of an error being made in the claim adjudication process. These errors can occur with claims submission, third-party transmission or in the processing of the claim by the payer. Claim adjudication errors may result in a delay in payment processing or a reduction in the amount of the payment received. Coding changes, therefore, may have an adverse effect on our revenues. There can be no assurance that payers will recognize these codes in a timely manner or

that the process of transitioning to such a code and updating their billing systems and ours will not result in errors, delays in payments and a related increase in accounts receivable balances.

As we introduce new assays, we will need to add new codes to our billing process as well as our financial reporting systems. Failure or delays in effecting these changes in external billing and internal systems and processes could negatively affect our collection rates, revenue and cost of collecting.

Additionally, our billing activities require us to implement compliance procedures and oversight, train and monitor our employees, challenge coverage and payment denials, assist patients in appealing claims, and undertake internal audits to evaluate compliance with applicable laws and regulations as well as internal compliance policies and procedures. Payers also conduct external audits to evaluate payments, which add further complexity to the billing process. If the payer makes an overpayment determination, there is a risk that we may be required to return some portion of prior payments we have received. These billing complexities, and the related uncertainty in obtaining payment for our assays, could negatively affect our revenue and cash flow, our ability to achieve profitability, and the consistency and comparability of our results of operations.

We rely on third-party billing provider software, and an in-house billing function, to transmit claims to payers, and any delay in transmitting claims could have an adverse effect on our revenue.

While we manage the overall processing of claims, we rely on third-party billing provider software to transmit the actual claims to payers based on the specific payer billing format. We have previously experienced delays in claims processing when our third-party provider made changes to its invoicing system. Additionally, coding for diagnostic assays may change, and such changes may cause short-term billing errors that may take significant time to resolve. If claims are not submitted to payers on a timely basis or are erroneously submitted, or if we are required to switch to a different software provider to handle claim submissions, we may experience delays in our ability to process these claims and receipt of payments from payers, or possibly denial of claims for lack of timely submission, which would have an adverse effect on our revenue and our business.

We may encounter manufacturing problems or delays that could result in lost revenue.

We currently manufacture our proprietary microfluidic channels at our San Diego facility and intend to continue to do so. We believe we currently have adequate manufacturing capacity for our microfluidic channels. If demand for our current products, assays and services and our planned future products, assays and services increases significantly, we will need to either expand our manufacturing capabilities or outsource to other manufacturers. If we or third-party manufacturers engaged by us fail to manufacture and deliver our microfluidic channels or certain reagents in a timely manner, our relationships with our customers could be seriously harmed. We cannot assure you that manufacturing, or quality control problems will not arise as we attempt to increase the production of our microfluidic channels or reagents or that we can increase our manufacturing capabilities and maintain quality control in a timely manner or at commercially reasonable costs. If we cannot manufacture our microfluidic channels consistently on a timely basis because of these or other factors, it could have a significant negative impact on our ability to perform assays and generate revenues. We may encounter supply chain constraints in obtaining the raw materials needed to manufacture our products due to the impact of the COVID-19 pandemic.

International expansion of our business would expose us to business, regulatory, political, operational, financial and economic risks associated with doing business outside of the United States.

Our business strategy is to pursue increased international expansion, including partnering with academic and commercial testing laboratories, and introducing our technology outside the United States as part of in vitro diagnostic (IVD) test kits and/or testing systems utilizing our technologies. Doing business internationally involves a number of risks, including:

- multiple, conflicting and changing laws and regulations such as tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us or our distributors to obtain regulatory approvals for the sale or use of our current products or assays and our planned future products or assays in various countries;
- difficulties in managing foreign operations;
- complexities associated with managing government payer systems, multiple payer-reimbursement regimes or self-pay systems;
- logistics and regulations associated with shipping blood samples, including infrastructure conditions and transportation delays;
- limits on our ability to penetrate international markets if our current products or assays and our planned future products or assays cannot be processed by an appropriately qualified local laboratory;
- financial risks, such as longer payment cycles, difficulty enforcing contracts and collecting accounts receivable and exposure to foreign currency exchange rate fluctuations;

- reduced protection for intellectual property rights, or lack of them in certain jurisdictions, forcing more reliance on our trade secrets, if available;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions; and
- failure to comply with the Foreign Corrupt Practices Act, including its books and records provisions and its anti-bribery provisions, by maintaining accurate information and control over sales activities and distributors' activities.

Any of these risks, if encountered, could significantly harm our future international expansion and operations and consequently, have a material adverse effect on our financial condition, results of operations and cash flows.

General economic or business conditions may have a negative impact on our business.

Continuing concerns over United States health care reform legislation and energy costs, geopolitical issues, the availability and cost of credit and government stimulus programs in the United States and other countries have contributed to increased volatility and diminished expectations for the global economy. These factors, combined with low business and consumer confidence and high unemployment, precipitated an economic slowdown and recession. If the economic climate deteriorates, our business, including our access to patient samples and the addressable market for products or diagnostic assays that we may successfully develop, as well as the financial condition of our suppliers and our third-party payers, could be adversely affected, resulting in a negative impact on our business, financial condition and results of operations.

Intrusions into our computer systems could result in compromise of confidential information.

Despite the implementation of security measures, our technology or systems that we interface with, including the Internet and related systems, may be vulnerable to physical break-ins, hackers, improper employee or contractor access, computer viruses, programming errors, or similar problems. Any of these might result in confidential medical, business or other information of other persons or of ourselves being revealed to unauthorized persons.

There are a number of state, federal and international laws protecting the privacy and security of health information and personal data. The Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, amended the privacy and security provisions of the Health Insurance Portability and Accountability Act, or HIPAA. HIPAA imposes limitations on the use and disclosure of an individual's healthcare information by certain healthcare providers, healthcare clearinghouses, and health insurance plans, collectively referred to as covered entities, and also grants individuals rights with respect to their health information. HIPAA also imposes compliance obligations and corresponding penalties for non-compliance on individuals and entities that provide services involving the creation, receipt, maintenance or transmission of individually identifiable health information for or on behalf of covered entities, collectively referred to as business associates. HITECH also made significant increases in the penalties for improper use or disclosure of an individual's health information under HIPAA and extended enforcement authority to state attorneys general. As amended by HITECH and subsequently by the final omnibus rule adopted in 2013, or Final Omnibus Rule, HIPAA also imposes notification requirements on covered entities in the event that certain health information has been inappropriately accessed or disclosed: notification requirements to individuals, federal regulators, and in some cases, notification to local and national media. Notification is not required under HIPAA if the health information that is improperly used or disclosed is deemed secured in accordance with encryption or other standards developed by the U.S. Department of Health and Human Services, or HHS. Most states have laws requiring notification of affected individuals and/or state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA. Many state laws impose significant data security requirements, such as encryption or mandatory contractual terms to ensure ongoing protection of personal information. Activities outside of the United States implicate local and national data protection standards, impose additional compliance requirements and generate additional risks of enforcement for non-compliance. For example, if we obtain certain personal information regarding residents in the European Union, we may be subject to the European Union General Data Protection Regulation. We may be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws, to protect against security breaches and hackers or to alleviate problems caused by such breaches.

We depend on our information technology and telecommunications systems, and any failure of these systems could harm our business.

We depend on information technology and telecommunications systems for significant aspects of our operations. In addition, our third-party billing software provider depends upon telecommunications and data systems provided by outside vendors and information we provide on a regular basis. These information technology and telecommunications systems support a variety of functions, including assay processing, sample tracking, quality control, customer service and support, billing and reimbursement, research and development activities and our general and administrative activities. Information technology and telecommunications systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious human acts and natural disasters. Moreover, despite network security and back-up measures, some of our servers are potentially vulnerable to physical or

electronic break-ins, computer viruses and similar disruptive problems. Despite the precautionary measures we have taken to prevent unanticipated problems that could affect our information technology and telecommunications systems, failures or significant downtime of our information technology or telecommunications systems or those used by our third-party service providers could prevent us from processing assays, providing assay results to medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists, other physicians, billing payers, processing reimbursement appeals, handling patient or physician inquiries, conducting research and development activities and managing the administrative aspects of our business. Any disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have an adverse effect on our business.

Regulatory Risks Relating to Our Business

Healthcare policy changes, including recently enacted legislation reforming the U.S. health care system, may have a material adverse effect on our financial condition, results of operations and cash flows.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, enacted in March 2010, makes a number of substantial changes in the way health care is financed by both governmental and private insurers.

Although some of these provisions may negatively impact payment rates for clinical laboratory tests, the ACA also extends coverage to over 30 million previously uninsured people, which resulted in an increase in the demand for our current assays and our planned future assays. There remain judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. Since January 2017, the President of the United States has signed executive orders and other directives designed to delay, circumvent, or loosen certain requirements mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed repeal legislation, it has enacted laws that modify certain provisions of the ACA such as removing penalties effective January 1, 2019, for not complying with the ACA's individual mandate to carry health insurance and eliminating the implementation of certain ACA-mandated fees, including but not limited the Medical Device Excise Tax. On December 14, 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Cuts and Jobs Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case and has allotted one hour for oral arguments. It is unclear how this decision, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. The Protecting Access to Medicare Act of 2014, or PAMA, was signed to law, which, among other things, significantly altered the current payment methodology under the Medicare Clinical Laboratory Fee Schedule, or CLFS. Under the law, issued in 2016 and the reporting period beginning in 2017 and every three years thereafter (or annually in the case of advanced diagnostic laboratory tests), applicable clinical laboratories must report laboratory test payment data for each Medicare-covered clinical diagnostic laboratory test that it furnishes during the specified time period. The reported data must include the payment rate (reflecting all discounts, rebates, coupons and other price concessions) and the volume of each test that was paid by each private payer (including health insurance issuers, group health plans, Medicare Advantage plans and Medicaid managed care organizations). Effective January 1, 2018, the Medicare payment rate for each clinical diagnostic laboratory test is equal to the weighted median amount for the test from the most recent data collection period. The payment rate applies to laboratory tests furnished by a hospital laboratory if the test is separately paid under the hospital outpatient prospective payment system. The PAMA rate changes to our tests that were impacted did not materially affect our payments beginning in 2018; however, we cannot predict how this may change future payment in coming years.

In January 2020, the Centers for Medicare & Medicaid Services, or CMS, announced that data reporting for clinical diagnostic laboratory tests is delayed by one year. Therefore, data that was supposed to be reported between January 1, 2020 and March 31, 2020 must now be reported between January 1, 2021 and March 31, 2021. Covered laboratories must report data from the original data collection period of January 1, 2019 through June 30, 2019. Data reporting for these tests will then resume on a three-year cycle beginning in 2024. In addition, CMS updated the statutory phase-in provisions such that, for 2020, the rates for clinical diagnostic laboratory tests may not be reduced by more than 10% of the rates for 2019. Additionally, there will be a 15% reduction cap for each of 2021, 2022, and 2023.

Also, under PAMA, the Centers for Medicare & Medicaid Services, or CMS, is required to adopt temporary billing codes to identify new tests and new advanced diagnostic laboratory tests that have been cleared or approved by the FDA. For an existing test that is cleared or approved by the FDA and for which Medicare payment is made as of April 1, 2014, CMS is required to assign a unique billing code if one has not already been assigned by the agency. In addition to assigning the code, CMS is required to publicly report payment for the tests. Further, under PAMA, CMS is required to adopt temporary billing codes to identify new tests and new

advanced diagnostic laboratory tests that have been cleared or approved by the FDA. We cannot determine at this time the full impact of PAMA on our business, financial condition and results of operations.

Additionally, the Budget Control Act of 2011, among other things, created the Joint Select Committee on Deficit Reduction to recommend proposals in spending reductions to Congress. The Joint Select Committee did not achieve its targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers and suppliers of up to 2% per fiscal year, starting in 2013, and, due to subsequent legislative amendments to the statute, will remain in effect through 2030 unless additional congressional action is taken. The Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020 and is designed to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2020, and extended the sequester by one year, through 2030. The full impact on our business the sequester law is uncertain. In addition, the Middle-Class Tax Relief and Job Creation Act of 2012, or MCTRJCA, mandated an additional change in Medicare reimbursement for clinical laboratory tests.

Some of our laboratory assay business is subject to the Medicare Physician Fee Schedule and, under the current statutory formula, the rates for these services are updated annually. For the past several years, the application of the statutory formula would have resulted in substantial payment reductions if Congress failed to intervene. In the past, Congress passed interim legislation to prevent the decreases. If Congress fails to intervene to prevent the negative update factor in future years, the resulting decrease in payment may adversely affect our revenue and results of operations. If in future years Congress does not adopt interim legislation to block or offset, and/or CMS does not moderate, any substantial CMS-proposed reimbursement reductions, the resulting decrease in payments from Medicare could adversely impact our revenues and results of operations.

In addition, it is possible that additional governmental action is taken to address the COVID-19 pandemic. For example, on April 18, 2020, CMS announced that qualified health plan issuers under the ACA may suspend activities related to the collection and reporting of quality data that would have otherwise been reported between May and June 2020 given the challenges healthcare providers are facing responding to the COVID-19 virus.

We cannot predict whether future health care initiatives will be implemented at the federal or state level, or how any future legislation or regulation may affect us. The expansion of government's role in the U.S. health care industry, and changes to the reimbursement amounts paid by Medicare and other payers for our current assays and our planned future assays, may reduce our profits, if any, and have a materially adverse effect on our business, financial condition, results of operations and cash flows. Moreover, Congress has proposed on several occasions to impose a 20% coinsurance payment requirement on patients for clinical laboratory tests reimbursed under the CLFS, which would require us to bill patients for these amounts. In the event that Congress were to ever enact such legislation, the cost of billing and collecting for our assays could often exceed the amount actually received from the patient.

Our commercial success could be compromised if hospitals or other clients do not pay our invoices or if third-party payers, including managed care organizations and Medicare, do not provide coverage and reimbursement, breach, rescind or modify their contracts or reimbursement policies or delay payments for our current assays and our planned future assays.

Medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians may not order our current assays and our planned future assays unless third-party payers, such as managed care organizations and government payers (e.g., Medicare and Medicaid), pay a substantial portion of the assay price. Coverage and reimbursement by a third-party payer may depend on a number of factors, including a payer's determination that assays using our technologies are:

- not experimental or investigational;
- medically necessary;
- appropriate for the specific patient;
- cost-effective;
- supported by peer-reviewed publications; and
- included in clinical practice guidelines.

Uncertainty surrounds third-party payer coverage and adequate reimbursement of any test incorporating new technology, including tests developed using our technologies. Technology assessments of new medical tests conducted by research centers and other entities may be disseminated to interested parties for informational purposes. Third-party payers and health care providers may use such technology assessments as grounds to deny coverage for a test or procedure. Technology assessments can include evaluation of clinical utility studies, which define how a test is used in a particular clinical setting or situation.

Because each payer generally determines for its own enrollees or insured patients whether to cover or otherwise establish a policy to reimburse our diagnostic assays, seeking payer approvals is a time-consuming and costly process. We cannot be certain that coverage

for our current assays and our planned future assays will be provided in the future by additional third-party payers or that existing agreements, policy decisions or reimbursement levels will remain in place or be fulfilled under existing terms and provisions. If we cannot obtain coverage and adequate reimbursement from private and governmental payers such as Medicare and Medicaid for our current assays, or new assays or assay enhancements that we may develop in the future, our ability to generate revenues could be limited, which may have a material adverse effect on our financial condition, results of operations and cash flow. Further, we may experience delays and interruptions in the receipt of payments from third-party payers due to missing documentation and/or other issues, which could cause delay in collecting our revenue.

In addition, to the extent that our assays are ordered for Medicare inpatients and outpatients, only the hospital may receive payment from the Medicare program for the technical component of pathology services and any clinical laboratory services that we perform, unless the testing is ordered at least 14 days after discharge and certain other requirements are met. We therefore must look to the hospital for payment for these services under these circumstances. If hospitals refuse to pay for the services or fail to pay in a timely manner, our ability to generate revenues could be limited, which may have a material adverse effect on our financial condition, results of operations and cash flow.

We expect to depend on Medicare and a limited number of private payers for a significant portion of our revenues and if these or other payers stop providing reimbursement or decrease the amount of reimbursement for our current assays and our planned future assays, our revenues could decline.

Approximately 38% and 34% of total net revenues during the year ended December 31, 2019 and the six months ended June 30, 2020, respectively, were associated with Medicare reimbursement. Approximately 21% and 29% of total net revenues during the year ended December 31, 2019 and six months ended June 30, 2020, respectively, were associated with Blue Cross Blue Shield reimbursement. We cannot assure you that, even if our current assays and our planned future assays are otherwise successful, our current assays and our planned future assays would, without such contracted payer reimbursement for the capture/enumeration portion of our assays, produce sufficient revenues to enable us to reach profitability and achieve our other commercial objectives.

Medicare and other third-party payers may change their coverage policies or cancel future contracts with us at any time, review and adjust the rate of reimbursement or stop paying for our assays altogether, which would reduce our total revenues. Payers have increased their efforts to control the cost, utilization and delivery of health care services. In the past, measures have been undertaken to reduce payment rates for and decrease utilization of clinical laboratory testing generally. Because of the cost-trimming trends, third-party payers that currently cover and provide reimbursement for our current assays and our planned future assays may suspend, revoke or discontinue coverage at any time, or may reduce the reimbursement rates payable to us. Any such action could have a negative impact on our revenues, which may have a material adverse effect on our financial condition, results of operations and cash flows.

In addition, we are currently considered a “non-contracted provider” by many private payers because we have not entered into a specific contract to provide diagnostic assays to their insured patients at specified rates of reimbursement. Additionally, a significant amount of our non-Medicare business (private payers) has historically not been contracted, and reimbursement for this business has historically not been at “in network” rates and has therefore been inconsistent. We first began to contract private payer networks in 2015, and since then our number of accessions treated as “in network” has increased as we continue to execute additional contracts, and reimbursement is improving. We are currently contracted with nine preferred provider organization networks, three large health plans, and five regional independent physician associations, and expect to continue to gain contracts in order to be considered as an “in-network” provider with additional plans. If we were to become a contracted provider with additional payers in the future, the amount of overall reimbursement we receive would likely decrease because we could be reimbursed less money per assay performed at a contracted rate than at a non-contracted rate, which could have a negative impact on our revenues. Further, we typically are unable to collect payments from patients beyond that which is paid by their insurance and will continue to experience lost revenue as a result.

Because of certain Medicare billing policies, we may not receive complete reimbursement for assays provided to Medicare patients. Medicare reimbursement revenues are an important component of our business model, and private payers sometimes look to Medicare determinations when making their own payment determinations; therefore, incomplete or inadequate reimbursement from Medicare would negatively affect our business.

Medicare has coverage policies that can be national or regional in scope. Coverage means that assay is approved as a benefit for Medicare beneficiaries. If there is no coverage, neither the supplier nor any other party, such as a reference laboratory, may receive reimbursement from Medicare for the service. There is currently no national coverage policy regarding the CTC enumeration portion of our assays. Because our laboratory is in California, the regional Medicare Administrative Contractor, or MAC, for California is the relevant MAC for all our assays. The previous MAC for California, Palmetto, which is contracted with CMS to administer the Molecular Diagnostic Services, or MolDx, program that sets guidelines for coding, coverage and reimbursement of molecular diagnostic assays, adopted a negative coverage policy for CTC enumeration. The current MAC for California, Noridian Healthcare Solutions, LLC, is adopting the coverage policies from Palmetto. Therefore, the enumeration portion of our assays is not currently covered, and we will receive no payment from Medicare for this portion of the service unless and until the coverage policy is changed. Although approximately 78% and 83% of all billable cases received during the year ended December 31, 2019 and the six months

ended June 30, 2020, respectively, relate to our Target-Selector™ biomarker assays, we continue to receive orders for traditional enumeration testing, which counts disease burden, and therefore the enumeration testing receives no payment from Medicare based upon the existing coverage decision. The CTC enumeration counts disease burden and is a prognostic assay, and although valuable, it does not meet many of the medical necessity requirements of Medicare and the payers. We intend to pursue payment for the capture portion of our CTC technology that allows us to run our diagnostic testing for some of our Target-Selector™ assays.

We cannot assure you that, even if our current assays and our planned future assays are otherwise successful, reimbursement for the currently Medicare, Blue Cross Blue Shield, and United Healthcare-covered portions of our current assays and our planned future assays would, without such contracted payer reimbursement for the capture/enumeration portion, produce sufficient revenues to enable us to reach profitability and achieve our other commercial objectives.

The processing of Medicare claims is subject to change at CMS' discretion at any time. Cost containment initiatives may be a threat to Medicare reimbursement levels (including for the covered components of our current assays and our planned future assays, including FISH analysis and molecular assays) for the foreseeable future.

Long payment cycles of Medicare, Medicaid and/or other third-party payers, or other payment delays, could hurt our cash flows and increase our need for working capital.

Medicare and Medicaid have complex billing and documentation requirements that we must satisfy in order to receive payment, and the programs can be expected to carefully audit and monitor our compliance with these requirements. We must also comply with numerous other laws applicable to billing and payment for healthcare services, including, for example, privacy laws. Failure to comply with these requirements may result in, among other things, non-payment, refunds, exclusion from government healthcare programs, and civil or criminal liabilities, any of which may have a material adverse effect on our revenues and earnings. In addition, failure by third-party payers to properly process our payment claims in a timely manner could delay our receipt of payment for our products and services, which may have a material adverse effect on our cash flows.

Complying with numerous regulations pertaining to our business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties.

We are subject to CLIA, a federal law regulating clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. Our clinical laboratory must be certified under CLIA in order for us to perform testing on human specimens. CLIA is intended to ensure the quality and reliability of clinical laboratories in the United States by mandating specific standards in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management, quality control, quality assurance and inspections. We have a current certificate of accreditation under CLIA to perform high complexity testing, and our laboratory is accredited by the College of American Pathologists, or CAP, one of six CLIA-approved accreditation organizations. To renew this certificate, we are subject to survey and inspection every two years. Moreover, CLIA and CAP inspectors may make periodic inspections of our clinical laboratory outside of the renewal process. The failure to comply with CLIA or CAP requirements can result in enforcement actions, including the revocation, suspension, or limitation of our CLIA and/or CAP certificate of accreditation, as well as a directed plan of correction, state on-site monitoring, civil money penalties, civil injunctive suit and/or criminal penalties. We must maintain CLIA compliance and certification to be eligible to bill for assays provided to Medicare beneficiaries. If we were to be found out of compliance with CLIA program requirements and subjected to sanctions, our business and reputation could be harmed. Even if it were possible for us to bring our laboratory back into compliance, we could incur significant expenses and potentially lose revenue in doing so.

In addition, our laboratory is located in California and is required by state law to have a California state license; as we expand our geographic focus, we may need to obtain laboratory licenses from additional states. California laws establish standards for operation of our clinical laboratory, including the training and skills required of personnel and quality control. In addition, we hold licenses from the states of Pennsylvania, Maryland and Rhode Island to test specimens from patients in those states or received from ordering physicians in those states. In addition, our clinical reference laboratory is required to be licensed on a product-specific basis by New York as an out of state laboratory and our products, as LDTs, must be approved by the New York State Department of Health before they are offered in New York. As part of this process, the State of New York requires validation of our assays. We currently do not have the necessary New York license, but we are in the process of addressing the requirements for licensure in New York. Other states may have similar requirements or may adopt similar requirements in the future. Finally, we may be subject to regulation in foreign jurisdictions if we seek to expand international distribution of our assays outside the United States.

If we were to lose our CLIA certification or California laboratory license, whether as a result of a revocation, suspension or limitation, we would no longer be able to offer our assays, which would limit our revenues and harm our business. If we were to lose, or fail to obtain, a license in any other state where we are required to hold a license, we would not be able to test specimens from those states. If we were to lose our CAP accreditation, our reputation for quality, as well as our business, financial condition and results of operations, could be significantly and adversely affected.

If the FDA were to begin requiring approval or clearance of our current products or assays and our planned future products or assays, we could incur substantial costs and time delays associated with meeting requirements for pre-market clearance or approval or we could experience decreased demand for, or reimbursement of, our assays.

We provide our assays as LDTs. Historically; the FDA has exercised enforcement discretion with respect to most LDTs and has not required laboratories that offer LDTs to comply with the agency's requirements for medical devices (e.g., establishment registration, device listing, quality systems regulations, premarket clearance or premarket approval, and post-market controls). In recent years, however, the FDA has stated it intends to end its policy of enforcement discretion and regulate certain LDTs as medical devices. To this end, on October 3, 2014, the FDA issued two draft guidance documents, entitled "Framework for Regulatory Oversight of Laboratory Developed Tests (LDTs)" and "FDA Notification and Medical Device Reporting for Laboratory Developed Tests (LDTs)", respectively, that set forth a proposed risk-based regulatory framework that would apply varying levels of FDA oversight to LDTs. The FDA has indicated that it does not intend to modify its policy of enforcement discretion until the draft guidance documents are finalized. In January 2017, the FDA announced that final guidance on the oversight of LDTs would allow for further public discussion. On January 13, 2017 the FDA issued a "Discussion Paper on Laboratory Developed Tests (LDTs)," which states that the material in the document does not represent a final version of the LDT draft guidance documents that were published in 2014 or position of the FDA; rather, the document is a method to encourage additional dialogue. The timing of when, if at all, the draft guidance documents will be finalized is unclear, and even then, the new regulatory requirements are proposed to be phased-in consistent with the schedule set forth in the guidance. Nevertheless, the FDA may decide to regulate certain LDTs on a case-by-case basis at any time. LDTs with the same intended use as a cleared or approved companion diagnostic are defined in FDA's draft guidance as "high-risk LDTs (Class III medical devices)" for which premarket review would be first to occur.

FDA review, if required and successfully accomplished, would be expected to have some advantages. Certain health insurance payers have paid higher amounts over LDT prices for FDA approved or cleared tests, recognizing the additional costs of bringing a test through regulatory review. Some payers also accept FDA approval or clearance as a presumptive evidence of an assay's analytic validity and clinical validity, which can reduce the barriers to coverage since the payer can focus its review on clinical utility.

The container we provide for collection and transport of blood samples from a health care provider to our clinical laboratory, as well as our BCTs, may be medical devices subject to the FDA regulation but are currently exempt from pre-market review by the FDA. While we believe that we are currently in material compliance with applicable laws and regulations, we cannot assure you that the FDA or other regulatory agencies would agree with our determination, and a determination that we have violated these laws, or a public announcement that we are being investigated for possible violations of these laws, could adversely affect our business, prospects, results of operations or financial condition.

Some of the materials we use for our current products, assays and services and may use in our planned future products, assays and services are labeled for RUO. In November 2013, the FDA finalized guidance regarding the sale and use of products labeled for research or investigational use only. Among other things, the guidance advises that the FDA continues to be concerned about distribution of research or investigational use only products intended for clinical diagnostic use and that the manufacturer's objective intent for the product's intended use will be determined by examining the totality of circumstances, including advertising, instructions for clinical interpretation, presentations that describe clinical use, and specialized technical support, surrounding the distribution of the product in question. The FDA has advised that if evidence demonstrates that a product is inappropriately labeled for research or investigational use only, the device would be misbranded and adulterated within the meaning of the Federal Food, Drug and Cosmetic Act. Some of the materials and reagents obtained by us from suppliers for use in our current products, assays and services and our planned future products, assays and services are currently labeled as research or investigational use only products. If the FDA were to undertake enforcement actions, some of our suppliers might cease selling research or investigational use products to us, and any failure to obtain an acceptable substitute could significantly and adversely affect our business, financial condition and results of operations, including increasing the cost of materials or reagents used in our current products, assays and services or planned future products, assays and services or delaying, limiting or prohibiting the purchase of materials or reagents necessary to sell our current products or planned future products or to perform our current assays or our planned future assays.

Our BCTs and Target Selector kits are marketed for RUO and distributed and sold to end users, some of which will be researchers and institutions while other end users could be labs performing clinical testing that will create their own LDTs. Some end users may assert that our ROU products caused their assays to perform inadequately or give erroneous results. If that was the case, we could potentially incur additional liabilities.

Further, HHS requested that its Advisory Committee on Genetics, Health and Society make recommendations about the oversight of genetic testing. A final report was published in April 2008. If the report's recommendations for increased oversight of genetic testing were to result in further regulatory burdens, they could negatively affect our business and delay the commercialization of assays in development.

Additionally, on March 16, 2018 CMS issued a final determination decision memo for Next-Generation Sequencing, or NGS, tests for Medicare Beneficiaries with Advanced Cancer (CAG-00450N). Under this final determination, NGS tests that gain FDA approval or

clearance as a companion diagnostic will receive coverage, and the final determination of coverage for NGS tests that are LDTs will be left up to the local MAC. Currently, only 1 of our 15 CLIA validated assays is NGS-based; however, we plan to offer additional NGS assays in the future. To gain coverage for those assays, we will need to apply to Palmetto, which is the MAC that evaluates and recommends payment coverage or denial for molecular testing in our jurisdiction. Historically, Palmetto has offered a path to reimbursement by providing coverage while data is being gathered known as Coverage with Data Development, or CDD. Going forward, the extent to which CDD will be continued, if at all, or to the extent that a process will be available in its place, if any, are unclear.

The requirement of pre-market review could negatively affect our business until such review is completed and clearance to market or approval is obtained. The FDA could require that we stop selling our products or diagnostic assays pending pre-market clearance or approval. If the FDA allows our products or assays to remain on the market but there is uncertainty about our products or assays, if they are labeled investigational by the FDA or if labeling claims the FDA allows us to make are very limited, orders from laboratory supply distributors and physicians, or reimbursement from third-party payers, may decline. The regulatory approval process may involve, among other things, successfully completing additional clinical trials and making a 510(k) submission or filing a pre-market approval application with the FDA. If the FDA requires pre-market review, our products or assays may not be cleared or approved on a timely basis, if at all. We may also decide voluntarily to pursue FDA pre-market review of our products or assays if we determine that doing so would be appropriate.

If we were required to conduct additional clinical studies or trials before continuing to offer assays that we have developed or may develop as LDTs, those studies or trials could lead to delays or failure to obtain necessary regulatory approval, which could cause significant delays in commercializing any future products and harm our ability to achieve sustained profitability.

If the FDA decides to require that we obtain clearance or approvals to commercialize our current assays or our planned future assays, we may be required to conduct additional pre-market clinical testing before submitting a regulatory notification or application for commercial sales. In addition, as part of our long-term strategy we may plan to seek FDA clearance or approval, so we can sell our assays outside our CLIA laboratory; however, we would need to conduct additional clinical validation activities on our assays before we can submit an application for FDA approval or clearance. Clinical trials must be conducted in compliance with FDA regulations or the FDA may take enforcement action or reject the data. The data collected from these clinical trials may ultimately be used to support market clearance or approval for our assays. It may take two years or more to conduct the clinical studies and trials necessary to obtain approval from the FDA to commercially launch our current assays and our planned future assays outside of our clinical laboratory. Even if our clinical trials are completed as planned, we cannot be certain that their results will support our assay claims or that the FDA or foreign authorities will agree with our conclusions regarding our assay results. Success in early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the later trials will replicate the results of prior clinical trials and studies. If we are required to conduct pre-market clinical trials, whether using prospectively acquired samples or archival samples, delays in the commencement or completion of clinical testing could significantly increase our assay development costs and delay commercialization. Many of the factors that may cause or lead to a delay in the commencement or completion of clinical trials may also ultimately lead to delay or denial of regulatory clearance or approval. The commencement of clinical trials may be delayed due to insufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites and the eligibility criteria for the clinical trial. Moreover, the clinical trial process may fail to demonstrate that our current assays and our planned future assays are effective for the proposed indicated uses, which could cause us to abandon an assay candidate and may delay development of other assays.

We may find it necessary to engage contract research organizations to perform data collection and analysis and other aspects of our clinical trials, which might increase the cost and complexity of our trials. We may also depend on clinical investigators, medical institutions and contract research organizations to perform the trials properly. If these parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, or if the quality, completeness or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or for other reasons, our clinical trials may have to be extended, delayed or terminated. Many of these factors would be beyond our control. We may not be able to enter into replacement arrangements without undue delays or considerable expenditures. If there are delays in testing or approvals as a result of the failure to perform by third parties, our research and development costs would increase, and we may not be able to obtain regulatory clearance or approval for our current assays and our planned future assays. In addition, we may not be able to establish or maintain relationships with these parties on favorable terms, if at all. Each of these outcomes would harm our ability to market our assays or to achieve sustained profitability.

We are subject to federal and state healthcare fraud and abuse laws and regulations and could face substantial penalties if we are unable to fully comply with such laws.

We are subject to health care fraud and abuse regulation and enforcement by both the federal government and the states in which we conduct our business. These health care laws and regulations include, for example:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from soliciting, receiving, offering or providing remuneration, directly or indirectly, overtly or covertly, in cash or in kind, in return for or to induce either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or services for which payment may be made under a federal health care program such as the Medicare and Medicaid programs;
- the federal physician self-referral prohibition, commonly known as the Stark Law, which prohibits physicians from referring Medicare or Medicaid patients to providers of "designated health services" with whom the physician or a member of the physician's immediate family has an ownership interest or compensation arrangement, unless a statutory or regulatory exception applies;
- HIPAA, which established additional federal civil and criminal liability for, among other things, knowingly and willfully executing a scheme to defraud any health care benefit program or making false statements in connection with the delivery of or payment for health care benefits, items or services;
- HIPAA, as amended by HITECH, and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information;
- federal false claims and civil monetary penalties laws, which, prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment to the federal government;
- the federal Physician Payments Sunshine Act requirements under the ACA, which require certain manufacturers of drugs, devices, biologics and medical supplies to report to CMS information related to payments and other transfers of value made to or at the request of covered recipients, such as physicians, as defined by such law, and teaching hospitals, and certain physician ownership and investment interests held by physicians and their immediate family members; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws, which may apply to items or services reimbursed by any third-party payer, including commercial insurers.

Further, the ACA, among other things, amended the intent requirement of the federal Anti-Kickback Statute and certain criminal health care fraud statutes. Where the intent requirement has been lowered, a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the government may now assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the false claims statutes. Any action brought against us for violation of these laws or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of these laws and regulations, we may be subject to any applicable penalty associated with the violation, including, among others, significant administrative, civil and criminal penalties, damages and fines, imprisonment, integrity oversight and reporting obligations, and exclusion from participation in government funded healthcare programs such as Medicare, Medicaid programs, including the California Medical Assistance Program (Medi-Cal-the California Medicaid program) or other state or federal health care programs. Additionally, we could be required to refund payments received by us, and we could be required to curtail or cease our operations. Any of the foregoing consequences could seriously harm our business and our financial results.

We are required to comply with laws governing the transmission, security and privacy of health information that require significant compliance costs, and any failure to comply with these laws could result in material criminal and civil penalties.

Under the administrative simplification provisions of HIPAA, HHS has issued regulations which establish uniform standards governing the conduct of certain electronic health care transactions and protecting the privacy and security of protected health information used or disclosed by health care providers and other covered entities.

The privacy regulations regulate the use and disclosure of protected health information by covered entities engaging in certain electronic transactions or "standard transactions." They also set forth certain rights that an individual has with respect to his or her protected health information maintained by a covered entity, including the right to access or amend certain records containing protected health information or to request restrictions on the use or disclosure of protected health information. The HIPAA security regulations establish administrative, physical and technical standards for maintaining the confidentiality, integrity and availability of protected health information in electronic form. These standards apply to covered entities and also to "business associates" or third parties providing services to covered entities involving the use or disclosure of protected health information. The HIPAA privacy and security regulations establish a uniform federal "floor" and do not supersede state laws that are more stringent or provide individuals with greater rights with respect to the privacy or security of, and access to, their records containing protected health information. As a result, we may be required to comply with both HIPAA privacy regulations and varying state privacy and security laws.

Moreover, HITECH, among other things, established certain health information security breach notification requirements, which were later further modified by the Final Omnibus Rule. In the event of a breach of unsecured protected health information, a covered entity must notify each individual whose protected health information is breached, federal regulators and in some cases, must publicize the breach in local or national media. Certain breaches may be publicized by federal regulators who publicly identify the breaching entity, the circumstances of the breach and the number of individuals affected.

These laws contain significant fines and other penalties for wrongful use or disclosure of protected health information. Given the complexity of HIPAA and HITECH and their overlap with state privacy and security laws, and the fact that these laws are rapidly evolving and are subject to changing and potentially conflicting interpretation, our ability to comply with the HIPAA, HITECH and state privacy requirements is uncertain and the costs of compliance are significant. Adding to the complexity is that our operations are evolving, and the requirements of these laws will apply differently depending on such things as whether or not we bill electronically for our services. The costs of complying with any changes to the HIPAA, HITECH and state privacy restrictions may have a negative impact on our operations. Noncompliance could subject us to criminal penalties, civil sanctions and significant monetary penalties as well as reputational damage.

Clinical research is heavily regulated and failure to comply with human subject protection regulations may disrupt our research program leading to significant expense, regulatory enforcement, private lawsuits and reputational damage.

Clinical research is subject to federal, state and, for studies conducted outside of the United States, international regulation. At the federal level, the FDA imposes regulations for the protection of human subjects and requirements such as initial and ongoing institutional review board review; informed consent requirements, adverse event reporting and other protections to minimize the risk and maximize the benefit to research participants. Many states impose human subject protection laws that mirror or in some cases exceed federal requirements. HIPAA also regulates the use and disclosure of protected health information in connection with research activities. Research conducted overseas is subject to a variety of national protections such as mandatory ethics committee review, as well as laws regulating the use, disclosure and cross-border transfer of personal data. For example, if we obtain certain personal information regarding residents in the European Union, we may be subject to the European Union General Data Protection Regulation. The costs of compliance with these laws may be significant and compliance with regulatory requirements may result in delay. Noncompliance may disrupt our research and result in data that is unacceptable to regulatory authorities, data lock or other sanctions that may significantly disrupt our operations.

Violation of a state's prohibition on the corporate practice of medicine could result in a material adverse effect on our business.

A number of states, including California, do not allow business corporations to employ physicians to provide professional services. This prohibition against the "corporate practice of medicine" is aimed at preventing corporations such as us from exercising control over the medical judgments or decisions of physicians. The state licensure statutes and regulations and agency and court decisions that enumerate the specific corporate practice rules vary considerably from state to state and are enforced by both the courts and regulatory authorities, each with broad discretion. If regulatory authorities or other parties in any jurisdiction successfully assert that we are engaged in the unauthorized corporate practice of medicine, we could be required to restructure our contractual and other arrangements. In addition, violation of these laws may result in significant civil, criminal and administrative penalties imposed against us and/or the professional through licensure proceedings, and exclusion from state and federal health care programs.

Legal, political and economic uncertainty surrounding the exit of the U.K., from the European Union, or EU, may be a source of instability in international markets, create significant currency fluctuations, adversely affect our operations or intended operations in the U.K. and pose additional risks to our business, revenue, financial condition and results of operations.

Following the result of a referendum in 2016, the U.K. left the EU on January 31, 2020, commonly referred to as Brexit. Pursuant to the formal withdrawal arrangements agreed between the U.K. and the EU, the U.K. will be subject to a transition period until December 31, 2020, or the Transition Period, during which EU rules will continue to apply. Negotiations between the U.K. and the EU are expected to continue in relation to the customs and trading relationship between the U.K. and the EU following the expiry of the Transition Period.

The uncertainty concerning the U.K's legal, political and economic relationship with the EU after the Transition Period may be a source of instability in the international markets, create significant currency fluctuations, and/or otherwise adversely affect trading agreements or similar cross-border co-operation arrangements (whether economic, tax, fiscal, legal, regulatory or otherwise).

These developments, or the perception that any of them could occur, have had, and may continue to have, a significant adverse effect on global economic conditions and the stability of global financial markets, and could significantly reduce global market liquidity and limit the ability of key market participants to operate in certain financial markets. In particular, it could also lead to a period of considerable uncertainty in relation to the U.K. financial and banking markets, as well as on the regulatory process in Europe. Asset valuations, currency exchange rates and credit ratings may also be subject to increased market volatility.

If the U.K. and the EU are unable to negotiate acceptable trading and customs terms or if other EU Member States pursue withdrawal, barrier-free access between the U.K. and other EU Member States or among the European Economic Area overall could be diminished or eliminated. The long-term effects of Brexit will depend on any agreements (or lack thereof) between the U.K. and the EU and, in particular, any arrangements for the U.K. to retain access to EU markets after the Transition Period.

Such a withdrawal from the EU is unprecedented, and it is unclear how the U.K's access to the European single market for goods, capital, services and labor within the EU, or single market, and the wider commercial, legal and regulatory environment, will impact our business. Any current or planned future operations in the U.K. as well as in other countries in the EU and European Economic Area, or EEA, could be disrupted by Brexit, particularly if there is a change in the U.K's relationship to the single market.

We may also face new regulatory costs and challenges as a result of Brexit that could have an adverse effect on our operations. For example, the U.K. could lose the benefits of global trade agreements negotiated by the EU on behalf of its members, which may result in increased trade barriers that could make our doing business in the EU and the EEA more difficult. Furthermore, at present, there are no indications of the effect Brexit will have on the pathway to obtaining marketing approval for any of our product candidates in the U.K., or what, if any, role the EMA may have in the approval process. There may continue to be economic uncertainty surrounding the consequences of Brexit which could adversely impact customer confidence resulting in customers reducing their spending budgets on our solutions, which could adversely affect our business, revenue, financial condition, results of operations.

Intellectual Property Risks Related to Our Business

If we are unable to obtain and maintain effective patent rights for our products or services, we may not be able to compete effectively in our markets.

We rely upon a combination of patents, trade secret protection, and confidentiality agreements to protect the intellectual property related to our technologies, products and services. Our success depends in large part on our ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries with respect to our proprietary technology and products.

We have sought to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and products that are important to our business. This process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. The possibility exists that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection.

The patent position of diagnostic companies generally is highly uncertain and involves complex legal and factual questions for which legal principles remain unsolved. The patent applications that we own, or in-license, may fail to result in issued patents with claims that cover our products or services in the United States or in other foreign countries. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found, which can invalidate a patent or prevent a patent from issuing from a pending patent application. Even if patents do successfully issue, and even if such patents cover our products and services, third parties may challenge their validity, enforceability, or scope, which may result in such patents being narrowed, found unenforceable or invalidated. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property, provide exclusivity for our products and services, or prevent others from designing around our claims. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

We, independently or together with our licensors, have filed several patent applications covering various aspects of our products and services. We cannot offer any assurances about which, if any, patents will issue, the breadth of any such patent or whether any issued patents will be found invalid and unenforceable or will be threatened by third parties. Any successful opposition to these patents or any other patents owned by or licensed to us after patent issuance could deprive us of rights necessary for the successful commercialization of any products and services that we may offer. Further, if we encounter delays in regulatory approvals, the period of time during which we could market a product or service under patent protection could be reduced.

Patent policy and rule changes could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. The laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. We therefore cannot be certain that we or our licensors were the first to make the invention claimed in our owned and licensed patents or pending applications, or that we or our licensor were the first to file for patent protection of such inventions. Assuming the other requirements for patentability are met, in the United States prior to March 15, 2013, the first to make the claimed

invention is entitled to the patent, while outside the United States, the first to file a patent application is entitled to the patent. After March 15, 2013, under the Leahy-Smith America Invents Act, or the Leahy-Smith Act, enacted on September 16, 2011, the United States has moved to a first to file system. The Leahy-Smith Act also includes a number of significant changes that affect the way patent applications will be prosecuted and may also affect patent litigation. The effects of these changes are currently unclear as the United States Patent and Trademark Office, or USPTO, must still implement various regulations, the courts have yet to address any of these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. In general, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

If we are unable to maintain effective proprietary rights for our products or services, we may not be able to compete effectively in our markets.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or that we elect not to patent, processes for which patents are difficult to enforce and any other elements of our products and services that involve proprietary know-how, information or technology that is not covered by patents. However, trade secrets can be difficult to protect. We seek to protect our proprietary technology and processes, in part, by entering into confidentiality agreements with our employees, consultants, scientific advisors, and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors.

Although we expect all of our employees and consultants to assign their inventions to us, and all of our employees, consultants, advisors, and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly executed or that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Misappropriation or unauthorized disclosure of our trade secrets could impair our competitive position and may have a material adverse effect on our business. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret.

Third-party claims of intellectual property infringement may prevent or delay our development and commercialization efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There have been many lawsuits and other proceedings involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, oppositions, and reexamination proceedings before the USPTO and corresponding foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing products and services. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our products and services may be subject to claims of infringement of the patent rights of third parties.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture, or methods for treatment related to the use or manufacture of our products and services. We have conducted freedom to operate analyses with respect to only certain of our products and services, and therefore we do not know whether there are any third-party patents that would impair our ability to commercialize these products and services. We also cannot guarantee that any of our analyses are complete and thorough, nor can we be sure that we have identified each and every patent and pending application in the United States and abroad that is relevant or necessary to the commercialization of our products and services. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our products or services may infringe.

For example, in August 2016, we received a letter from MolecularMD Corp. offering a license to two U.S. Patents owned by the Memorial Sloan-Kettering Cancer Center, and licensed to MolecularMD Corp., that are relevant to one of the biomarkers we detect in our Liquid Biopsy Non-Small Cell Lung Cancer Profile Target-Selector™ assay and our Liquid Biopsy Lung Cancer Resistance Profile Target-Selector™ assay. One of the two patents is expected to expire in 2026. The other patent is expected to expire in 2028. Although we believe that the claims of both patents relevant to our assays would likely be held invalid, we cannot provide any assurances that a court or an administrative agency would agree with our assessment. If the validity of the relevant claims in question is upheld upon a validity challenge, then we may be liable for past damages and would need a license in order to continue commercializing our Liquid Biopsy Non-Small Cell Lung Cancer Profile Target-Selector™ Assay and our Liquid Biopsy Lung Cancer Resistance Profile Target-Selector™ Assay in the United States. However, such a license may not be available on commercially reasonable terms or at all, which could materially and adversely affect our business.

In addition, we are aware of a U.S. Patent owned by Amgen, Inc. that is relevant to one of the biomarkers we detect in our Liquid Biopsy Non-Small Cell Lung Cancer Profile Target-Selector™ assay and our Liquid Biopsy Lung Cancer Resistance Profile Target-Selector™ assay. The patent is expected to expire in 2028. Although we believe that the claims of the patent relevant to our assays would likely be held invalid, we cannot provide any assurances that a court or an administrative agency would agree with our assessment. If the validity of the relevant claims in question is upheld upon a validity challenge, then we may be liable for past damages and would need a license in order to continue commercializing our Liquid Biopsy Non-Small Cell Lung Cancer Profile Target-Selector™ assay and our Liquid Biopsy Lung Cancer Resistance Profile Target-Selector™ assay in the United States. However, such a license may not be available on commercially reasonable terms or at all, which could materially and adversely affect our business.

We are also aware of a U.S. Patent owned by Genentech, Inc. that is relevant to one of the biomarkers we detect in our Liquid Biopsy Lung Cancer Resistance Profile Target-Selector™ assay and our Liquid Biopsy Colon Cancer Profile Target-Selector™ assay. The patent is expected to expire in 2025. Although we believe that the claims of the patent relevant to our assays would likely be held invalid, we cannot provide any assurances that a court or an administrative agency would agree with our assessment. If the validity of the relevant claims in question is upheld upon a validity challenge, then we may be liable for past damages and would need a license in order to continue commercializing our Liquid Biopsy Lung Cancer Resistance Profile Target-Selector™ assay and our Liquid Biopsy Colon Cancer Profile Target-Selector™ assay in the United States. However, such a license may not be available on commercially reasonable terms or at all, which could materially and adversely affect our business.

In addition, in July 2016, we received a communication from the Mayo Foundation for Medical Education and Research (“Mayo”) offering a license to a U.S. Patent owned by Mayo that is relevant to an antibody that we use in our Liquid Biopsy Immuno-Oncology PD-L1 assay. The patent is expected to expire in 2021. At present, we believe that we will need a license to this patent to continue commercializing our Liquid Biopsy Immuno-Oncology PD-L1 assay. We are currently in discussions with Mayo and believe a license can be obtained on commercially reasonable terms. However, if we are unable to secure such a license, we may be liable for past damages, and our business could be materially and adversely affected.

In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover aspects of our products or services, the holders of any such patents may be able to block our ability to commercialize such products or services unless we obtained a license under the applicable patents, or until such patents expire or are finally determined to be invalid or unenforceable. Such a license may not be available on commercially reasonable terms or at all.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize one or more of our products or services. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys’ fees for willful infringement, pay royalties, redesign our infringing products or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

We may not be successful in obtaining or maintaining necessary rights to our products or services through acquisitions and in-licenses.

We currently have rights to the intellectual property, through licenses from third parties and under patents that we own, to develop our products and services. Because our programs may require the use of proprietary rights held by third parties, the growth of our business will likely depend in part on our ability to acquire, in-license, or use these proprietary rights. We may be unable to acquire or in-license any compositions, methods of use, processes, or other third-party intellectual property rights from third parties that we identify as necessary for our products or services. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, cash resources, and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment.

We sometimes collaborate with U.S. and foreign institutions to accelerate our research or development under written agreements with these institutions. Typically, these institutions provide us with an option to negotiate a license to any of the institution’s rights in technology resulting from the collaboration. Regardless of such option, we may be unable to negotiate a license within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may offer the intellectual property rights to other parties, potentially blocking our ability to pursue our program.

If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of that program and our business and financial condition could suffer.

Although we are not currently involved in any litigation, we may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time consuming, and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. Although we are not currently involved in any litigation, if we or one of our licensing partners were to initiate legal proceedings against a third-party to enforce a patent covering one of our products or services, the defendant could counterclaim that the patent covering our product or service is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability is unpredictable.

Interference proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. In addition, the uncertainties associated with litigation could have a material adverse effect on our ability to raise sufficient capital to continue our research programs, license necessary technology from third parties, or enter into development partnerships that would help commercialize our products or services.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions, or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of our common stock.

We may be subject to claims that our employees, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

We employ certain individuals who were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants, and independent contractors do not use the proprietary information or know-how of others in their work for us, and we are not currently subject to any claims that our employees, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties, we may in the future be subject to such claims. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could adversely impact our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

We may be subject to claims challenging the inventorship of our patents and other intellectual property.

Although we are not currently experiencing any claims challenging the inventorship of our patents or ownership of our intellectual property, we may in the future be subject to claims that former employees, collaborators or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our products or services. Litigation may be necessary to defend against these and other claims challenging inventorship. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biotechnology industry involves both technological and legal complexity. Therefore, obtaining and enforcing biotechnology patents is costly, time consuming, and inherently uncertain. In addition, the United States has recently enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts, and the

USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, and defending patents on products and services in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and may also export infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Our collaborators may assert ownership or commercial rights to inventions we develop from our use of the biological materials which they provide to us, or otherwise arising from the collaboration.

We collaborate with several institutions, physicians and researchers in scientific matters. We do not have written agreements with certain of such collaborators, or the written agreements we have do not cover intellectual property rights. Also, we rely on numerous third parties to provide us with blood samples and biological materials that we use to develop assays. If we cannot successfully negotiate sufficient ownership and commercial rights to any inventions that result from our use of a third-party collaborator's materials, or if disputes arise with respect to the intellectual property developed with the use of a collaborator's samples, or data developed in a collaborator's study, we may be limited in our ability to capitalize on the market potential of these inventions or developments.

Risks Relating to Our Common Stock

****The price of our common stock may be volatile.***

Market prices for our common stock have historically been volatile. The factors that may cause the market price of our common stock to fluctuate include, but are not limited to:

- progress, or lack of progress, in performing, developing and commercializing our current assays and our planned future assays;
- favorable or unfavorable decisions about our assays from government regulators, insurance companies or other third-party payers;
- our ability to recruit and retain qualified research and development personnel;
- changes in investors' and securities analysts' perception of the business risks and conditions of our business;
- changes in our relationship with key collaborators;
- changes in the market valuation or earnings of our competitors or companies viewed as similar to us;
- changes in key personnel;
- depth of the trading market in our common stock;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- disruptions caused by man-made or natural disasters or public health pandemics or epidemics or other business interruptions, including, for example, the COVID-19 pandemic;

- changes in the structure of healthcare payment systems;
- the granting or exercise of employee stock options or other equity awards;
- realization of any of the risks described herein; and
- general market and economic conditions.

In addition, the equity markets have experienced significant price and volume fluctuations that have affected the market prices for the securities of newly public companies for a number of reasons, including reasons that may be unrelated to our business or operating performance. The ongoing COVID-19 pandemic, for example, has negatively affected the stock market and investor sentiment and has resulted in significant volatility. These broad market fluctuations may result in a material decline in the market price of our common stock and you may not be able to sell your shares at prices you deem acceptable. In the past, following periods of volatility in the equity markets, securities class action lawsuits have been instituted against public companies. Such litigation, if instituted against us, could result in substantial cost and the diversion of management attention.

Our failure to meet the continued listing requirements of The Nasdaq Capital Market could result in a de-listing of our common stock.

If we fail to satisfy the continued listing requirements of The Nasdaq Capital Market, such as the corporate governance requirements, the minimum closing bid price requirement, or the minimum stockholders' equity requirement, Nasdaq may take steps to de-list our common stock. For example, in May 2016, we received a letter from Nasdaq indicating that we are not in compliance with the minimum stockholders' equity requirement of Nasdaq Listing Rule 5550(b)(1), and in each of June 2016, November 2016, January 2018 and September 2019, we received letters from Nasdaq indicating that we are not in compliance with the minimum bid price requirement of Nasdaq Listing Rule 5550(a)(2), which requires that companies listed on The Nasdaq Capital Market maintain a minimum closing bid price of at least $1.00 per share. Although we were able to regain compliance with the Nasdaq continued listing requirements discussed in the May 2016, June 2016, November 2016 and January 2018 letter, we have not yet regained compliance with the $1.00 minimum closing bid price requirement that was the subject of the September 2019 letter from Nasdaq. In March 2020, we requested and received an additional 180-day extension to regain compliance with the $1.00 minimum closing bid price requirement that was the subject of the September 2019 letter from Nasdaq. and, in light of the COVID-19 pandemic, Nasdaq tolled the 180-day compliance period effective April 16, 2020 until July 1, 2020. We intend to monitor the closing bid price of our common stock and may, if appropriate, consider implementing available options, including a reverse stock split, to regain compliance with the minimum closing bid price requirement. We are seeking stockholder approval of a reverse stock split at our 2020 annual meeting of stockholders. Our 2020 annual meeting of stockholders was held on June 5, 2020 and since then has been adjourned three times, most recently until August 18, 2020, in an effort to solicit additional stockholder votes in favor of a reverse stock split of our common stock. There can be no assurance that our stockholders will ultimately authorize us to implement a reverse stock split of our common stock or that we will be able to regain compliance with the $1.00 minimum closing bid price requirement, or maintain compliance with the other continued listing requirements of the Nasdaq Capital Market. If we fail to regain and/or maintain compliance with Nasdaq's continued listing requirements, Nasdaq may take steps to de-list our common stock. Such a de-listing would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. In the event of a de-listing, we would take actions to restore our compliance with Nasdaq's listing requirements, but we can provide no assurance that any such action taken by us would allow our common stock to become listed again, stabilize the market price or improve the liquidity of our common stock, or prevent future non-compliance with Nasdaq's listing requirements.

Our quarterly operating results may fluctuate significantly.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- the rate of adoption and/or continued use of our current assays and our planned future assays by healthcare practitioners;
- variations in the level of expenses related to our development programs;
- addition or reduction of resources for sales and marketing;
- addition or termination of clinical utility studies;
- any intellectual property infringement lawsuit in which we may become involved;
- the impact of the ongoing COVID-19 pandemic on our ability to generate revenues;
- third-party payer coverage and reimbursement determinations affecting our assays; and
- regulatory developments affecting our assays.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially.

If securities or industry analysts issue an adverse opinion regarding our stock or do not publish research or reports about our company, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that equity research analysts publish about us, our business and our competitors. We do not control these analysts or the content and opinions or financial models included in their reports. Securities analysts may elect not to provide research coverage of our company, and such lack of research coverage may adversely affect the market price of our common stock. The price of our common stock could also decline if one or more equity research analysts downgrade our common stock or if those analysts issue other unfavorable commentary or cease publishing reports about us or our business. If one or more equity research analysts cease coverage of our company, we could lose visibility in the market, which in turn could cause our stock price to decline.

****Future sales of our common stock or other securities, or the perception that future sales may occur, may cause the market price of our common stock to decline, even if our business is doing well.***

Sales of substantial amounts of our common stock or other securities, or the perception that these sales may occur, could materially and adversely affect the price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. For example, in May 2020, the SEC declared effective a shelf registration statement filed by us. This shelf registration statement allows us to issue any combination of our common stock, preferred stock, debt securities and warrants from time to time for an aggregate initial offering price of up to $100 million. The specific terms of additional future offerings, if any, under this shelf registration statement would be established at the time of such offerings. Depending on a variety of factors, including market liquidity of our common stock, the sale of shares under this shelf registration statement may cause the trading price of our common stock to decline. The sale of a substantial number of shares of our common stock under this shelf registration statement, or anticipation of such sales, could cause the trading price of our common stock to decline or make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise desire.

We had outstanding 133,934,314 shares of common stock as of August 7, 2020, most of which are not subject to resale restrictions under Rule 144 of the Securities Act. In addition, as of June 30, 2020, we had outstanding preferred stock convertible into 471,393 shares of our common stock, options to purchase 2,571,712 shares of our common stock, 360 shares of common stock were issuable upon the settlement of outstanding restricted stock units, or RSUs, and 15,064,916 shares of our common stock were issuable upon the exercise of outstanding warrants. Shares issued upon the exercise of stock options or upon the settlement of outstanding RSUs generally will be eligible for sale in the public market, except that affiliates will continue to be subject to volume limitations and other requirements of Rule 144 under the Securities Act. The issuance or sale of such shares could depress the market price of our common stock.

In the future, we also may issue our securities if we need to raise additional capital. The number of new shares of our common stock issued in connection with raising additional capital could constitute a material portion of the then-outstanding shares of our common stock.

If we are unable to favorably assess the effectiveness of our internal control over financial reporting, investors may lose confidence in our financial reporting and our stock price could be materially adversely affected.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404(a) of the Sarbanes-Oxley Act, or the subsequent testing by our independent registered public accounting firm conducted in connection with Section 404(b) of the Sarbanes-Oxley Act after we no longer qualify as a “smaller reporting company,” with less than $100 million in annual revenues, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our consolidated financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

We are required to disclose changes made in our internal control procedures on a quarterly basis and our management is required to assess the effectiveness of these controls annually. However, for as long as we are a “smaller reporting company” with less than $100 million in annual revenues, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting pursuant to Section 404. An independent assessment of the effectiveness of our internal controls could detect problems that our management’s assessment might not. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation.

We have incurred and will continue to incur significant costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, the listing requirements of The Nasdaq Stock Market and other applicable securities rules and regulations. Compliance with these rules and regulations includes significant legal and financial compliance costs, makes some activities more difficult, time-consuming or costly, and increases demand on our systems and resources. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to maintain and, if required, improve our disclosure controls and procedures and internal control over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could harm our business and operating results. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

In addition, changing laws, regulations and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs and making some activities more time consuming. These laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Anti-takeover provisions of our certificate of incorporation, our bylaws and Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove the current members of our board and management.

Certain provisions of our amended certificate of incorporation and amended and restated bylaws could discourage, delay or prevent a merger, acquisition or other change of control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove members of our Board of Directors. (For example, Delaware law provides that if a corporation has a classified board of directors, stockholders cannot remove any director during his or her term without cause.) These provisions also could limit the price that investors might be willing to pay in the future for our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. These provisions, among other things:

- classify our Board of Directors into three classes of equal (or roughly equal) size, with all directors serving for a three-year term and the directors of only one class being elected at each annual meeting of stockholders, so that the terms of the classes of directors are "staggered";
- allow the authorized number of directors to be changed only by resolution of our Board of Directors;
- authorize our Board of Directors to issue, without stockholder approval, preferred stock, the rights of which will be determined at the discretion of the Board of Directors and that, if issued, could operate as a "poison pill" to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that our Board of Directors does not approve;
- establish advance notice requirements for stockholder nominations to our Board of Directors or for stockholder proposals that can be acted on at stockholder meetings; and
- limit who may call a stockholders meeting.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of the voting rights on our common stock, from merging or combining with us for a prescribed period of time.

Because we do not expect to pay cash dividends for the foreseeable future, you must rely on appreciation of our common stock price for any return on your investment. Even if we change that policy, we may be restricted from paying dividends on our common stock.

We do not intend to pay cash dividends on shares of our common stock for the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our Board of Directors and will depend upon results of operations, financial performance, contractual restrictions, restrictions imposed by applicable law and other factors our Board of Directors deems relevant. Accordingly, you will have to rely on capital appreciation, if any, to earn a return on your investment in our common stock. Investors seeking cash dividends in the foreseeable future should not purchase our common stock.

Changes in tax laws or regulations that are applied adversely to us or our customers may have a material adverse effect on our business, cash flow, financial condition or results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could adversely affect our business operations and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, the Tax Cuts and Jobs Act enacted many significant changes to the U.S. tax laws. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Cuts and Jobs Act may affect us, and certain aspects of the Tax Cuts and Jobs Act could be repealed or modified in future legislation. For example, the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, modified certain provisions of the Tax Cuts and Jobs Act. In addition, it is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act, the CARES Act or any newly enacted federal tax legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Cuts and Jobs Act or future reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges, and could increase our future U.S. tax expense.

Our effective tax rate may fluctuate, and we may incur obligations in tax jurisdictions in excess of accrued amounts.

We are subject to taxation in numerous U.S. states and territories. As a result, our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of such places. Nevertheless, our effective tax rate may be different than experienced in the past due to numerous factors, including the results of examinations and audits of our tax filings, our inability to secure or sustain acceptable agreements with tax authorities, changes in accounting for income taxes and changes in tax laws. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations and may result in tax obligations in excess of amounts accrued in our financial statements.

Our ability to use our estimated net operating loss carryforwards and certain other tax attributes may be limited.

Our ability to utilize our estimated federal net operating loss, carryforwards and federal tax credits may be limited under Sections 382 and 383 of the Code. Under the Tax Cuts and Jobs Act as modified by the CARES Act, federal net operating losses incurred in tax years beginning after December 31, 2017 may be carried forward indefinitely, but the deductibility of such federal net operating losses in tax years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act or the CARES Act. In addition, under Sections 382 and 383 of the Code, if a corporation undergoes an “ownership change,” generally defined as a cumulative change in its equity ownership by “5-percent shareholders” of greater than 50 percentage points (by value) over a three-year period, the corporation’s ability to use its estimated pre-change net operating loss carryforwards and certain other tax attributes (such as research tax credits) to offset its post-change taxable income and taxes, as applicable, may be limited. As of December 31, 2019, we had estimated federal and state net operating loss carryforwards of approximately $54.9 million and $13.9 million, respectively, and estimated federal and California research and development tax credits of approximately $366,000 and $3.7 million, respectively, which could be limited if we have experienced or do experience any “ownership changes.” We have not completed a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since our formation, due to the complexity and cost associated with such a study, and the fact that there may be additional ownership changes in the future. We believe, however, that multiple ownership changes likely occurred. In addition, at the state level, there may be periods during which the use of net operating loss carryforwards is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. We have estimated that the use of our net operating loss is limited and the amounts above remain fully offset by a valuation allowance.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because early-stage life sciences companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management’s attention and resources, which could harm our business.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Unregistered Sales of Equity Securities

None.

Use of Proceeds

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

The exhibits listed below are hereby filed with the SEC as part of this Quarterly Report on Form 10-Q.

Exhibit No.	Description of Exhibit
3.1	Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1.4 of the Registrant's Current Report on Form 8-K, filed with the SEC on February 14, 2014).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2.1 of the Registrant's 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 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).
4.4	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), as amended, filed with the SEC on February 6, 2015).
4.5	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).
4.6	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).
4.7	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).
4.8	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).
4.9	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), as amended, filed with the SEC on January 22, 2018).
4.10	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).
4.11	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).
4.12	Form of Series A 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), as amended, filed with the SEC on July 11, 2018).
4.13	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).
4.14	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).
4.15	Form of Series B Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.24 of the Registrant's Registration Statement on Form S-1 (File No. 333-228566), filed with the SEC on November 28, 2018).

Exhibit No.	Description of Exhibit
4.16	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.25 of the Registrant's Registration Statement on Form S-1 (File No. 333-228566), filed with the SEC on November 28, 2018).
4.17	Form of Series B Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on March 18, 2019).
4.18	Form of Series C Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on May 29, 2019).
4.19	Form of Common Stock Warrant (incorporated by reference to Exhibit 4.19 of the Registrant's Registration Statement on Form S-1 (File No. 333-234459), as amended, filed with the SEC on December 6, 2019).
4.20	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.20 of the Registrant's Registration Statement on Form S-1 (File No. 333-234459), as amended, filed with the SEC on November 8, 2019).
4.21	Form of Common Stock Warrant (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 11, 2019).
4.22	Form of Warrant Amendment (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on January 9, 2020).
4.23	Form of 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 January 9, 2020).
10.1	Form of Securities Purchase Agreement, dated April 14, 2020, by and between the Registrant and each purchaser identified on the signature pages thereto (incorporated by reference to Exhibit 99.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on April 15, 2020).
10.2	Placement Agency Agreement, dated April 14, 2020, by and between the Registrant and Maxim Group LLC (incorporated by reference to Exhibit 99.2 of the Registrant's Current Report on Form 8-K, filed with the SEC on April 15, 2020).
10.3	Lease Agreement, dated June 1, 2020, by and between the Registrant and 9955 Mesa Rim A DE LLC.
10.4	Amendment to Lease Agreement, dated June 5, 2020, by and between the Registrant and ARE-SD Region No. 18, LLC.
10.5+	Amended and Restated 2013 Equity Incentive Plan, as amended, 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 Current Report on Form 8-K, filed with the SEC on June 10, 2020).
10.6+	Employment Agreement between the Registrant and Michael Terry, dated September 11, 2018.
10.7+	Employment Agreement between the Registrant and Cory Dunn, dated February 1, 2020.
31.1	Certification of Michael Nall, Chief Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Timothy Kennedy, Chief Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Michael Nall, Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Timothy Kennedy, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

+ Indicates management contract or compensatory plan.

* This certification is not deemed “filed” for purposes of Section 18 of the Securities Exchange Act, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

BIOCEPT, INC.
(Registrant)

Date: August 13, 2020

By: /s/ Michael W. Nall
Michael W. Nall
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: August 13, 2020

By: /s/ Timothy C. Kennedy
Timothy C. Kennedy
Chief Financial Officer, Senior Vice President of Operations
(Principal Financial and Accounting Officer)

EXHIBIT 10.3

SINGLE-TENANT LEASE
(TRIPLE NET)

LANDLORD:
9955 MESA RIM, A DE LLC,
a Delaware limited liability company

TENANT:
BIOCEPT, INC.,
a Delaware corporation

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SUMMARY OF BASIC LEASE INFORMATION AND DEFINITIONS

This SUMMARY OF BASIC LEASE INFORMATION AND DEFINITIONS ("**Summary**") is hereby incorporated into and made a part of the attached Single-Tenant Lease which pertains to the Premises described in Section 1.3 below. All references in the Lease to the "**Lease**" shall include this Summary. All references in the Lease to any term defined in this Summary shall have the meaning set forth in this Summary for such term. Any initially capitalized terms used in this Summary and any initially capitalized terms in the Lease which are not otherwise defined in this Summary shall have the meaning given to such terms in the Lease.

1.1 **Landlord's Address**:

9955 Mesa Rim, a DE LLC
c/o LPC West, Inc.
600 B Street, Suite 2210
San Diego, CA 92101
Attn: Brig Black
Telephone: 619-230-8885
Email: bblack@lpc.com

1.2 **Tenant's Address**:

Biocept, Inc.
5810 Nancy Ridge Drive
San Diego, CA 92121
Attn: Tim Kennedy
Telephone: 858-320-8207
Email: tkennedy@biocept.com

1.3 **Premises**: The building located at 9955 Mesa Rim Road, in the City of San Diego, County of San Diego, State of California (the "**Building**"), together with all improvements and facilities on the legal parcel containing the Building as shown on the site plan attached hereto as Exhibit "A" and more particularly described in Exhibit "B" attached hereto (the "**Property**"). The Building contains approximately 39,644 rentable square feet.

1.4 **Commencement Date**: The earliest of (a) the date Tenant first commences to conduct business operations in the Building, or (b) December 1, 2020 (the "**Anticipated Commencement Date**"). The Anticipated Commencement Date shall be extended for Landlord Delays to the extent provided in Section 5.3 of the Tenant Work Letter attached hereto as Exhibit "D."

1.5 **Lease Expiration Date**: One hundred twenty-seven (127) months following the Commencement Date. If the Commencement Date occurs on a day other than the first day of a month, then for purposes of determining the Lease Expiration Date, the one hundred twenty-seven (127) month period shall be measured from the first day of the month following the month in which the Commencement Date occurs.

1.6 **Rent**

Period	Monthly Rent
1-12*	$111,003.20 ($2.80/sf/mo)**
13-24	$114,174.72 ($2.88/sf/mo)
25-36	$117,742.68 ($2.97/sf/mo)
37-48	$121,310.64 ($3.06/sf/mo)
49-60	$124,878.60 ($3.15/sf/mo)
61-72	$128,843.00 ($3.25/sf/mo)
73-84	$132,410.96 ($3.34/sf/mo)
85-96	$136,375.36 ($3.44/sf/mo)
97-108	$140,736.20 ($3.55/sf/mo)
109-120	$144,700.60 ($3.65/sf/mo)
121-127	$149,061.44 ($3.76/sf/mo)

*Including any partial month at the beginning of the Term.

**Subject to abatement as set forth in Section 3.3 below, in the total amount of $777,022.40, and as set forth in Section 3.4 below.

1.7 **Security Deposit**: $386,529.00 subject to the terms of Section 5 below.

1.8 **Permitted Use**: The Premises may be used only for general office, research & development, and laboratory purposes.

1.9 **Brokers**: Cushman & Wakefield (Jack Hughson and Glenn Arnold) representing Landlord and Cushman & Wakefield (Greg Bisconti) representing Tenant.

1.10 **Interest Rate**: The lesser of: (a) the prime rate announced from time to time by Wells Fargo Bank or, if Wells Fargo Bank ceases to exist or ceases to publish such rate, then the rate announced from time to time by the largest (as measured by deposits) chartered operating bank operating in California, plus five percent (5%) per annum; or (b) the maximum rate permitted by Law.

SINGLE-TENANT LEASE

This SINGLE-TENANT LEASE ("**Lease**"), which includes the preceding Summary of Basic Lease Information and Definitions ("**Summary**") attached hereto and incorporated herein by this reference, is made as of the 27th day of May, 2020, by and between 9955 MESA RIM, A DE LLC, a Delaware limited liability company ("**Landlord**"), and BIOCEPT, INC., a Delaware corporation ("**Tenant**").

1. Lease of Premises.

1.1 **Lease of Premises**. Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the Premises upon and subject to the terms, covenants and conditions contained in this Lease to be performed by each party.

1.2 **Square Footage of Building**. The parties stipulate that the Building contains the square footage set forth in Section 1.3 of the Summary and notwithstanding any remeasurement of the Premises, the Monthly Rent shall not be increased in connection with any such future measurements.

1.3 **Landlord's Work**. Landlord, at its sole cost and expense using standard materials, shall perform the following work ("**Landlord's Work**"), lien-free, in a good, workmanlike manner, and using licensed professionals or the Contractor pursuant to a separate contract and not the Construction Contract (as each term is defined in the Tenant Work Letter), and diligently cause its completion:

(a) At least thirty (30) days prior to the Anticipated Commencement Date, slurry coat the Property's existing parking lot and re-stripe the Property's existing parking stalls;

(b) Within sixty (60) days following the Effective Date, remove any existing tenant signage at the Premises, on the Building or in the parking areas as of the date of execution of this Lease and repair any damage resulting therefrom;

(c) Prior to the Anticipated Commencement Date, re-roof either by replacement or overlay the Building's roof at Landlord's sole cost and supervision; and

(d) Within sixty (60) days following the Effective Date, engage a reputable and licensed termite inspector to inspect the Premises and provide a pest report, and thereafter, Landlord will complete any recommended repairs identified in said report.

Except as provided in this Section 1.3, Tenant shall accept the Premises in its then "as-is" condition. As is reasonably necessary and prudent, the Landlord's Work may be performed in part concurrently with construction of the Improvements if such Landlord's Work does not interfere with or delay the construction of the Improvements, but in all respects the Landlord's Work shall be Substantially Completed (as defined in the Tenant Work Letter) within the timeframes provided above.

In addition, Landlord will reimburse Tenant within thirty (30) days following Tenant's completion of the following work and delivery of a reasonably detailed invoice to Landlord for such work: (i) replace one time the Building's exhaust fans specifically identified on Exhibit "F attached hereto with Building-standard exhaust fans and (ii) replace one time the Building's HVAC units specifically identified on Exhibit "G" attached hereto with Building-standard HVAC units.

1.4 **Existing FF&E**. As of the Commencement Date, Landlord hereby conveys to Tenant all of Landlord's right, title and interest in and to the equipment currently located in the Building listed on Exhibit "E" attached hereto (collectively, the "**FF&E**"). Landlord has made no representations or warranties, express, implied or otherwise, regarding the condition or working order of the FF&E. Tenant confirms that it has had the reasonable opportunity to inventory and inspect the FF&E and hereby represents that (i) it accepts the FF&E "**AS IS AND WITH ALL FAULTS**", and (ii) it is satisfied that all items of FF&E listed on Exhibit "E" attached hereto are currently located in the Building and are hereby accepted by Tenant, subject to and in accordance with the terms of this Section 1.4. Throughout the Term of this Lease, Tenant shall be obligated to maintain the FF&E, and shall obtain and maintain property insurance on the FF&E as set forth in Section 20.1(a) below. In no event shall Landlord have any liability or responsibility with respect to the FF&E, and Landlord shall have no responsibility to repair, replace or refurbish the FF&E at any time for any reason, unless due to Landlord's intentional or grossly negligent acts or omissions.

1.5 **Tenant's Entry Into the Premises Prior to the Commencement Date**. Landlord shall deliver the Premises to Tenant on the date of full execution and delivery of this Lease by Landlord and Tenant ("**Delivery Date**") to allow Tenant and its employees, agents, architects, engineers, contractors and other representatives to access to the Premises for the purpose of Tenant installing furniture, fixtures and equipment (including lab equipment, telephones and computers and related cabling) in the Premises and construction of the Improvements pursuant to the Tenant Work Letter attached hereto as Exhibit "D". Prior to Tenant's entry into the Premises as permitted by the terms of this Section 1.5, Tenant shall submit certificates of insurance reasonably acceptable to Landlord and shall submit a schedule to Landlord (and Landlord's contractor, if so requested by Landlord), for their approval, which schedule shall detail the timing and purpose of Tenant's entry. Tenant's entry into the Premises shall be subject to all terms and conditions of this Lease except the payment of Monthly Rent and CAM Costs prior to the Commencement Date. Tenant shall hold Landlord harmless from and indemnify, protect and defend Landlord against any loss or

damage to the Property and Premises and against injury to any persons caused by Tenant's actions in the Premises pursuant to this Section 1.5.

2. Term.

2.1 **Term; Notice of Lease Dates**. This Lease shall be effective upon the date first above written (the "**Effective Date**"). The term of this Lease (the "**Term**") shall commence upon the date set forth in Section 1.4 of the Summary ("**Commencement Date**") and shall expire on the date set forth in Section 1.5 of the Summary ("**Lease Expiration Date**"), unless sooner terminated or extended as provided herein. If Landlord does not deliver possession of the Premises to Tenant on or before the Delivery Date, Landlord shall not be subject to any liability for its failure to do so, and such failure shall not affect the validity of this Lease nor the obligations of Tenant hereunder; provided that the Anticipated Commencement Date shall be extended day-for-day by any delays in the Delivery Date. Within ten (10) days after Landlord's request, Tenant shall execute a written confirmation of the Commencement Date as set forth in the Notice of Lease Term Dates attached hereto as Exhibit "C". The Notice of Lease Term Dates shall be binding upon Tenant unless Tenant objects thereto within ten (10) days following Landlord's request.

2.2 **Conditions Precedent**. Landlord will not be obligated to deliver possession of the Premises to Tenant until Landlord has received from Tenant all of the following: (i) a copy of this Lease fully executed by Tenant; (ii) evidence satisfactory to Landlord of the deposit of the Security Deposit in accordance with Section 5 below, and the first installment of Monthly Rent in accordance with Section 3.1 below; and (iii) copies of policies of insurance or certificates thereof as required under Article 20 of this Lease.

2.3 **Options to Extend**.

(a) Option Right. Landlord hereby grants the Tenant named in this Lease (the "**Original Tenant**") two (2) consecutive options (each an "**Option**") to extend the Term for the entire Premises for a period of five (5) years each (each, an "**Option Term**"), which Options shall be exercisable only by written notice delivered by Tenant to Landlord as set forth below. The rights contained in this Section 2.3 shall be personal to the Original Tenant and any Affiliated Assignee (as defined in Section 14.5 below) and may only be exercised by the Original Tenant or an Affiliated Assignee (and not any other assignee, sublessee or other transferee of the Original Tenant's interest in this Lease). Tenant must timely and properly exercise the first (1st) Option in order to be permitted to exercise the second (2nd) Option.

(b) Option Rent. The Monthly Rent payable by Tenant during an Option Term ("**Option Rent**") shall be equal to the "Market Rent" (defined below). "**Market Rent**" shall mean the applicable Monthly Rent at which tenants, as of the commencement of the Option Term, are entering into leases for non-sublease space which is not encumbered by expansion rights and which is comparable in size, location and quality to the Premises in renewal transactions for a term comparable to the Option Term which comparable space is located in similarly improved lab/life science buildings comparable to the Building in the Sorrento Mesa submarket, taking into consideration the reimbursement structure for real property taxes, operating expenses and insurance costs, any rent concessions, tenant improvement allowances or other rental incentives, and the value of the existing improvements in the Building to Tenant, as compared to the value of the existing improvements in such comparable space, with such value to be based upon the age, quality and layout of the improvements and the extent to which the same could be utilized by Tenant with consideration given to the fact that the improvements existing in the Building are specifically suitable to Tenant.

(c) Exercise of Option. Each Option shall be exercised by Tenant only in the following manner: (i) Tenant shall not be in default after expiration of any applicable notice and cure periods on the delivery date of the Interest Notice and Tenant's Acceptance; (ii) Tenant shall deliver written notice ("**Interest Notice**") to Landlord not more than fifteen (15) months nor less than nine (9) months prior to the expiration of then Term of this Lease, stating that Tenant is interested in exercising the Option; (iii) within fifteen (15) business days of Landlord's receipt of Tenant's written notice, Landlord shall deliver notice ("**Option Rent Notice**") to Tenant setting forth the Option Rent; and (iv) if Tenant desires to exercise such Option, Tenant shall provide Landlord written notice within fifteen (15) business days after receipt of the Option Rent Notice ("**Tenant's Acceptance**") and as part of Tenant's Acceptance, Tenant may, at its option, object to the Option Rent contained in the Option Rent Notice. Tenant's failure to deliver the Interest Notice or Tenant's Acceptance on or before the dates specified above shall be deemed to constitute Tenant's election not to exercise the Option. If Tenant timely and properly exercises an Option, the Term shall be extended for the Option Term upon all of the terms and conditions set forth in this Lease, except that the Monthly Rent for the Option Term shall be as indicated in the Option Rent Notice unless Tenant objects to the Option Rent contained in the Option Rent Notice, in which case the parties shall follow the procedure and the Option Rent shall be determined, as set forth in Section 2.3(d) below.

(d) Determination of Option Rent. If Tenant timely and appropriately objects to Landlord's determination of the Option Rent in Tenant's Acceptance, Landlord and Tenant shall attempt to agree upon the Option Rent using their best good-faith efforts. If Landlord and Tenant fail to reach agreement within twenty-one (21) days following Tenant's Acceptance ("**Outside Agreement Date**"), then each party shall make a separate determination of the Option Rent which shall be submitted to each other and to arbitration in accordance with the following items (i) through (vii):

(i) Landlord and Tenant shall each appoint, within ten (10) business days of the Outside Agreement Date, one arbitrator who shall by profession be a current real estate broker or appraiser of comparable commercial properties in the immediate vicinity of the Building, and who has been active in such field over the last five (5) years. The determination of the arbitrators shall be limited solely to the issue of whether Landlord's or Tenant's submitted Option Rent is the closest to the actual Market Rent as determined by the arbitrators, taking into account the requirements of Section 2.3(b) above (i.e., the arbitrators may only select Landlord's or Tenant's determination of Option Rent and shall not be entitled to make a compromise determination).

(ii) The two (2) arbitrators so appointed shall within five (5) business days of the date of the appointment of the last appointed arbitrator agree upon and appoint a third (3rd) arbitrator who shall be qualified under the same criteria set forth hereinabove for qualification of the initial two (2) arbitrators.

(iii) The three (3) arbitrators shall within fifteen (15) days of the appointment of the third (3rd) arbitrator reach a decision as to whether the parties shall use Landlord's or Tenant's submitted Market Rent, and shall notify Landlord and Tenant thereof.

(iv) The decision of the majority of the three (3) arbitrators shall be binding upon Landlord and Tenant.

(v) If either Landlord or Tenant fails to appoint an arbitrator within ten (10) days after the applicable Outside Agreement Date, the arbitrator appointed by one (1) of them shall reach a decision, notify Landlord and Tenant thereof, and such arbitrator's decision shall be binding upon Landlord and Tenant.

(vi) If the two (2) arbitrators fail to agree upon and appoint a third (3rd) arbitrator, or both parties fail to appoint an arbitrator, then the appointment of the third (3rd) arbitrator or any arbitrator shall be dismissed and the matter to be decided shall be forthwith submitted to arbitration under the provisions of the American Arbitration Association, but subject to the instruction set forth in this Section 2.3(d).

(vii) Each of Landlord and Tenant shall (1) separately pay for the cost of its respective chosen arbitrator, and (2) pay the cost of the neutral third arbitrator and all other costs of arbitration equally.

2.4 **Termination Option**. Provided Tenant fully and completely satisfies each of the conditions set forth in this Section 2.4, Tenant shall have the one time option ("**Termination Option**") to terminate this Lease effective as of the last day of the ninetieth (90th) full calendar month of the initial Term of this Lease only (the "**Termination Date**"). In order to exercise the Termination Option, Tenant must fully and completely satisfy each and every one of the following conditions: (a) Tenant must give Landlord written notice ("**Termination Notice**") of its exercise of the Termination Option, which Termination Notice must be delivered to Landlord at least twelve (12) months prior to the Termination Date; (b) at the time of the delivery of the Termination Notice to Landlord, Tenant shall not be in default under this Lease after expiration of any applicable notice and cure periods; and (c) concurrently with Tenant's delivery of the Termination Notice to Landlord, Tenant shall pay to Landlord a termination fee ("**Termination Fee**") equal to six (6) months (provided that the Termination Fee shall be increased to eight (8) months if Tenant uses more than $20.00 per rentable square foot of the Building of the Additional Allowance pursuant to the Tenant Work Letter) of Monthly Rent calculated at the rate otherwise payable for the ninetieth (90th) full calendar month of the initial Term of this Lease. The right to exercise the Termination Option is personal to the Original Tenant and any Affiliated Assignee.

3. Rent.

3.1 **Monthly Rent**. Tenant agrees to pay Landlord, as rent for the Premises, the Monthly Rent designated in Section 1.6 of the Summary. The Monthly Rent shall be paid by Tenant in advance on the first day of each and every calendar month commencing upon the Commencement Date, except that the first full month's Monthly Rent for the Premises shall be paid upon execution of this Lease by Tenant. Monthly Rent for any partial month shall be prorated in the proportion that the number of days this Lease is in effect during such month bears to the actual number of days in such month.

3.2 **Additional Rent**. All amounts and charges payable by Tenant under this Lease in addition to the Monthly Rent described in Section 3.1 above shall be considered additional rent for the purposes of this Lease, and the word "**Rent**" in this Lease shall include such additional rent unless the context specifically or clearly implies that only the Monthly Rent is referenced. Rent shall be paid to Landlord as provided in Article 7, without any prior demand therefor and without any deduction or offset except as specified elsewhere in the Lease or the Tenant Work Letter attached hereto, in lawful money of the United States of America.

3.3 **Abatement of Monthly Rent**. Notwithstanding anything to the contrary contained herein and provided that Tenant faithfully performs all of the terms and conditions of this Lease, Landlord hereby agrees to abate Tenant's obligation to pay Monthly Rent for the second (2nd) through the eighth (8th) full calendar months of the initial Term of this Lease ("**Abatement Period**") in the amount of $777,022.40.

During such Abatement Period, Tenant shall still be responsible for the payment of all of its other monetary obligations under this Lease including, without limitation, the payment to Landlord of Real Property Taxes and Insurance Costs. In the event of a default by Tenant under the terms of this Lease that results in early termination pursuant to the provisions of Article 22 of this Lease, then as a part of the recovery set forth in Article 22 of this Lease, Landlord shall be entitled to the recovery of the unamortized portion of the Monthly Rent that was abated under the provisions of this Section 3.3, which unamortized portion shall be calculated on a straight-line basis over the one hundred twenty-seven (127) month initial Lease Term.

3.4 **Abatement of Monthly Rent Upon Sale**. Notwithstanding anything to the contrary contained herein and provided that Tenant faithfully performs all of the terms and conditions of this Lease, if the entity originally named in this Lease as the Landlord hereunder, e.g. 9955 MESA RIM, A DE LLC (the "**Original Landlord**") sells the Property, or transfers any other interest in the Property or the Original Landlord in a manner that would cause the Property to be reassessed for property tax purposes as a result of a "change in ownership" as defined in California Revenue and Taxation Code §60 (a "**Sale**"), and (a) the Sale closes between the period beginning on the date of this Lease and ending on third (3rd) anniversary of the date of this Lease, then Landlord hereby agrees to abate Tenant's obligation to pay Monthly Rent for the first two (2) full calendar months following the closing of such Sale (or, if all or a part of such two (2) months would otherwise occur during the Abatement Period set forth in Section 3.3 above, then the first two (2) full months following the Abatement Period), or (b) the Sale closes between the period beginning on the first day following the third (3rd) anniversary of the date of this Lease and ending on fifth (5th) anniversary of the date of this Lease, then Landlord hereby agrees to abate Tenant's obligation to pay Monthly Rent for the first one (1) full calendar month following the closing of such Sale. For the avoidance of doubt, Tenant shall not be entitled to an additional abatement of Monthly Rent under this Section 3.4 if there is a Sale after the fifth (5th) anniversary of the date of this Lease. During and such period of abated Monthly Rent under this Section 3.4, Tenant shall still be responsible for the payment of all of its other monetary obligations under this Lease including, without limitation, the payment to Landlord of Real Property Taxes and Insurance Costs.

4. <u>Triple-Net Lease</u>.

4.1 **Tenant's Obligations; Operating Expenses**. Except as otherwise provided herein, all Rent shall be absolutely net to Landlord so that this Lease shall yield net to Landlord, the Rent to be paid each month during the Term of this Lease. Tenant shall be responsible for the reimbursement as "**Operating Expenses**" for the Permitted Capitalized Expenses in accordance with Section 11.2(a) below. Nothing herein contained shall be deemed to require Tenant to pay or discharge any litigation regarding title, liens or mortgages of any character whatsoever which may exist or hereafter be placed upon the Premises by an affirmative act or omission of Landlord.

Notwithstanding anything to the contrary in this Lease, the following shall not be considered a part of CAM Costs: (a) costs of leasing commissions, attorneys' fees and other costs and expenses incurred in connection with negotiations or disputes with present or prospective tenants or other occupants of the Property; (b) costs (including permit, license and inspection costs) incurred in renovating or otherwise improving, decorating or redecorating rentable space for other tenants or vacant rentable space; (c) any deprecation of the Building; (d) costs of overhead or profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for services in or in connection with the Building to the extent the same exceeds the costs of overhead and profit increment included in the costs of such services which could be obtained from third parties on a competitive basis; (e) principal, interest or fees for loans or any costs associated with financing the Building; (f) ground rent; (g) costs of repairs and maintenance actually reimbursed by any other party (including, without limitation, by insurance proceeds); (h) attorneys' fees and other costs incurred in disputes with third parties; (i) costs associated with the operation of the business of the partnership or entity which constitutes Landlord as the same are distinguished from the costs of operation of the Building, including accounting and legal matters; (j) costs or expenses resulting from the violation of any laws by Landlord or as a result of the gross negligence or misconduct of Landlord; (k) the cost of testing, containing, removing or otherwise remediating any contamination of the Property (including the underlying land and ground water) by any Hazardous Materials that were not caused by Tenant; (l) wages, salaries or other compensation paid to any executive employees above the grade of senior director of property operations or similar title; (m) costs of capital improvements, replacements or alterations (as determined pursuant to generally acceptable accounting principles), except as permitted by Section 11.2(a); (n) costs to correct a violation of building codes, zoning laws, accessibility laws, or any other applicable laws, where such legal violation existed on or before the Delivery Date; (o) any costs associated with selling, transferring or encumbering the Building or of any ownership interest in Landlord; (p) advertising or promotional expenditures, or any Building signage; (q) the costs of correcting any latent defects in the original construction of the Building or Landlord's Work; (r) property management fees exceeding two percent (2%) of Building revenues; and (s) reserves of any kind.

4.2 **Estimated Expenses**. On or before the first day of each calendar year during the Term, or as soon thereafter as practicable, Landlord shall give Tenant written notice of Landlord's reasonable estimate of the amounts payable by Tenant for Operating Expenses, Real Property Taxes and Insurance Costs (collectively, "**CAM Costs**") for the ensuing calendar year (each an "**Expense Estimate**"). On or before the first day of each month during such ensuing calendar year, Tenant shall pay to Landlord one-twelfth (1/12th) of such estimated amounts set forth in an Expense Estimate. If Landlord does not deliver an Expense Estimate for any calendar year, Tenant shall continue to pay on the basis of the prior year's Expense Estimate until the month after such new Expense Estimate is given, and subsequent payments by Tenant shall be based on Landlord's current Expense Estimate, adjusted, as determined by Landlord, so that the subsequent monthly installments payable by Tenant hereunder through the end of the calendar

year reimburse Landlord for all amounts payable by Tenant for CAM Costs. If at any time it appears to Landlord that the amounts payable under Section 4.1 hereof for the current calendar year will vary from Landlord's Expense Estimate, Landlord may, by giving written notice to Tenant, revise Landlord's Expense Estimate for such year, and subsequent payments by Tenant for such year shall be based on such revised Expense Estimate.

4.3 **Reconciliation of Expenses**. On or before April 1st of each calendar year, or as soon after such date as practicable, Landlord shall give Tenant a written statement of the amounts payable as CAM Costs for such calendar year certified by Landlord (each an "**Expense Statement**"). If an Expense Statement shows an amount owing by Tenant that is less than the estimated payments for such calendar year previously made by Tenant, Landlord shall, at its option, either refund or credit the excess to Tenant within thirty (30) days of the date of such Expense Statement. If an Expense Statement shows an amount owing by Tenant that is more than the estimated payments for such calendar year previously made by Tenant, Tenant shall pay the deficiency to Landlord within thirty (30) days after delivery of such Expense Statement and payment of such deficiency shall be a condition precedent to Tenant's rights to inspect Landlord's books pursuant to Section 4.5 below.

4.4 **Proration of Expenses in Final Lease Year**. If the Term ends on a day other than the last day of a calendar year, the amounts payable by Tenant under this Article 4 applicable to the calendar year in which such Term ends shall be prorated according to the ratio which the number of days in such calendar year to and including the end of the Term bears to three hundred sixty (360). Termination of this Lease shall not affect the obligation of Tenant pursuant to Section 4.3 to be performed after such termination.

4.5 **Audit**. Tenant shall have the right, at its sole cost and expense, to inspect the books of Landlord directly relating to CAM Costs, after giving prior written notice to Landlord of Tenant's intent to conduct such inspection no later than one hundred eighty (180) days after delivery of such Expense Statement, and no sooner than five (5) business days prior to conducting such inspection. Tenant shall conduct its inspection of Landlord's books during the business hours of Landlord at Landlord's office or at such other location as Landlord may designate, for the purpose of verifying the information in such statement. Tenant shall use a certified public accountant reasonably acceptable to Landlord to conduct its inspection of Landlord's books and in no event shall Tenant have the right to pay such accountant on a contingency fee basis. If Tenant shall have availed itself of its right to inspect the books and records, and whether or not Tenant disputes the accuracy of the information set forth in such books and records, Tenant shall nevertheless pay the amount set forth in Landlord's then-current Expense Estimate and continue to pay the amounts required by Section 4.3, pending resolution of said dispute. If Tenant's inspection of Landlord's books reveals that the amount of CAM Costs paid or incurred by Landlord in the calendar year being audited ("**Audited Expenses**") are overstated in the aggregate, then Landlord shall within thirty (30) days after the completion of the inspection elect to either reimburse or credit Tenant for any and all overcharges; or if the Audited Expenses for any calendar year are not overstated, then Tenant shall within thirty (30) days after the completion of the inspection pay to Landlord the amount (if any) by which Tenant has underpaid CAM Costs for the calendar year being audited. If it is determined that Landlord overstated the Audited Expenses by more than three percent (3%), then Landlord shall pay all reasonable costs and expenses related to the audit. If Tenant fails to notify Landlord of Tenant's election to inspect Landlord's books within one hundred eighty (180) days of Tenant's receipt of Landlord's Expense Statement, Landlord's Expense Statement shall be deemed final and binding on Tenant and Tenant shall have no further right to inspect Landlord's books with respect to the CAM Costs for the calendar year for which the Landlord's Expense Statement pertains.

5. **Security Deposit**. Concurrently with Tenant's execution of this Lease, Tenant shall deposit with Landlord the Security Deposit designated in Section 1.7 of the Summary. The Security Deposit shall be held by Landlord as security for the full and faithful performance by Tenant of all of the terms, covenants and conditions of this Lease to be performed by Tenant during the Term. The Security Deposit is not, and may not be construed by Tenant to constitute, rent for the last month or any portion thereof. If Tenant defaults with respect to any of its obligations under this Lease after expiration of all applicable notice and cure periods, Landlord may (but shall not be required to) use, apply or retain all or any part of the Security Deposit for the payment of any rent or any other sum in default, or for the payment of any other amount, loss or damage which Landlord may spend, incur or suffer by reason of Tenant's default. If any portion of the Security Deposit is so used or applied, Tenant shall, within ten (10) business days after demand therefor, deposit cash with Landlord in an amount sufficient to restore the Security Deposit to its original amount. Landlord shall not be required to keep the Security Deposit separate from its general funds, and Tenant shall not be entitled to interest on the Security Deposit. If Tenant shall fully and faithfully perform every provision of this Lease to be performed by it, the Security Deposit or any balance thereof shall be returned to Tenant within two (2) weeks following the expiration or earlier termination of the Lease term, provided that Landlord, upon written notice given on or before the expiration or earlier termination of the Lease term, as applicable, may retain the Security Deposit until such time as any amount due from Tenant to Landlord in accordance with this Lease has been determined and paid in full. If Landlord sells its interest in the Building during the Term and if Landlord deposits with the purchaser the Security Deposit (or balance thereof), and such purchaser acknowledges receipt thereof, then, upon such sale, Landlord shall be discharged from any further liability with respect to the Security Deposit. Tenant waives the provisions of Section 1950.7 of the California Civil Code and all other provisions of Laws, now or hereafter in force, which provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of rent, to repair damage caused by Tenant or to clean the Premises, it being agreed that Landlord may, in addition, claim those sums specified above, and all of Landlord's damages under this Lease and California Laws including, but not limited to, any damages accruing upon termination

of this Lease under Section 1951.2 of the California Civil Code and/or those sums reasonably necessary to compensate Landlord for any other loss or damage, foreseeable or unforeseeable, caused by the acts or omissions of Tenant or any officer, employee, agent, contractor or invitee of Tenant.

6. Use.

6.1 **General**. Tenant shall use the Premises solely for the Permitted Use specified in Section 1.8 of the Summary, and shall not use or permit the Premises to be used for any other use or purpose whatsoever. Tenant shall, at its sole cost and expense, observe and comply with all requirements of any board of fire underwriters or similar body relating to the Premises, all recorded covenants, conditions and restrictions[1] now or hereafter affecting the Premises (provided that Landlord shall not consent to any new covenants, conditions and restrictions after the date of this Lease that would materially impair Tenant's use of or access to the Premises) and all Laws now or hereafter in force relating to or affecting the condition, use, occupancy, alteration or improvement (whether structural or non-structural, including unforeseen and/or extraordinary alterations or improvements, and regardless of the period of time remaining in the Term) of the Premises, including, without limitation, the provisions of the Americans with Disabilities Act ("**ADA**") as it pertains to the condition, use, occupancy, improvement and alteration (whether structural or non-structural, including unforeseen and/or extraordinary alterations or improvements, and regardless of the period of time remaining in the Term) of the Premises; provided, however, that, notwithstanding anything to the contrary herein, Tenant shall not be liable for, or responsible for making any structural changes to the Premises to correct, a violation of building codes, zoning laws, accessibility laws, the ADA or any other applicable laws, where such structural violation existed on or before the Delivery Date. Tenant shall not use or allow the Premises to be used (a) in violation of any recorded covenants, conditions and restrictions affecting the Premises or of any Law, or of any certificate of occupancy issued for the Premises, or (b) for any improper, immoral, unlawful or reasonably objectionable purpose. Tenant shall not cause, maintain or permit any nuisance in, on or about the Premises, nor commit or suffer to be committed any waste in, on or about the Premises.

6.2 **Signs, Awnings and Canopies**. Tenant shall have the right to fabricate and install, at Tenant's sole cost and expense, upon the Building such signage that complies with the City of San Diego's signage criteria (including, without limitation, an exclusive sign at the top of the Building in a location reasonably approved by Landlord), provided Tenant complies with any covenants of record and obtains approval from all governmental authorities having jurisdiction over the Building and written approval from Landlord, which approval shall not be unreasonably withheld, conditioned or delayed. Tenant agrees to maintain any such sign, awning, canopy, decoration, lettering or advertising matter as may be approved by Landlord in good condition and repair at all times at Tenant's sole cost and expense. At the expiration or earlier termination of this Lease, at Landlord's election, Tenant shall remove all signs, awnings, canopies, decorations, lettering and advertising installed by or at the direction of Tenant and shall repair any damage to the Premises resulting therefrom and return the impacted area(s) to their condition prior to such installation (including, without limitation, patching as needed) all at Tenant's sole cost and expense. If Tenant fails to maintain any such approved sign, awning, decoration, lettering, or advertising, Landlord may do so and Tenant shall reimburse Landlord for such cost plus a three percent (3%) overhead fee. If, without Landlord's prior written consent, Tenant installs any sign, awning, decoration, lettering or advertising, or fails to remove any such item(s) at the expiration or earlier termination of this Lease, Landlord may have such item(s) removed and stored and may repair any damage to the Premises at Tenant's expense. The removal, repair and/or storage costs shall bear interest until paid at the Interest Rate.

6.3 **Hazardous Materials**.

6.3.1 **Tenant's Environmental Representations and Indemnification**. Except as provided in Section 6.3.2 below, Tenant agrees not to cause or permit any Hazardous Materials to be brought upon, stored, used, handled, generated, released or disposed of on, in, under or about the Premises by Tenant, its agents, employees, subtenants, assignees, licensees, contractors or invitees (collectively, "**Tenant's Parties**"), without the prior written consent of Landlord, which consent Landlord shall not unreasonably withhold, condition or delay, provided that such Hazardous Materials are customary for comparable life science tenants in San Diego, California. Upon the expiration or earlier termination of this Lease, Tenant agrees to promptly remove from the Premises, at its sole cost and expense, any and all Hazardous Materials, including any equipment or systems containing Hazardous Materials which are installed, brought upon, stored, used, generated or released upon, in, under or about the Premises by Tenant or any of Tenant's Parties. To the fullest extent permitted by Law, Tenant agrees to promptly indemnify, protect, defend and hold harmless Landlord and Landlord's partners, officers, directors, employees, agents, successors and assigns (collectively, "**Landlord Indemnified Parties**") from and against any and all claims, damages, judgments, suits, causes of action, losses, liabilities, penalties, fines, expenses and costs (including, without limitation, clean-up, removal, remediation and restoration costs, sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees and court costs) which arise or result from the presence of Hazardous Materials on, in, under or about the Premises first introduced to the Premises by Tenant or a Tenant Party. Tenant agrees to promptly notify Landlord of any discovery or release of Hazardous Materials that Tenant becomes aware of during the Term of this Lease, whether caused by Tenant, Tenant Parties or any other persons or entities. In the event of any release of Hazardous Materials caused or permitted by Tenant or any of Tenant's Parties, Landlord shall have the right, but not the obligation, to cause Tenant to immediately take all steps Landlord deems necessary or appropriate to remediate such release in accordance with applicable Environmental Law, and, if such release is caused

by Tenant or a Tenant Party, prevent any similar future release to the reasonable satisfaction of Landlord and Landlord's mortgagee(s). At all times during the Term of this Lease (but not more than once in any 12-month period), Landlord will have the right, but not the obligation, to enter upon the Premises in accordance with Section 15 hereof to inspect, investigate, sample and/or monitor the Premises to determine if Tenant is in compliance with the terms of this Lease regarding Hazardous Materials. Tenant will, upon the request of Landlord, cause to be performed an environmental audit of the Premises by an environmental consulting firm reasonably acceptable to Landlord at Landlord's sole cost and expense unless such audit shall discover a violation of applicable Environmental Law by Tenant. The term "**Hazardous Materials**" shall mean and include any hazardous or toxic materials, substances or wastes as now or hereafter designated or regulated under any law, statute, ordinance, rule, regulation, order or ruling of any agency of the State, the United States Government or any local governmental authority, including, without limitation, asbestos, petroleum, petroleum hydrocarbons and petroleum based products, urea formaldehyde foam insulation, polychlorinated biphenyls ("**PCBs**"), and freon and other chlorofluorocarbons. The term "**Environmental Law**" means any past, present or future federal, state or local statutory or common law, or any regulation, ordinance, code, plan, order, permit, grant, franchise, concession, restriction or agreement issued, entered, promulgated or approved thereunder, relating to (a) the environment, human health or safety, including, without limitation, emissions, discharges, releases or threatened releases of Hazardous Materials (as defined below) into the environment (including, without limitation, air, surface water, groundwater or land), or (b) the manufacture, generation, refining, processing, distribution, use, sale, treatment, receipt, storage, disposal, transport, arranging for transport, or handling of Hazardous Materials. The provisions of this Section 6.3.1 will survive the expiration or earlier termination of this Lease.

6.3.2 **Permitted Hazardous Materials**. Landlord acknowledges that it is not the intent of this Section 6.3 to prohibit Tenant from operating its business as described in Section 1.8 of the Summary above. Tenant may use, store, handle and generate Hazardous Materials to operate its business according to the custom of the industry of the Permitted Use so long as the use or presence of any Hazardous Material is strictly and properly monitored and accomplished according to all applicable governmental requirements and in accordance with all Environmental Laws. As a material inducement to Landlord to allow Tenant to use Hazardous Materials in connection with its business, Tenant agrees to deliver to Landlord prior to the Commencement Date a list identifying each type of Hazardous Material to be present on the Premises and setting forth any and all governmental approvals or permits required in connection with the presence of such Hazardous Material on the Premises ("**Hazardous Materials List**"). Tenant shall deliver an updated list before any new Hazardous Material is brought onto the Premises or on or before the date Tenant obtains any additional permits or approvals for Hazardous Materials. Landlord shall have the right to refuse such Hazardous Materials and cause Tenant to promptly remove them from the Premises in the event that (i) any use of the Premises by Tenant involves the generation or storage, use, treatment or disposal of Hazardous Material in a manner or for a purpose prohibited at the Premises by order of any applicable governmental agency or authority; (ii) Tenant has been required by any lender or governmental authority to take remedial action in connection with Hazardous Material contaminating the Premises if the contamination resulted from Tenant's actions or use of the Premises (unless Tenant is diligently seeking compliance with such remedial action); or (iii) Tenant is in violation of an enforcement order issued by any governmental authority in connection with the use, disposal or storage of a Hazardous Material on the Premises (unless Tenant is diligently seeking compliance with such enforcement order). Landlord shall have the right to have an environmental audit of the Premises to be conducted within ninety (90) days prior to the scheduled expiration date of this Lease, or at termination of this Lease, if the Lease is terminated on a date other than the scheduled termination date. If a violation of applicable Environmental Law is discovered and such violation was caused by Tenant or a Tenant Party, Tenant shall promptly perform any remedial action required by applicable Environmental Law. The costs of such audits shall be borne by Landlord unless the audit discloses the existence of a violation of applicable Environmental Law by Tenant or a Tenant Party, in which case the costs of the audit shall be borne by Tenant.

6.4 **Refuse and Sewage**. Tenant agrees not to keep any trash, garbage, waste or other refuse on the Premises except in sanitary containers and agrees to regularly and frequently remove same from the Premises. Tenant shall keep all containers or other equipment used for storage of such materials in a clean and sanitary condition. Tenant shall, at Tenant's sole cost and expense, properly dispose of all sanitary sewage and shall not use the sewage disposal system for the disposal of anything except sanitary sewage. Tenant shall keep the sewage disposal system free of all obstructions and in good operating condition. Tenant shall contract directly for all trash disposal services at Tenant's sole cost and expense.

6.5 **Exculpation; Landlord Indemnity**. Landlord represents and warrants to Tenant that, to its actual knowledge as of the Delivery Date, no Hazardous Materials exist in, on, under or about the Premises or Building in violation of any Environmental Law. Notwithstanding anything to the contrary in this Lease, Tenant shall not be responsible to remediate nor otherwise be liable or responsible for (not shall Tenant be responsible to indemnify Landlord with respect to) any Hazardous Materials (a) located in, on, under or about the Premises or Building prior to the Delivery Date, (b) brought upon the Premises by Landlord or any of the Landlord Indemnified Parties, or (c) that have migrated onto the Premises or Building from other properties ("**Landlord's Hazardous Materials**"). To the extent that Landlord's Hazardous Materials are discovered at the Premises and remediation of the same is required by a governmental authority with jurisdiction, then Landlord shall remediate the Landlord's Hazardous Substances (to the extent required by the applicable governmental authority) at Landlord's sole cost and expense, and not subject to inclusion in Operating Expenses. To the fullest extent permitted by Environmental Law, Landlord agrees to promptly indemnify, protect, defend and hold harmless Tenant and the Tenant Parties from and against any and all claims, damages, judgments, suits, causes of action, losses, liabilities, penalties, fines, expenses and costs (including, without limitation, clean-up, removal, remediation and restoration costs, sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees and court costs) which arise or result from the

presence of any Hazardous Materials (i) located in, on, under or about the Premises or Building prior to the Delivery Date, or (ii) brought upon the Premises by Landlord or any of the Landlord Indemnified Parties.

7. **Payments and Notices**. All Rent and other sums payable by Tenant to Landlord hereunder shall be paid to Landlord at the address designated in Section 1.1 of the Summary, by wire transfer or ACH pursuant to Landlord's written payment instructions, or to such other persons and/or at such other places as Landlord may hereafter designate in writing. Any notice required or permitted to be given hereunder must be in writing and given by personal delivery (including delivery by nationally recognized overnight courier or express mailing service), or by registered or certified mail, postage prepaid, return receipt requested, addressed to Tenant at the Premises, or to Landlord at the address(es) designated in Section 1.1 of the Summary. Either party may, by written notice to the other, specify a different address for notice purposes. Notice given in the foregoing manner shall be deemed given (i) when actually received or refused by the party to whom sent if delivered by a carrier or personally served or (ii) if mailed, on the day of actual delivery or refusal as shown by the certified mail return receipt or the expiration of three (3) business days after the day of mailing, whichever first occurs. For purposes of this Article 7, a "business day" is Monday through Friday, excluding holidays observed by the United States Postal Service.

8. **Brokers**. Landlord has entered into an agreement with the real estate broker specified in Section 1.9 of the Summary as representing Landlord ("**Landlord's Broker**"), and Landlord shall pay any commissions or fees that are payable to Landlord's Broker with respect to this Lease in accordance with the provisions of a separate commission contract. Each of Landlord and Tenant represents to the other that it has not had any dealings with any real estate broker, finder or intermediary with respect to this Lease, other than Landlord's Broker and the broker specified in Section 1.9 of the Summary as representing Tenant ("**Tenant's Broker**"). Any commissions or fees payable to Tenant's Broker with respect to this Lease shall be paid exclusively by Landlord's Broker. Each party represents and warrants to the other, that, to its knowledge, no other broker, agent or finder (a) negotiated or was instrumental in negotiating or consummating this Lease on its behalf, or (b) is or might be entitled to a commission or compensation in connection with this Lease. Tenant shall indemnify, protect, defend (by counsel reasonably approved in writing by Landlord) and hold Landlord harmless from and against any and all claims, judgments, suits, causes of action, damages, losses, liabilities and expenses (including attorneys' fees and court costs) resulting from any breach by Tenant of the foregoing representation, including, without limitation, any claims that may be asserted against Landlord by any broker, agent or finder undisclosed by Tenant herein. Landlord shall indemnify, protect, defend (by counsel reasonably approved in writing by Tenant) and hold Tenant harmless from and against any and all claims, judgments, suits, causes of action, damages, losses, liabilities and expenses (including attorneys' fees and court costs) resulting from any breach by Landlord of the foregoing representation, including, without limitation, any claims that may be asserted against Tenant by any broker, agent or finder undisclosed by Landlord herein. The foregoing indemnities shall survive the expiration or earlier termination of this Lease.

9. **Surrender; Holding Over**.

9.1 **Surrender of Premises**. Upon the expiration or sooner termination of this Lease, Tenant shall surrender all keys for the Premises to Landlord, and Tenant shall deliver exclusive possession of the Premises to Landlord broom clean and in substantially similar condition and repair as received, reasonable wear and tear excepted (and casualty damage excepted if this Lease is terminated as a result thereof pursuant to Article 18), with all of Tenant's personal property removed therefrom and all damage caused by such removal repaired, as required pursuant to Sections 12.2 and 12.3 below. If Tenant holds over without Landlord's written consent and thereafter fails to surrender the Premises within one (1) month of the expiration or earlier termination of this Lease, with such removal and repair obligations completed, then, in addition to Landlord's rights and remedies under Section 12.4 and the other provisions of this Lease, Tenant shall indemnify, protect, defend (by counsel reasonably approved in writing by Landlord) and hold Landlord harmless from and against any and all claims, judgments, suits, causes of action, damages, losses, liabilities and expenses (including attorneys' fees and court costs) resulting from such failure to surrender, including, without limitation, any claim made by any succeeding tenant based thereon. The foregoing indemnity shall survive the expiration or earlier termination of this Lease.

9.2 **Holding Over**. If Tenant holds over after the expiration or earlier termination of the Lease Term without Landlord's written consent, then, without waiver of any right on the part of Landlord as a result of Tenant's failure to timely surrender possession of the Premises to Landlord, Tenant shall become a tenant at sufferance only, upon the terms and conditions set forth in this Lease so far as applicable (including Tenant's obligation to pay all costs, expenses and any other additional rent under this Lease), but at a Monthly Rent equal to (a) for the first month of holdover, one hundred twenty-five percent (125%) of the Monthly Rent applicable to the Premises immediately prior to the date of such expiration or earlier termination and (b) following the first month of holdover, one hundred fifty percent (150%) of the Monthly Rent applicable to the Premises immediately prior to the date of such expiration or earlier termination. Acceptance by Landlord of rent after such expiration or earlier termination shall not constitute a consent to a hold over hereunder or result in an extension of this Lease; however, Landlord shall not be entitled to any additional sums except as provided in Section 9.1 above. Tenant shall pay an entire month's Monthly Rent calculated in accordance with this Section 9.2 for any portion of a month it holds over and remains in possession of the Premises pursuant to this Section 9.2.

9.3 **No Effect on Landlord's Rights**. The foregoing provisions of this Article 9 are in addition to, and do not affect, Landlord's right of re-entry or any other rights of Landlord hereunder or otherwise provided at law or in equity, except for payment of rent.

10. Taxes.

10.1 **Real Property Taxes**. In accordance with Article 4 hereof, Tenant agrees to reimburse Landlord for all general and special real property taxes, assessments (including, without limitation, change in ownership taxes or assessments), liens, bond obligations, license fees or taxes, commercial rent taxes and any similar impositions in-lieu of other impositions now or previously within the definition of real property taxes or assessments and any and all assessments under any covenants, conditions and restrictions affecting the Premises (collectively "**Real Property Taxes**") which may be now or hereafter levied or assessed against the Premises applicable to the period from the Commencement Date, until the expiration or sooner termination of this Lease. Real Property Taxes shall include, by way of illustration but not limitation, the following: (a) any tax on Landlord's "right" to rent or "right" to other income from the Premises or as against Landlord's business of leasing the Premises; (b) any assessment, tax, fee, levy or charge in substitution, partially or totally, of any assessment, tax, fee, levy or charge previously included within the definition of real property tax; (c) any assessment, tax, fee, levy or charge allocable to or measured by the area of the Premises or the Rent payable by Tenant hereunder, including, without limitation, any gross receipts tax or excise tax levied by state, city or federal government, or any political subdivision thereof, with respect to the receipt of such Rent, or upon or with respect to the possession, leasing, operation, management, maintenance, alteration, repair, use or occupancy by Tenant and of the Premises; (d) any assessment, tax, fee, levy or charge upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises; and/or (e) any assessment, tax, fee, levy or charge by any governmental agency related to any transportation plan, fund or system (including assessment districts) instituted within the geographic area of which the Premises make a part. Real Property Taxes shall not include (1) net income taxes of Landlord or the owner of any interest in the Building, (2) franchise, capital stock, gift, estate or inheritance taxes, (3) any federal, state or local documentary taxes imposed against the Property or any portion thereof or interest therein, or (4) any late fees, interest or penalties incurred due to Landlord’s failure to pay any reimbursable portion of Real Property Taxes as and when due.

All Real Property Taxes for the tax year in which the Commencement Date occurs and for the tax year in which this Lease terminates shall be apportioned and adjusted so that Tenant shall not be responsible for any Real Property Taxes for a period of time occurring prior to the Commencement Date or subsequent to the expiration of the Term.

Tenant shall pay Real Property Taxes as part of CAM Costs in accordance with Article 4; provided, however, Tenant, at its sole cost and expense, shall have the right, (a) to pay any Tenant contested amounts to Landlord under protest and (b) with Landlord's reasonable cooperation, to contest any Real Property Tax assessment of the Property and/or bring suit in any court of competent jurisdiction to seek to recover from the governmental authority the amount of any such taxes and assessments that Tenant believes were incorrectly assessed against the Premises.

10.2 **Personal Property Taxes**. Tenant shall be liable for, and shall pay before delinquency, all taxes and assessments (real and personal) levied against (a) any personal property or trade fixtures placed by Tenant in or about the Premises (including any increase in the assessed value of the Premises based upon the value of any such personal property or trade fixtures); and (b) any Tenant Improvements or alterations in the Premises (whether installed and/or paid for by Landlord or Tenant). If any such taxes or assessments are levied against Landlord or Landlord's personal property located within the Premises, Landlord may, after written notice to Tenant (and under proper protest if requested by Tenant) pay such taxes and assessments, and Tenant shall reimburse Landlord therefor within thirty (30) days after Tenant’s receipt of invoices for same from Landlord; provided, however, Tenant, at its sole cost and expense, shall have the right, with Landlord's cooperation, to bring suit in any court of competent jurisdiction to recover the amount of any such taxes and assessments so paid under protest.

11. Repairs.

11.1 **Tenant's Repair Obligations**. Except as provided in Section 11.2 below, Tenant shall at all times and at Tenant's sole cost and expense, keep, maintain, clean, repair, renovate, replace and preserve the Premises and all parts thereof, including, without limitation, the non-structural portions of the Building, utility meters, plumbing, pipes and conduits, all heating, ventilating and air conditioning systems located within the Premises, all fixtures, furniture and equipment, Tenant's signs, if any, locks, closing devices, security devices, windows, window sashes, casements and frames, floors and floor coverings, shelving, restrooms, ceilings, interior walls, roof, skylights, interior and demising walls, doors, electrical and lighting equipment, sprinkler systems, parking areas, driveways, walkways, parking lots, loading dock areas and doors (including, without limitation, roll up doors), rail spur areas, fences, signs, lawns and landscaping, if any, all Tenant Improvements, Tenant Changes or other alterations, additions and other property and/or fixtures located within the Premises in good condition and repair, reasonable wear and tear excepted. Tenant's repair and maintenance obligations shall include, but not be limited to, slurry coating the parking areas every thirty (30) months; parking area and driveway sweeping and repairing; and responsibility for painting. Tenant shall at all times during the Term make all non-structural changes, repairs and improvements to the Premises of every kind and nature, whether ordinary or extraordinary, foreseen or unforeseen, which may be required by any Laws or for the safety of the Premises. Tenant agrees to procure and maintain maintenance contracts for all heating, ventilating and air conditioning systems with reputable contractors reasonably approved by Landlord. Such maintenance and repairs shall be performed with due diligence, lien-free and in a good and workmanlike manner, by licensed contractor(s) which are selected by Tenant and approved by Landlord, which approval Landlord shall not unreasonably withhold or delay; provided that

no such approval of Landlord is required for any one-time service work under $5,000.00. Tenant shall be responsible for employing a janitorial and maintenance service for the Premises, which contractor shall provide services five (5) days per week and shall be reasonably approved by Landlord, and Tenant hereby acknowledges that Landlord shall have no obligation whatsoever to provide such services at the Premises.

11.2 **Landlord's Repair Rights and Obligations**. Landlord shall be responsible, at its sole cost and expense, to repair and maintain the structural components of the Building, including but not limited to, the slab, foundation and structural components. Landlord has no obligation whatsoever to alter, remodel, improve, repair, renovate, retrofit, replace, redecorate or paint all or any part of the Premises except as expressly provided in this Lease. Tenant waives the provisions of California Civil Code Sections 1932(1) and 1942 and any successive sections or statutes of a similar nature). If Tenant fails to perform Tenant's obligations under Section 11.1 hereof, or under any other provision of this Lease, then Landlord shall have the option (but not the obligation) to enter upon the Premises after ten (10) business days' prior written notice to Tenant, or in the case of an emergency immediately without prior notice, to perform such obligations on Tenant's behalf necessary to return the Premises to good order, condition and repair, whereupon the costs incurred by Landlord shall become due and payable to Landlord, upon demand, together with a fee of three percent (3%) of the costs of such work for Landlord's managing agent. Notwithstanding anything to the contrary in this Section 11.2, if the exterior portions of the Premises are not in compliance with the Americans with Disabilities Act requirements in effect as the date of this Lease and as the Premises is intended to be improved pursuant to the Tenant Work Letter attached hereto, and a governmental authority requires that such non-compliance be remedied, Landlord shall cause such work to be promptly performed at Landlord's sole cost and expense; provided, however, all costs to bring the inside of the Building into compliance with all applicable laws, including, without limitation, local and state building code requirements, the Americans with Disabilities Act, Title 24, and 1997 or later UBC Seismic Code Requirements shall be Tenant's responsibility (subject to the use of any available unused Improvement Allowance funds pursuant to the Tenant Work Letter attached hereto as Exhibit "D").

(a) Roof and HVAC Repairs/Replacement by Landlord. If, at any time during the Term of this Lease, the cumulative repair costs for (i) the HVAC units or (ii) the roof and/or the roof membrane, for the Building meets or exceeds or are anticipated to meet or exceed fifty percent (50%) of the estimated replacement cost of such items (i) or (ii), respectively, then Landlord shall agree to replace such items pursuant to this Section 11.2(a) so long as such replacement is not due to the negligence or willful misconduct of Tenant or its agents or employees. If the foregoing sentence is satisfied, then Landlord shall promptly engage a licensed contractor to immediately replace such items set forth in clause (i) and/or (ii) at Landlord's cost, provided that such costs shall be amortized over a fifteen (15) year useful life and apportioned to Tenant to be reimbursed to Landlord over such remainder of the Term of this Lease as Operating Expenses ("**Permitted Capitalized Expenses**").

11.3 **Condition of Premises**. Tenant acknowledges and agrees that, except as expressly provided in this Lease, Landlord has not made, does not make and specifically negates and disclaims any representations, warranties, promises, covenants, agreements or guarantees of any kind or character whatsoever (whether express or implied) concerning or with respect to (a) the value, nature, quality or condition of the Premises; (b) the suitability of the Premises for any and all activities and uses which Tenant may conduct thereon; (c) the compliance of the Premises with any laws, rules, ordinances or regulations of any applicable governmental authority or body, including, without limitation, environmental laws (collectively, "**Laws**" or "**Law**"); (d) the habitability, merchantability, marketability, profitability or fitness for a particular purpose of the Premises; (e) the manner or quality of the construction or materials incorporated into the Premises; (f) the manner, quality, state of repair or lack of repair of the Premises; or (g) any other matter with respect to the Premises. Tenant further acknowledges and agrees that the leasing of the Premises as provided for herein is made on an "AS-IS" condition and basis with all faults. Notwithstanding anything to the contrary in this Section 11.3, Landlord shall deliver the Premises to Tenant with the Base, Shell and Core (as such term is defined in the Tenant Work Letter attached hereto) and Building systems in good working order and condition.

12. Alterations.

12.1 **Tenant Changes; Conditions**.

(a) Tenant shall not make any alterations, additions, or improvements to the Premises (collectively, "**Tenant Changes**," and individually, a "**Tenant Change**") unless Tenant first obtains Landlord's prior written approval thereof, which approval Landlord shall not unreasonably withhold or delay. Notwithstanding the foregoing, Landlord's prior approval shall not be required for any Tenant Change which satisfies all of the following conditions (hereinafter a "**Pre-Approved Change**"): (i) the costs of such Tenant Change does not exceed Twenty-Five Thousand Dollars ($25,000.00) individually; (ii) the costs of such Tenant Change when aggregated with the costs of all other Pre-Approved Changes made by Tenant do not exceed Two Hundred Thousand Dollars ($200,000.00) in any twelve (12) consecutive month period; (iii) Tenant delivers to Landlord final plans, specifications and working drawings for such Tenant Change at least ten (10) days prior to commencement of the work thereof; (iv) Tenant and such Tenant Change otherwise satisfy all other conditions set forth in this Section 12.1; and (v) the Tenant Change does not affect the structural, electrical, mechanical, life-safety or exterior elements of the Premises. Notwithstanding the foregoing, the construction of initial improvements to the Premises shall be governed by the terms of the Tenant Work Letter attached hereto as Exhibit D and not the terms of this Article 12.

(b) After Landlord has approved the Tenant Changes and the plans, specifications and working drawings therefor (or is deemed to have approved the Pre-Approved Changes as set forth in Section 12.1(a) above), Tenant shall: (i) enter into an agreement for the performance of such Tenant Changes with licensed and bondable contractors and subcontractors selected by Tenant and approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed; and (ii) before proceeding with any Tenant Change, provide Landlord with at least ten (10) days' prior written notice thereof. In addition, before proceeding with any Tenant Change, Tenant's contractors shall obtain, on behalf of Tenant and at Tenant's sole cost and expense: (A) all necessary governmental permits and approvals for the commencement and completion of such Tenant Change; and (B) if the cost of the Tenant Change is expected to be in excess of $100,000.00, at Landlord's request, a completion and lien indemnity bond, or other surety, reasonably satisfactory to Landlord for such Tenant Change. Landlord's approval of any contractor(s) and subcontractor(s) of Tenant shall not release Tenant or any such contractor(s) and/or subcontractor(s) from any liability for any conduct or acts of such contractor(s) and/or subcontractor(s). Further, Landlord's approval of Tenant Changes and the plans therefor will create no liability or responsibility on Landlord's part concerning the completeness of same or their design sufficiency or compliance with Laws.

(c) All Tenant Changes shall be performed: (i) in accordance with the approved plans, specifications and working drawings; (ii) lien-free and in a good and workmanlike manner; (iii) in compliance with all Laws including, without limitation, applicable building permit requirements and the provisions of Title III of the ADA; (iv) by licensed and/or bondable contractors and subcontractors approved by Landlord and (v) at such times necessary, in such manner and subject to safety rules and regulations as Landlord may from time to time reasonably designate. In no event shall Landlord be liable for any Tenant Change or Pre-Approved Change.

(d) Throughout the performance of the Tenant Changes, Tenant shall obtain, or cause its contractors to obtain, workers compensation insurance and commercial general liability insurance in compliance with the provisions of Article 20 of this Lease.

12.2 **Removal of Tenant Changes and Tenant Improvements**. All Tenant Changes and the initial tenant improvements in the Premises pursuant to the Tenant Work Letter attached hereto as Exhibit "D" (the "**Tenant Improvements**"), shall become the property of Landlord and shall remain upon and be surrendered with the Premises at the end of the Term of this Lease. Notwithstanding anything to the contrary contained in this Lease or the Tenant Work Letter, under no circumstance shall Tenant be required to remove or restore (or pay for such removal or restoration of) any Tenant Improvements.

12.3 **Removal of Personal Property**. All articles of personal property owned by Tenant or installed by Tenant at its expense in the Premises (including business and trade fixtures, furniture and movable partitions) shall be, and remain, the property of Tenant, and shall be removed by Tenant from the Premises, at Tenant's sole cost and expense, on or before the expiration or sooner termination of this Lease. Tenant shall repair any damage caused by such removal.

12.4 **Tenant's Failure to Remove**. If Tenant fails to remove by the expiration or sooner termination of this Lease all of its personal property, then after thirty (30) days following written notice to Tenant, such personal property shall be deemed abandoned and Landlord may, (without liability to Tenant for loss thereof), at Tenant's sole cost and in addition to Landlord's other rights and remedies under this Lease, at law or in equity: (a) remove and store such items in accordance with applicable Law; and/or (b) upon an additional ten (10) days' prior notice to Tenant sell all or any such items at private or public sale for such price as Landlord may obtain as permitted under applicable Law. Landlord shall apply the proceeds of any such sale to any amounts due to Landlord under this Lease from Tenant (including Landlord's reasonable attorneys' fees and other out-of-pocket costs incurred in the removal, storage and/or sale of such items), with any remainder to be paid to Tenant.

13. **Liens**. Tenant shall not permit any mechanic's, materialmen's or other liens to be filed against all or any part of the Premises, nor against Tenant's leasehold interest in the Premises, by reason of or in connection with any repairs, alterations, improvements or other work contracted for or undertaken by Tenant or any other act or omission of Tenant or Tenant's agents, employees, contractors, licensees or invitees. Tenant shall, at Landlord's request, provide Landlord with enforceable, conditional and final lien releases in the form required by applicable law from all persons furnishing labor and/or materials with respect to the Premises. Landlord shall have the right at all reasonable times to post on the Premises and record any notices of non-responsibility which it deems necessary for protection from such liens. If any such liens are filed, Tenant shall, at its sole cost, immediately cause such lien to be released of record or bonded so that it no longer affects title to the Premises. If Tenant fails to cause such lien to be so released or bonded within twenty (20) days after notice to Tenant of the filing thereof, Landlord may, without waiving its rights and remedies based on such breach, and without releasing Tenant from any of its obligations, cause such lien to be released by any means it shall deem proper, including payment in satisfaction of the claim giving rise to such lien. Tenant shall pay to Landlord within thirty (30) days after receipt of invoice from Landlord, any sum paid by Landlord to remove such liens, together with interest at the Interest Rate from the date of such payment by Landlord. Notice is hereby given that Landlord shall not be liable for any labor, services or materials furnished or to be furnished to Tenant, or to anyone holding the Premises through or under Tenant, and that no mechanics' or other liens for any such labor, services or materials shall attach to or affect the interest of Landlord in the Premises.

14. Assignment and Subletting.

14.1 **Restriction on Transfer**. Except with respect to a Permitted Transfer, Tenant will not assign, encumber or hypothecate this Lease in whole or in part, nor sublet all or any part of the Premises (collectively and individually, a "**Transfer**"), without the prior written consent of Landlord, which consent Landlord will not unreasonably withhold, condition or delay, except as provided in this Article 14. The consent by Landlord to any assignment, encumbrance or subletting shall not constitute a waiver of the necessity for such consent to any subsequent assignment or subletting. This prohibition against assigning or subletting shall be construed to include a prohibition against any assignment or subletting by operation of Law. Irrespective of any assignment or sublease, Tenant shall remain fully liable under this Lease and shall not be released from performing any of the terms, covenants and conditions of this Lease without the prior consent of Landlord. Without limiting in any way Landlord's right to withhold its consent on any reasonable grounds, it is agreed that Landlord will not be acting unreasonably in refusing to consent to an assignment or sublease if, in Landlord's reasonable opinion, (i) the net worth or financial capabilities of such assignee is less than that of Tenant at the date hereof, (ii) the proposed assignee or subtenant does not have the financial capability to fulfill the obligations imposed by the assignment or sublease, (iii) the proposed assignment or sublease involves a change of use of the Premises from that specified herein or (iv) the proposed assignee or subtenant is not, in Landlord's reasonable opinion, of reputable or good character. If Tenant is a privately-held corporation, limited liability company, or an unincorporated association or partnership (i.e. its equity interests are not traded on a public exchange), the transfer, assignment or hypothecation of any stock or interest in such entity in the aggregate in excess of fifty percent (50%) shall be deemed an assignment within the meaning and provisions of this Section 14.1.

14.2 **Transfer Notice**. If Tenant desires to effect any Transfer other than a Permitted Transfer, then at least thirty (30) days prior to the date when Tenant desires the Transfer to be effective (the "**Transfer Date**"), Tenant agrees to give Landlord a notice (the "**Transfer Notice**"), stating the name, address and business of the proposed assignee, sublessee or other transferee (sometimes referred to hereinafter as "**Transferee**"), reasonable information concerning the character, ownership, and financial condition of the proposed Transferee, the Transfer Date, any ownership or commercial relationship between Tenant and the proposed Transferee, and the consideration and all other material terms and conditions of the proposed Transfer, all in such detail as Landlord may reasonably require. Notwithstanding anything to the contrary in this Article 14, if any prior notice, information or copy of any instruments required to be given by Tenant is prohibited by applicable law or confidentiality obligations of Tenant, then Tenant shall give such notice, information or copy as soon as Tenant is permitted to do so.

14.3 **Landlord's Options**. Within fifteen (15) days of Landlord's receipt of any Transfer Notice, and any additional information reasonably requested by Landlord concerning the proposed Transferee's financial responsibility, Landlord will notify Tenant of its election to do one of the following: (i) consent to the proposed Transfer subject to such reasonable conditions as Landlord may impose in providing such consent; (ii) refuse such consent, which refusal shall be on reasonable grounds and provided in reasonable detail; or (iii) if the request is to assign this Lease or sublet more than fifty percent (50%) of the Premises for all or substantially all of the then-remaining Term, terminate this Lease as to all or such portion of the Premises which is proposed to be sublet to a non-Permitted Transferee and recapture all or such portion of the Premises for reletting by Landlord ("**Recapture Right**"). If Landlord fails to respond within such fifteen-day period, Tenant may send a second written request for consent and, if Landlord fails to respond to such second written request within five (5) business days of delivery thereof, Landlord shall be deemed to have consented to such request.

14.4 **Additional Conditions**. A condition to Landlord's consent to any Transfer of this Lease will be the delivery to Landlord of a true copy of the fully executed instrument of assignment, sublease, transfer or hypothecation, in form and substance reasonably satisfactory to Landlord. Tenant agrees to pay to Landlord, as additional rent, fifty percent (50%) of all sums and other consideration received by Tenant from the assignee or sublessee in excess of the Rent payable under this Lease for the same period and portion of the Premises ("**Transfer Premium**"). In calculating excess Rent or other consideration which may be payable to Landlord under this Section 14.4, Tenant will be entitled to deduct commercially reasonable third party brokerage commissions and attorneys' fees, costs of cleaning, decommissioning or otherwise preparing the Premises for such assignment or subletting, any out-of-pocket sublease rental incentives (specifically excluding abated rent), tenant improvement allowances and other amounts reasonably and actually expended by Tenant in connection with such assignment or subletting if acceptable written evidence of such expenditures is provided to Landlord. No Transfer will release Tenant of Tenant's obligations under this Lease or alter the primary liability of Tenant to pay the Rent and to perform all other obligations to be performed by Tenant hereunder. Landlord may require that any Transferee remit directly to Landlord on a monthly basis, all monies due Tenant by said Transferee, and each sublease shall provide that if Landlord gives said sublessee written notice that Tenant is in default under this Lease after expiration of all applicable notice and cure periods, said sublessee will thereafter make all payments due under the sublease directly to or as directed by Landlord, which payments will be credited against any payments due under this Lease. Tenant hereby irrevocably and unconditionally assigns to Landlord all rents and other sums payable under any sublease of the Premises; provided, however, that Landlord hereby grants Tenant a license to collect all such rents and other sums so long as Tenant is not in default under this Lease. Tenant shall, within ten (10) days after the execution and delivery of any assignment or sublease other than a Permitted Transfer, deliver a duplicate original copy thereof to Landlord. Consent by Landlord to one Transfer will not be deemed consent to any subsequent Transfer. In the event of default by any Transferee of Tenant or any successor of Tenant in the performance of any of the terms hereof, Landlord may proceed directly against Tenant without the necessity of exhausting remedies against such Transferee or successor.

If Tenant effects a Transfer or requests the consent of Landlord to any Transfer (whether or not such Transfer is consummated), then, as a condition precedent to Landlord's consideration of the proposed assignment or sublease, Tenant agrees to pay Landlord a non-refundable administrative fee of One Thousand Five Hundred Dollars ($1,500.00), plus Landlord's reasonable attorneys' fees and costs (whether attributable to Landlord's in-house attorneys or paralegals or otherwise) and other out-of-pocket costs incurred by Landlord in reviewing such proposed assignment or sublease, the total of which not to exceed Three Thousand Five Hundred Dollars ($3,500.00) per proposed Transfer. Acceptance of the administrative fee and/or reimbursement of Landlord's attorneys' fees and costs shall in no event obligate Landlord to consent to any proposed Transfer.

14.5 **Permitted Transfers**. Notwithstanding anything to the contrary contained in this Article 14, each of the following (a "**Permitted Transfer**") shall not be deemed a Transfer under this Article 14, shall not require Landlord's review, administrative fee (as provided in Section 14.4 above), or consent, and shall not trigger the Recapture Right or any Transfer Premium: (a) an assignment or other transfer of this Lease or subletting of all or a portion of the Premises to a Tenant Affiliate (as defined in this Section 14.5 below), provided that Tenant notifies Landlord of any such Transfer and promptly supplies Landlord with any documents or information requested by Landlord regarding such assignment or sublease or such Tenant Affiliate, (b) an assignment of this Lease to an entity which acquires all or a majority of the assets or interests (partnership, stock or other) of Tenant, (c) a transfer of stock or partnership or other interests in Tenant to an entity which acquires all or substantially all of such stock or interests in a bona fide M&A transaction, (d) an assignment of this Lease to an entity which is the resulting entity of a merger or consolidation of Tenant, (e) a sale or other transfer of corporate shares of capital stock (or any member interest if Tenant is a limited liability company) in Tenant on a nationally-recognized stock exchange, or (f) transfers of shares of stock or membership interests in Tenant which result in a change of control of Tenant; and in each case other than clause (e) above, further provided that (i) such assignment or sublease is not a subterfuge by Tenant to avoid its obligations under this Lease, and (ii) Landlord confirms that such assignee or subtenant does not violate Landlord's "know your customer" requirements. "**Control**," as used in this Section 14.5, shall mean the ownership, directly or indirectly, of greater than fifty percent (50%) of the voting securities of, or possession of the right to vote, in the ordinary direction of its affairs, of greater than fifty percent (50%) of the voting interest in, an entity. The term "**Tenant Affiliate**" shall mean (i) any entity that is controlled by, controls or is under common control with, Tenant or (ii) any entity that merges with, is acquired by, or acquires Tenant through the purchase of stock or assets and where the net worth of the surviving entity as of the date such transaction is completed is not less than that of Tenant immediately prior to the transaction calculated under generally accepted accounting principles. A Tenant Permitted Transferee that is assigned Tenant's entire interest in this Lease in accordance with this Section 14.5 may be referred to herein as an "**Affiliated Assignee**." "**Permitted Transferee**" means any transferee or the resulting Tenant arising from or in connection with a Permitted Transfer. Any Affiliated Assignee in connection with a Permitted Transfer shall be deemed the original Tenant for all purposes of this Lease (including without limitation options to renew and terminate).

14.6 **Public Company Provisions.** Landlord acknowledges that, as of the date of this Lease, the stock of Biocept, Inc. is traded on the NASDAQ exchange. For so long as Tenant's stock is traded on a recognized public exchange, no sale, buy-back, split, issuance or any other transfer of Tenant's stock shall be deemed a Transfer or otherwise subject to this Article 14 in any respect.

15. **Entry by Landlord**. Landlord and its employees and agents shall at all reasonable times and upon reasonable notice (i.e., not less than 24 hours' prior) have the right to enter the Premises to inspect the same, to exhibit the Premises to prospective lenders or purchasers (or during the last twelve (12) months of the Term, to prospective tenants), to post notices of non-responsibility, to alter, improve or repair the Premises as contemplated by this Lease and/or to otherwise exercise its rights and remedies under this Lease, all without being deemed guilty of or liable for any breach of Landlord's covenant of quiet enjoyment or any eviction of Tenant, and without abatement of rent. In exercising such entry rights, Landlord shall use commercially reasonable efforts to minimize, as reasonably practicable, the interference with Tenant's business, and shall provide Tenant with reasonable advance written notice of such entry (except in emergency situations and for providing regularly scheduled services, if any). Landlord shall have the means which Landlord may deem proper to open Tenant's doors in an emergency in order to obtain entry to the Premises.

16. **Utilities and Services**. Tenant shall be solely responsible for obtaining and shall promptly pay all charges for heat, air conditioning, water, gas, electricity or any other utility used, consumed or provided in, furnished to or attributable to the Premises directly to the supplying utility companies following the Commencement Date, together with all deposits and hook-up and connection charges for such utilities. Tenant shall reimburse Landlord within thirty (30) days of billing for any hook-up, connection, fixture or other charges and/or tariffs that are charged to Landlord by utility companies. Landlord will notify Tenant of this charge as soon as it becomes known and such charge will be due as additional rent. In no event shall Rent abate or shall Landlord be liable for any interruption or failure in the supply of any such utility services to Tenant. Tenant hereby authorizes each utility company providing utility service to the Premises to provide/release utility consumption or similar data to Landlord for the purpose of assisting Landlord in Landlord's compliance obligations with legal disclosure requirements concerning utility consumption, including, without limitation, Section 25402.10 of the Public Resources Code of California.

Notwithstanding the foregoing, if the Building, or a material portion of the Building, are made untenantable and Tenant does not use the same for a period in excess of five (5) consecutive days as a result of a utility interruption that is reasonably within the control of Landlord to correct and through no fault of Tenant, then

Tenant, as its sole remedy, shall be entitled to receive an abatement of Rent payable hereunder during the period beginning on the date Tenant provided notice of the service interruption to Landlord and ending on the day the service has been restored in the proportion that the rentable area of the portion of the Building that Tenant is prevented from using, and does not use, bears to the total rentable area of the Building; provided, however, in the event that Tenant is prevented from using, and does not use, a portion of the Building and the remaining portion of the Building is not sufficient to allow Tenant to effectively conduct its business therein, and if Tenant does not conduct its business from such remaining portion, then the Rent for the entire Premises shall be abated entirely for such time as Tenant continues to be so prevented from using, and does not use, the Premises. If a fire or other casualty results in Tenant's inability to use the Premises or a portion thereof, the terms and conditions of Article 18 below shall apply rather than this Article 16.

Subject to Landlord's security requirements and Articles 18 and 19 below, Landlord shall allow Tenant to have access to the Premises including the Building and the Premises' parking area twenty-four (24) hours per day, seven (7) days per week throughout the Term of this Lease. Tenant shall have the exclusive access and rights to use all of the surface parking associated with the Premises free of charge for the Term of this Lease, subject to Landlord's and its agents' use of the same in connection with Landlord's entry onto the Premises for purposes permitted by this Lease.

17. Indemnification and Exculpation.

17.1 **Limitation of Damages**. Except to the extent such matter is not covered by the insurance required to be maintained by a party under this Lease and such matter is not attributable to the gross negligence or willful misconduct of the party or the party's agent(s), notwithstanding anything to the contrary in this Lease, a party shall not be liable to the other party, the other party's employees, agents or invitees for: (i) any damage to property of the other party, or of others, located in, on or about the Premises, (ii) the loss of or damage to any property of the other party or of others by theft or otherwise, (iii) any injury or damage to persons or property resulting from fire, explosion, falling plaster, steam, gas, electricity, water, rain or leaks from any part of the Premises or from the pipes, appliance of plumbing works or from the roof, street or subsurface or from any other places or by dampness or by any other cause of whatsoever nature, or (iv) any such damage caused by other persons in the Premises, occupants of adjacent property, or the public, or caused by operations in construction of any private, public or quasi-public work. Notwithstanding anything contained in this Lease to the contrary and except as provided in Section 9.1 above in connection with a Tenant holdover, in no event shall either party be liable for any consequential damages or loss of business or profits and each party hereby waives any and all claims for any such damages. All property of Tenant kept or stored on the Premises shall be so kept or stored at the sole risk of Tenant and Tenant shall hold Landlord harmless from any claims arising out of damage to the same, including subrogation claims by Tenant's insurance carriers, unless such damage shall be caused by the gross negligence, intentional acts or willful misconduct of Landlord or Landlord's agent(s).

17.2 **Indemnification**. Subject to Article 21 below, each party shall be liable for, and shall indemnify, defend, protect and hold the other party and the other party's parent, partners, officers, directors, employees, agents, successors and assigns (collectively, "**Indemnified Parties**") harmless from and against, any and all claims, damages, judgments, suits, causes of action, losses, liabilities and expenses, including attorneys' fees and court costs (collectively, "**Indemnified Claims**"), arising or resulting from (a) the party's negligence or willful misconduct or its agents, employees or contractors, (b) any default by the party of any obligations to be performed under the terms of this Lease; or (c) the party's failure to comply with any applicable law, rule or regulation. In case any action or proceeding is brought against any Indemnified Parties by reason of any such Indemnified Claims, the indemnifying party pursuant to this Section 17.2, upon notice from the other party shall defend the same at the indemnifying party's expense by counsel approved in writing by the other party, which approval shall not be unreasonably withheld.

17.3 **Survival; No Release of Insurers**. The indemnification obligations under Section 17.2, shall survive the expiration or earlier termination of this Lease. The covenants, agreements and indemnification in Sections 17.1 and 17.2 above, are not intended to and shall not relieve any insurance carrier of its obligations under policies required to be carried pursuant to the provisions of this Lease.

18. Damage or Destruction.

18.1 **Casualty**. If the Base, Shell and Core should be damaged or destroyed by fire or other casualty, Tenant shall give prompt written notice to Landlord. Within thirty (30) days after receipt from Tenant of such written notice, Landlord shall notify Tenant of Landlord's estimate of how long it will take Landlord to complete the necessary repairs to the Base, Shell and Core. Damage or destruction to the portions of the Premises other than the Base, Shell and Core of the Building including, without limitation, the Building's interior improvements, the Tenant Improvements, Tenant's alterations, and Tenant's furniture, fixtures and equipment shall be Tenant's responsibility to repair at Tenant's sole cost and performed in accordance with Article 12 above and shall not be subject to the provisions of this Article 18.

(a) Less Than Nine Months. If the Base, Shell and Core of the Building should be damaged only to such extent that repairs by Landlord can reasonably be completed within nine (9) months after the issuance of permits therefor, this Lease shall not terminate and, provided that insurance proceeds are available to fully repair the damage (other than deductibles, for which Tenant shall be responsible), Landlord shall repair the Base, Shell and Core. If Tenant is required to vacate all or a portion of the Building during Landlord's repair of the Base, Shell and Core, the Monthly Rent

payable hereunder shall be abated proportionately on the basis of the size of the area of the Building that is damaged (i.e., the number of square feet of floor area of the Building that is damaged compared to the total square footage of the floor area of the Building) from the date Tenant vacates all or a portion of the Building that was damaged until the date Tenant is able to use the impacted portion of the Premises for the Permitted Use.

(b) Greater Than Nine Months. If the Base, Shell and Core should be so damaged that repairs by Landlord cannot be completed within nine (9) months after the issuance of permits therefor, either Landlord or Tenant may terminate this Lease by giving written notice within fifteen (15) business days after notice from Landlord specifying such time period of repair, and this Lease shall terminate. In the event that neither party elects to terminate this Lease, Landlord shall promptly commence and diligently prosecute to completion the repairs to the Base, Shell and Core, provided insurance proceeds are available to repair the damage (other than deductibles, for which Tenant shall be responsible). If Tenant is required to vacate all or a portion of the Building during Landlord's repair thereof, the Monthly Rent payable hereunder shall be abated proportionately on the basis of the size of the area of the Building that is damaged (i.e., the number of square feet of floor area of the Building that is damaged compared to the total square footage of the floor area of the Building), from the date Tenant vacates all or a portion of the Building that was damaged until the date Tenant is able to use the impacted portion of the Premises for the Permitted Use. If this Lease terminates pursuant to this Article 18, Tenant shall assign all proceed of any insurance on the Tenant Improvements to Landlord.

18.2 **Fault**. If the Base, Shell and Core is damaged resulting from the gross negligence, willful misconduct or breach of this Lease by Tenant or any of Tenant's Parties, Monthly Rent shall not be reduced during the repair of such damage and Tenant shall be liable to Landlord for the cost of the repair caused thereby to the extent such cost is not covered by insurance proceeds received by Landlord. If the Base, Shell and Core is damaged resulting from the gross negligence or willful misconduct by Landlord or any of Landlord's Parties, Monthly Rent shall be abated to the extent provided in this Article 18 and Landlord shall be responsible at its sole cost and expense for all insurance deductibles required for such restoration.

18.3 **Uninsured Casualty**. Tenant shall be responsible for and shall pay to Landlord any deductible or retention amount payable under the property insurance for the Base, Shell and Core. In the event that the Base, Shell and Core is damaged to the extent Tenant is unable to use the Premises and such damage is not covered by insurance proceeds received by Landlord or in the event that the holder of any indebtedness secured by the Premises requires that the insurance proceeds be applied to such indebtedness, then Landlord shall have the right at Landlord's option either (i) to repair such damage as soon as reasonably possible at Landlord's expense, or (ii) to give written notice to Tenant within thirty (30) days after the date of the occurrence of such damage of Landlord's intention to terminate this Lease as of the date of the occurrence of such damage. In the event Landlord elects to terminate this Lease, Tenant shall have the right within thirty (30) days after receipt of such notice to give written notice to Landlord of Tenant's commitment to pay the cost of repair of such damage, in which event this Lease shall continue in full force and effect, and Landlord shall make such repairs as soon as reasonably possible subject to the following condition: Tenant shall deposit with Landlord Landlord's estimated cost of such repairs not later than thirty (30) days prior to Landlord's commencement of the repair work. If the cost of such repairs exceeds the amount deposited, Tenant shall reimburse Landlord for such excess cost within thirty (30) days after receipt of an invoice from Landlord. Any amount deposited by Tenant in excess of the cost of such repairs shall be refunded within thirty (30) days of Landlord's final payment to Landlord's contractor. If Tenant does not give such notice within the thirty (30) day period, or fails to make such deposit as required, this Lease shall terminate automatically as of the date of the occurrence of the damage.

18.4 **Disbursement of Insurance Proceeds upon Termination**. Upon any termination of this Lease under the provisions of this Article 18, all proceeds from insurance policies maintained under Section 20.1(a) (other than proceeds attributable to Tenant's FF&E) shall be disbursed and paid to Landlord.

18.5 **Waiver of Termination**. The agreements contained in this Article 18 provide a material part of the consideration for this Lease and in bargaining for and obtaining its rights under this Article 18, Tenant waives any right to terminate this Lease under Section 1932 and/or 1933 of the Civil Code of California, or any similar Law now or hereafter in force.

19. Eminent Domain.

19.1 **Total or Partial Taking**. In case all of the Premises, or such part thereof as shall materially and substantially interfere with Tenant's ability to conduct its business upon the Premises, shall be taken for any public or quasi-public purpose by any lawful power or authority by exercise of the right of appropriation, condemnation or eminent domain, or sold to prevent such taking, Tenant shall have the right to terminate this Lease effective as of the date possession is required to be surrendered to said authority. Tenant shall not assert any claim against Landlord or the taking authority for any compensation because of such taking, and Landlord shall be entitled to receive the entire amount of any award without deduction for any estate or interest of Tenant; provided, however, in the event of such a taking, Tenant shall be entitled to such portion of the award as shall be attributable to goodwill and for damage to, or the cost of removal of, Tenant's personal property. In the event this Lease is not terminated following a taking, Landlord shall be entitled to the entire amount of the award without deduction for any estate or interest of Tenant, Landlord shall, subject to the terms of any loan agreement with any lender, restore the Premises to substantially their same condition prior to such partial taking to the extent of any award proceeds received by Landlord, and a fair

and equitable abatement shall be made to Tenant for the Monthly Rent corresponding to the time during which, and to the part of the Premises of which, Tenant shall be so deprived on account of such taking and restoration. If the award proceeds from the taking are insufficient to restore the Premises (the "**Short Amount**") as required by the preceding sentence and Landlord does not provide its own funds to so restore the Premises, then Landlord shall notice Tenant of the Short Amount (the "**Short Amount Notice**") and Tenant shall pay the Short Amount to Landlord within sixty (60) days after receipt of the Short Amount Notice in order for Landlord to properly restore the Premises as required by this Section 19.1. In the event Tenant fails to deposit the Short Amount to Landlord within the time period set forth herein, in addition to any other remedies available to Landlord under this Lease or at law or in equity, Tenant shall thereafter be required to pay Monthly Rent without abatement for the remainder of the Term. Any amount of the award that is attributable to reimbursement of Tenant for loss of the ability to rent the Premises shall be Tenant's property as long as the same does not reduce the amount of the award available to Landlord.

19.2 **Temporary Taking**. In the event of taking of the Premises or any part thereof for temporary use, (i) this Lease shall be and remain unaffected thereby and Rent shall not abate, and (ii) Tenant shall be entitled to receive for itself such portion or portions of any award made for such use with respect to the period of the taking which is within the Lease Term. For purposes of this Section 19.2, a temporary taking shall be defined as a taking for a period of one (1) year or less.

19.3 **Waiver of Termination**. Tenant and Landlord waive any right to terminate this Lease under Section 1265.130 of the California Code of Civil Procedure, or any similar Law now or hereafter in force.

20. <u>Tenant's Insurance</u>.

20.1 **Types of Insurance**. On or before the earlier of the Commencement Date or the date Tenant commences or causes to be commenced any work of any type in or on the Premises pursuant to this Lease, and continuing during the entire Term, Tenant shall obtain and keep in full force and effect, the following insurance:

(a) Property Insurance written on Special Form (formerly known as All Risk) basis including fire and extended coverage, sprinkler leakage (including earthquake sprinkler leakage), vandalism and malicious mischief coverage upon the entire Building (excluding the Base, Shell and Core of the Building), including, without limitation, the improvements in the Building, property of every description and kind owned by Tenant and located on the Premises, or for which Tenant is legally liable or installed by or on behalf of Tenant including, without limitation, the FF&E, any other furniture, fixtures, equipment and any other personal property of Tenant on the Premises, all improvements on the Premises outside the Building, any Tenant Changes and the Tenant Improvements, in an amount not less than the full replacement cost thereof. In the event that there shall be a dispute as to the amount which comprises full replacement cost, the decision of Landlord or the mortgagees of Landlord shall be presumptive.

(b) Commercial general liability insurance coverage, on an occurrence basis, including personal injury, bodily injury (including wrongful death), broad form property damage, operations hazard, owner's protective coverage, contractual liability (including Tenant's indemnification obligations under this Lease, including Article 17 hereof), liquor liability (if Tenant serves alcohol on the Premises), with a per occurrence and a general aggregate liability of not less than Two Million Dollars ($2,000,000). The limits of liability of such commercial general liability insurance shall be increased every ten (10) years during the Term of this Lease to an amount reasonably required by Landlord and in accordance with similar leases for comparable buildings in the Sorrento Mesa submarket for similar uses as the Permitted Use.

(c) Commercial Automobile Liability covering all owned, hired and non-owned automobiles with a limit of liability of not less than One Million ($1,000,000) per accident.

(d) Worker's compensation (with a waiver of subrogation in favor of Landlord), in statutory amounts and employers liability with limits of One Million ($1,000,000) per person and accident, covering all persons employed in connection with any work done in, on or about the Premises for which claims for death, bodily injury or illness could be asserted against Landlord, Tenant or the Premises.

(e) Umbrella liability insurance on an occurrence basis, with minimum limits of not less than Five Million Dollars ($5,000,000) per occurrence and annual aggregate limit, in excess of and following the form of the underlying insurance described in Sections 20.1(b) and (c) and the employer's liability coverage in Section 20.1(d) which is at least as broad as each and every area of the underlying policies. Such umbrella liability insurance shall include pay on behalf of wording, concurrency of effective dates with primary policies, blanket contractual liability, application of primary policy aggregates, and shall provide that if the underlying aggregate is exhausted, the excess coverage will drop down as primary insurance The amounts of insurance required in Sections 20.1(b) and 20.1(c) may be satisfied by purchasing coverage for the limits specified or by any combination of underlying and umbrella limits, so long as the total amount of insurance is not less than the limits specified in each of such sections when added to the limit specified in this Section 20.1(e).

(f) [Reserved.]

(g) Loss of income, extra expense and business interruption insurance in such amounts as will reimburse Tenant for twelve (12) months of Rent and direct or indirect loss of earnings attributable to all perils commonly insured against by prudent tenants or attributable to prevention of access to the Premises, Tenant's parking areas or to the Building as a result of such perils.

(h) Any other form or forms of insurance as Tenant or Landlord or the mortgagees of Landlord may reasonably require from time to time upon at least sixty (60) days' prior written notice, in form, amounts and for insurance risks against which a prudent tenant would protect itself, but only to the extent such risks and amounts are available in the insurance market at commercially reasonable costs.

20.2 **Requirements**. Each policy required to be obtained by Tenant hereunder shall: (a) be issued by insurers which are approved by Landlord and/or Landlord's mortgagees and are authorized to do business in the state in which the Building is located and rated not less than Financial Size X, and with a Financial Strength rating of A in the most recent version of Best's Key Rating Guide (provided that, in any event, the same insurance company shall provide the coverages described in Sections 20.1(a) and 20.1(g) above); (b) be in form reasonably satisfactory to Landlord; (c) name Tenant as named insured thereunder and shall name Landlord and, at Landlord's request, such other persons or entities of which Tenant has been informed in writing, as additional named insureds thereunder, all as their respective interests may appear, except that the coverages described in Sections 20.1(a) and 20.1(g) above shall name Landlord and such other persons or entities as loss-payees; (d) not have a deductible amount exceeding Five Thousand Dollars ($5,000.00), which deductible amount shall be deemed self-insured with full waiver of subrogation; (e) specifically provide that the insurance afforded by such policy for the benefit of Landlord and any other additional insureds shall be primary, and any insurance carried by Landlord or any other additional insureds shall be excess and non-contributing; (f) contain an endorsement that the insurer waives its right to subrogation as described in Article 21 below; (g) require the insurer to notify Landlord and any other additional insureds in writing not less than thirty (30) days prior to any material change, reduction in coverage, cancellation or other termination thereof; (h) contain a cross liability or severability of interest endorsement; and (i) be in amounts sufficient at all times to satisfy any coinsurance requirements thereof. Each such policy shall also provide that any loss otherwise payable thereunder shall be payable notwithstanding any act or omission of Landlord or Tenant which might, absent such provision, result in a forfeiture of all or a part of such insurance payment. Tenant agrees to deliver to Landlord, as soon as practicable after the placing of the required insurance, but in no event later than the date Tenant is required to obtain such insurance as set forth in Section 20.1 above, certificates from the insurance company evidencing the existence of such insurance and Tenant's compliance with the foregoing provisions of this Article 20. Tenant shall cause replacement certificates to be delivered to Landlord not less than ten (10) days prior to the expiration of any such policy or policies. If any such initial or replacement certificates are not furnished within the time(s) specified herein, Tenant shall be deemed to be in material default under this Lease without the benefit of any additional notice or cure period provided in Section 22.1 below, and Landlord shall have the right, but not the obligation, to procure such policies and certificates at Tenant's expense.

20.3 **Effect on Insurance**. Tenant shall not do or permit to be done anything which will violate or invalidate any insurance policy maintained by Landlord or Tenant hereunder. If Tenant's occupancy or conduct of its business in or on the Premises or any Tenant Improvements or Tenant Changes result in any increase in premiums for any insurance carried by Landlord, Tenant shall pay such increase as additional rent within thirty (30) days after being billed therefor by Landlord. If any insurance coverage carried by Landlord shall be cancelled or reduced (or cancellation or reduction thereof shall be threatened) by reason of the use or occupancy of the Premises by Tenant or by anyone permitted by Tenant to be upon the Premises or any Tenant Improvements or Tenant Changes, and if Tenant fails to remedy such condition within fifteen (15) business days after notice thereof, Tenant shall be deemed to be in default under this Lease, without the benefit of any additional notice or cure period specified in Section 22.1 below, and Landlord shall have all remedies provided in this Lease, at Law or in equity, including, without limitation, the right (but not the obligation) to enter upon the Premises and attempt to remedy such condition at Tenant's cost.

20.4 **Landlord to Insure the Base, Shell and Core**. Landlord shall maintain the Property Insurance written on Special Form (fka All Risk) referred to in Section 20.1(a) above covering the Base, Shell and Core of the Building only for the replacement value of the Building. Landlord also has the right, but not the obligation, to carry (a) rental loss insurance covering Tenant's rental obligations hereunder for a period of at least twelve (12) months by giving Tenant at least sixty (60) days' prior written notice thereof and (b) Property Insurance written on Special Form (fka All Risk) referred to in Section 20.1(a) covering the affixed improvements and alterations on the Premises. Tenant shall have no obligation to maintain such insurance on the Base, Shell and Core. Landlord shall cause the insurer to waive all rights of recovery by way of subrogation against Tenant in connection with any claims, damages and losses covered by such insurance on the Base, Shell and Core of the Building. Tenant shall reimburse Landlord, as additional rent, for the cost of the Landlord's insurance referenced in this Section 20.4 together with any deductible or retention amount on such insurance (collectively, "**Insurance Costs**") as part of CAM Costs.

21. <u>Waiver of Subrogation</u>.

21.1 **Waiver by the Parties**. Notwithstanding anything to the contrary in this Lease, Tenant hereby waives its rights against Landlord for any claims or damages or losses, including any deductibles and self-insured amounts, which are caused by or result from any occurrence covered, and paid, by the insurance

described in Sections 20.1(a), (d) and (g) above. Notwithstanding anything to the contrary in this Lease, Landlord hereby waives its rights against Tenant for any claims or damages or losses, excluding any deductibles and self-insured amounts which shall be paid by Tenant as part of CAM Costs, which are caused by or result from any occurrence covered, and paid, by the insurance described in Section 20.4 above. The foregoing waiver shall be in addition to, and not a limitation of, any other waivers or releases contained in this Lease.

21.2 **Waiver of Insurers**. Each of Landlord and Tenant shall cause each insurance policy (other than commercial general liability insurance, automobile liability or umbrella liability insurance) required to be obtained by it pursuant to Article 20, and any other property insurance obtained by such party, to provide that the insurer waives all rights of recovery by way of subrogation against the other party hereto, in connection with any claims, losses and damages covered by such policy. If either party fails to maintain insurance for an insurable loss, such loss shall be deemed to be self-insured with a deemed full waiver of subrogation as set forth in the immediately preceding sentence.

22. Tenant's Default and Landlord's Remedies.

22.1 **Tenant's Default**. The occurrence of any one or more of the following events shall constitute an "**Event of Default**" under this Lease by Tenant:

(a) the abandonment of the Premises by Tenant. "**Abandonment**" is herein defined to include, but is not limited to, any absence by Tenant from the Premises for fifteen (15) business days or longer while in material default of any other provision of this Lease;

(b) the failure by Tenant to make any payment of Rent or any other payment required to be made by Tenant hereunder, within five (5) days of written notice from Landlord that such payment was not received;

(c) the failure by Tenant to observe or perform any of the express or implied covenants or provisions of this Lease to be observed or performed by Tenant, other than as specified in Sections 22.1(a) or (b) above, where such failure shall continue for a period of thirty (30) days after written notice thereof from Landlord to Tenant; provided, however, that if the nature of Tenant's default is such that it may be cured but more than thirty (30) days are reasonably required for its cure, then Tenant shall not be deemed to be in default if Tenant shall commence such cure within said thirty (30) day period and thereafter diligently prosecute such cure to completion;

(d) (i) the making by Tenant or any guarantor hereof of any general assignment for the benefit of creditors, (ii) the filing by or against Tenant or any guarantor hereof of a petition to have Tenant adjudged a bankrupt or a petition for reorganization or arrangement under any Law relating to bankruptcy (unless, in the case of a petition filed against Tenant or any guarantor hereof, the same is dismissed within sixty (60) days), (iii) the appointment of a trustee or receiver to take possession of substantially all of Tenant's assets located at the Premises or of Tenant's interest in this Lease or of substantially all of any guarantor's assets, where possession is not restored to Tenant within sixty (60) days, or (iv) the attachment, execution or other judicial seizure of substantially all of Tenant's assets located at the Premises or of substantially all of any guarantor's assets or of Tenant's interest in this Lease where such seizure is not discharged within sixty (60) days;

(e) any material representation or warranty made by Tenant in this Lease or any other document delivered in connection with the execution and delivery of this Lease or pursuant to this Lease proves to be incorrect in any material respect when made; or

(f) Tenant shall be liquidated or dissolved or shall begin proceedings towards its liquidation or dissolution.

Any notice given under this Section 22.1 shall be in lieu of, and not in addition to, any notice required under California Code of Civil Procedure, Section 1161.

22.2 **Landlord's Remedies; Termination**. In the event of any such Event of Default by Tenant, in addition to any other remedies available to Landlord under this Lease, at Law or in equity, Landlord shall have the immediate option to terminate this Lease and all rights of Tenant hereunder. In the event that Landlord shall elect to so terminate this Lease, then Landlord may recover from Tenant:

(a) the worth at the time of award of any unpaid Rent which had been earned at the time of such termination; plus

(b) the worth at the time of the award of the amount by which the unpaid Rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(c) the worth at the time of award of the amount by which the unpaid Rent for the balance of the term after the time of award exceeds the amount of such rental loss that Tenant proves could be reasonably avoided; plus

(d) any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which, in the ordinary course of things, would be likely to result therefrom including, but not limited to: unamortized Tenant Improvement costs; attorneys' fees; unamortized brokers' commissions; the costs of refurbishment, alterations, renovation and repair of the Premises; and removal (including the repair of any damage caused by such removal) and storage (or disposal) of Tenant's personal property, equipment, fixtures, Tenant Changes, Tenant Improvements and any other items which Tenant is required under this Lease to remove but does not remove.

As used in Sections 22.2(a) and 22.2(b) above, the "worth at the time of award" is computed by allowing interest at the Interest Rate set forth in Section 1.10 of the Summary. As used in Section 22.2(c) above, the "worth at the time of award" is computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%).

22.3 **Landlord's Remedies; Re-Entry Rights**. In the event of any such Event of Default by Tenant, in addition to any other remedies available to Landlord under this Lease, at Law or in equity, Landlord shall also have the right as permitted by applicable Law, with or without terminating this Lease, to re-enter the Premises and remove all persons and property from the Premises; such property may be removed, stored and/or disposed of pursuant to Section 12.4 of this Lease or any other procedures permitted by applicable Law. No re-entry or taking possession of the Premises by Landlord pursuant to this Section 22.3, and no acceptance of surrender of the Premises or other action on Landlord's part, shall be construed as an election to terminate this Lease unless a written notice of such intention be given to Tenant or unless the termination thereof be decreed by a court of competent jurisdiction.

22.4 **Landlord's Remedies; Continuation of Lease**. In the event of any such default by Tenant, in addition to any other remedies available to Landlord under this Lease, at Law or in equity, Landlord shall have the right to continue this Lease in full force and effect, whether or not Tenant shall have abandoned the Premises. The foregoing remedy shall also be available to Landlord pursuant to California Civil Code Section 1951.4 and any successor statute thereof in the event Tenant has abandoned the Premises. In the event Landlord elects to continue this Lease in full force and effect pursuant to this Section 22.4, then Landlord shall be entitled to enforce all of its rights and remedies under this Lease, including the right to recover rent as it becomes due. Landlord's election not to terminate this Lease pursuant to this Section 22.4 or pursuant to any other provision of this Lease, at Law or in equity, shall not preclude Landlord from subsequently electing to terminate this Lease or pursuing any of its other remedies.

22.5 **Landlord's Right to Perform**. Except as specifically provided otherwise in this Lease, all covenants and agreements by Tenant under this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any abatement or offset of rent. If Tenant shall fail to pay any sum of money (other than Rent) or perform any other act on its part to be paid or performed hereunder and such failure shall continue for five (5) business days after the date due with respect to monetary obligations (or ten (10) business days with respect to non-monetary obligations) after Tenant's receipt of written notice thereof from Landlord (except that no notice will be required in the event of an emergency), Landlord may, without waiving or releasing Tenant from any of Tenant's obligations, make such payment or perform such other act on behalf of Tenant. All sums so paid by Landlord and all necessary incidental costs incurred by Landlord in performing such other acts shall be payable by Tenant to Landlord within fifteen (15) business days after demand therefor as additional rent.

22.6 **Interest**. If any monthly installment of Rent, or any other amount payable by Tenant hereunder is not received by Landlord within five (5) days of the date when due, it shall bear interest at the Interest Rate set forth in Section 1.10 of the Summary from the date due until paid. All interest, and any late charges imposed pursuant to Section 22.7 below, shall be considered additional rent due from Tenant to Landlord under the terms of this Lease.

22.7 **Late Charges**. Tenant acknowledges that, in addition to interest costs, the late payments by Tenant to Landlord of any Rent or other sums due under this Lease will cause Landlord to incur costs not contemplated by this Lease, the exact amount of such costs being extremely difficult and impractical to fix. Such other costs include, without limitation, processing, administrative and accounting charges and late charges that may be imposed on Landlord by the terms of any mortgage, deed of trust or related loan documents encumbering the Premises. Accordingly, if any installment of Rent or any other amount payable by Tenant hereunder is not received by Landlord within five (5) days following the due date thereof, Tenant shall pay to Landlord an additional sum of ten percent (10%) of the overdue amount as a late charge, but in no event more than the maximum late charge allowed by Law. Notwithstanding the foregoing, Tenant shall be entitled to notice and the expiration of a five (5) day cure period prior to imposition of any late charge under this Section 22.7 one (1) time per calendar year; after such written notice has been provided to Tenant in a calendar year, Tenant shall not be entitled to any further notice prior to imposition of a late charge under this Section 22.7 in such calendar year. The parties agree that such late charge represents a fair and reasonable estimate of the costs that Landlord will incur by reason of any late payment as hereinabove referred to by Tenant, and the payment of late charges and interest are distinct and separate in that the payment of interest is to compensate Landlord for the use of Landlord's money by Tenant, while the payment of late charges is to compensate Landlord for Landlord's processing, administrative and other costs incurred by Landlord as a result of Tenant's delinquent payments. Acceptance of a late charge or interest shall not constitute a waiver of Tenant's default with respect to the overdue amount or prevent Landlord from exercising any of the other rights and remedies available to Landlord under this Lease or at Law or in equity now or hereafter in effect.

22.8 **[Reserved]**.

22.9 **Rights and Remedies Cumulative**. All rights, options and remedies of Landlord contained in this Article 22 and elsewhere in this Lease shall be construed and held to be cumulative, and no one of them shall be exclusive of the other, and Landlord shall have the right to pursue any one or all of such remedies or any other remedy or relief which may be provided by Law or in equity, whether or not stated in this Lease. Nothing in this Article 22 shall be deemed to limit or otherwise affect Tenant's indemnification of Landlord pursuant to any provision of this Lease.

22.10 **Waiver of Redemption**. Tenant hereby waives and surrenders for itself and all those claiming under it, including creditors of all kinds, (i) any right and privilege which it or any of them may have under any present or future Law to redeem any of the Premises or to have a continuance of this Lease after termination of this Lease or of Tenant's right of occupancy or possession pursuant to any court order or any provision hereof, and (ii) the benefits of any present or future Law which exempts property from liability for debt or for distress for rent.

22.11 **Costs Upon Default and Litigation**. Tenant shall pay to Landlord and its mortgagees as additional rent all the expenses incurred by Landlord in connection with any Event of Default by Tenant hereunder or the exercise of any remedy by reason of such Event of Default by Tenant hereunder, including reasonable attorneys' fees and expenses. If Landlord or its mortgagees shall be made a party to any litigation commenced against Tenant or any litigation pertaining to this Lease or the Premises other than that by Tenant, at the option of Landlord and/or its mortgagees, Tenant, at its expense, shall provide Landlord and/or its mortgagees with counsel approved by Landlord and/or its mortgagees and shall pay all costs incurred or paid by Landlord and/or its mortgagees in connection with such litigation.

23. **Landlord's Default**. Landlord shall not be in default in the performance of any obligation required to be performed by Landlord under this Lease unless Landlord has failed to perform such obligation within thirty (30) days after the receipt of written notice from Tenant specifying in detail Landlord's failure to perform; provided however, that if the nature of Landlord's obligation is such that more than thirty (30) days are required for its performance, then Landlord shall not be deemed in default if it promptly commences such performance within such thirty (30) day period and thereafter diligently pursues the same to completion. Upon any such uncured default by Landlord, Tenant may exercise any of its rights provided in Law or at equity.

24. **Subordination**. Landlord hereby represents and warrants to Tenant that, as of the date of this Lease, (a) there is no deed of trust, mortgage, or other financial instrument representing indebtedness of the owner encumbering the real property underlying the Building, and (b) there is no superior lease or ground lease affecting all or any portion of the Premises. At the written request of Landlord or any mortgagee of a mortgage or a beneficiary of a deed of trust hereafter encumbering all or any portion of the Premises, or any lessor of any ground or master lease hereafter affecting all or any portion of the Premises, this Lease shall be subject and subordinate at all times to such ground or master leases (and such extensions and modifications thereof), and to the lien of such mortgages and deeds of trust (as well as to any advances made thereunder and to all renewals, replacements, modifications and extensions thereof); provided that as a condition precedent to the subordination of this Lease to any such future ground or master lease or the lien of any mortgage, deed of trust or other encumbrance on the title of the real property underlying the Building, Landlord shall obtain for the benefit of Tenant a commercially reasonable subordination, non-disturbance and attornment agreement ("**SNDA**) from the lessor or lender of such future instrument in form and substance reasonably satisfactory to Tenant; provided further, however, no subordination of this Lease to a future ground or master lease or mortgage or deed of trust shall result in Tenant being disturbed in its possession of the Premises or in the enjoyment of its rights under this Lease so long as no Event of Default has occurred and is continuing. In the event that any ground or master lease terminates for any reason or any mortgage or deed of trust is foreclosed or a conveyance in lieu of foreclosure is made for any reason, at the election of Landlord's successor in interest, Tenant shall attorn to and become the tenant of such successor under all of the terms and conditions of this Lease. Tenant hereby waives its rights under any current or future Law which gives or purports to give Tenant any right to terminate or otherwise adversely affect this Lease and the obligations of Tenant hereunder in the event of any such foreclosure proceeding or sale. Subject to the foregoing, Tenant covenants and agrees to execute and deliver to Landlord within ten (10) business days after receipt of written demand by Landlord and in the form reasonably mutually agreeable to the parties, any additional documents evidencing the priority or subordination of this Lease with respect to any such ground or master lease or the lien of any such mortgage or deed of trust or Tenant's agreement to attorn. Should Tenant fail to sign and return or provide corrections to any such documents within said ten (10) business day period, Tenant shall be in default hereunder without the benefit of any additional notice or cure periods specified in Section 22.1 above.

25. **Estoppel Certificate**.

25.1 **Tenant's Obligations**. Within ten (10) business days following Landlord's written request, Tenant shall execute and deliver to Landlord an estoppel certificate, in a form reasonably requested by Landlord, certifying: (a) the Commencement Date of this Lease; (b) that this Lease is unmodified and in full force and effect (or, if modified, that this Lease is in full force and effect as modified, and stating the date and nature of such modifications); (c) the date to which the Rent and other sums payable under this Lease have been paid; (d) that there are not, to the best of Tenant's knowledge, any defaults under this Lease by either Landlord or Tenant, except as specified in such certificate; and (e) such other factual matters as are reasonably requested by Landlord and are true and correct. Any such estoppel certificate delivered

pursuant to this Section 25.1 may be relied upon by any mortgagee, beneficiary, purchaser or prospective purchaser of any portion of the Premises, as well as their assignees.

25.2 **Tenant's Failure to Deliver**. Tenant's failure to deliver such estoppel certificate within such time shall constitute a default hereunder without the applicability of notice and cure periods specified in Section 22.1 above and shall be conclusive upon Tenant that: (a) this Lease is in full force and effect without modification, except as may be represented by Landlord; (b) there are no uncured defaults in Landlord's or Tenant's performance (other than Tenant's failure to deliver the estoppel certificate); and (c) not more than one (1) month's rental has been paid in advance. Tenant shall indemnify, protect, defend (with counsel reasonably approved by Landlord in writing) and hold Landlord harmless from and against any and all claims, judgments, suits, causes of action, damages, losses, liabilities and expenses (including attorneys' fees and court costs) attributable to any failure by Tenant to timely deliver any such estoppel certificate to Landlord pursuant to Section 25.1 above.

26. Modification and Cure Rights of Landlord's Mortgagees and Lessors.

26.1 **Modifications**. If, in connection with Landlord's obtaining or entering into any financing or ground lease for any portion of the Premises, the lender or ground lessor shall request modifications to this Lease, Tenant shall, subject to any SNDA (as defined above) and within ten (10) business days after request therefor, execute a commercially reasonable amendment to this Lease including such modifications, provided such modifications are reasonable, do not increase the obligations of Tenant hereunder (including Rent), decrease Tenant's rights or the length of the Term of this Lease or adversely affect the leasehold estate created hereby or Tenant's rights hereunder.

26.2 **Cure Rights**. In the event of any default on the part of Landlord, subject to any SNDA, Tenant will give notice by registered or certified mail to any beneficiary of a deed of trust or mortgagee covering the Premises or ground lessor of Landlord whose address shall have been furnished to Tenant in writing, and shall offer such beneficiary, mortgagee or ground lessor a reasonable opportunity to cure the default (including with respect to any such beneficiary or mortgagee, time to obtain possession of the Premises, subject to this Lease and Tenant's rights hereunder, by power of sale or judicial foreclosure, if such should prove necessary to effect a cure).

27. Quiet Enjoyment. Landlord covenants and agrees with Tenant that, upon Tenant performing all of the covenants and provisions on Tenant's part to be observed and performed under this Lease (including payment of rent hereunder), Tenant shall and may peaceably and quietly have, hold and enjoy the Premises, in accordance with and subject to the terms and conditions of this Lease, as against all persons claiming by, through or under Landlord.

28. Transfer of Landlord's Interest. The term "Landlord" as used in this Lease, so far as covenants or obligations on the part of the Landlord are concerned, shall be limited to mean and include only the owner or owners, at the time in question, of the fee title to, or a lessee's interest in a ground lease of, the Premises. In the event of any transfer or conveyance of any such title or interest (other than a transfer for security purposes only), the transferor shall be relieved of all covenants and obligations on the part of Landlord contained in this Lease only after Tenant's receipt of acknowledgment of all obligations of this Lease by such transferee. Landlord and Landlord's transferees and assignees shall have the absolute right to transfer all or any portion of their respective title and interest in the Premises and/or this Lease without the consent of Tenant, and such transfer or subsequent transfer shall not be deemed a violation on Landlord's part of any of the terms and conditions of this Lease.

29. Limitation on Liability. Notwithstanding anything contained in this Lease to the contrary, the obligations of a party under this Lease (including any actual or alleged breach or default by a party) do not constitute personal obligations of the individual members, partners, directors, officers or shareholders of the party or the party's partners, and the other party shall not seek recourse against the individual partners, directors, officers or shareholders of the party or the party's members, partners, or any of their personal assets for satisfaction of any liability with respect to this Lease. In addition, in consideration of the benefits accruing hereunder to Tenant and notwithstanding anything contained in this Lease to the contrary, Tenant hereby covenants and agrees for itself and all of its successors and assigns that the liability of Landlord for its obligations under this Lease (including any liability as a result of any actual or alleged failure, breach or default hereunder by Landlord), shall be limited solely to, and Tenant's and its successors' and assigns' sole and exclusive remedy shall be against, Landlord's interest in the Premises, and no other assets of Landlord.

30. Miscellaneous.

30.1 **Governing Law**. This Lease shall be governed by, and construed pursuant to, the Laws of the state in which the Premises are located.

30.2 **Successors and Assigns**. Subject to the provisions of Article 28 above, and except as otherwise provided in this Lease, all of the covenants, conditions and provisions of this Lease shall be binding upon, and shall inure to the benefit of, the parties hereto and their respective heirs, personal representatives and permitted successors and assigns; provided, however, no rights shall inure to the benefit of any Transferee of Tenant unless the Transfer to such Transferee is made in compliance with the provisions of Article 14.

30.3 **No Merger**. The voluntary or other surrender of this Lease by Tenant or a mutual termination thereof shall not work as a merger and shall, at the option of Landlord, either (a) terminate all or any existing subleases, or (b) operate as an assignment to Landlord of Tenant's interest under any or all such subleases.

30.4 **Professional Fees**. If either Landlord or Tenant should bring suit or arbitration against the other with respect to this Lease, including for unlawful detainer or any other relief against the other hereunder, then all costs and expenses incurred by the prevailing party therein (including, without limitation, its actual appraisers', accountants', attorneys' and other professional fees, expenses and court costs), shall be paid by the other party.

30.5 **Waiver**. The waiver by either party of any breach by the other party of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant and condition herein contained, nor shall any custom or practice which may become established between the parties in the administration of the terms hereof be deemed a waiver of, or in any way affect, the right of any party to insist upon the performance by the other in strict accordance with said terms. No waiver of any default of either party hereunder shall be implied from any acceptance by a party or delivery by a party (as the case may be) of any Rent or other payments due hereunder or any omission by the non-defaulting party to take any action on account of such default if such default persists or is repeated, and no express waiver shall affect defaults other than as specified in said waiver. The subsequent payment by Tenant or acceptance of Rent hereunder by Landlord shall not be deemed to be a waiver of any preceding breach by a party of any term, covenant or condition of this Lease regardless of a party's knowledge of such preceding breach at the time of acceptance of such Rent.

30.6 **Terms and Headings; Interpretation**. The words "Landlord" and "Tenant" as used herein shall include the plural as well as the singular. Words used in any gender include other genders. The Section and Article headings of this Lease are not a part of this Lease and shall have no effect upon the construction or interpretation of any part hereof. Any instance herein where a cost, expense or cost and expense is the sole responsibility of Landlord, such costs and expenses shall be deemed not to be part of Operating Expenses. Any deletion of language from this Lease prior to its execution by Landlord and Tenant shall not be construed to raise any presumption, canon of construction or implication, including, without limitation, any implication that the parties intended thereby to state the converse of the deleted language. The parties hereto acknowledge and agree that each has participated in the negotiation and drafting of this Lease; therefore, in the event of an ambiguity in, or dispute regarding the interpretation of, this Lease, the interpretation of this Lease shall not be resolved by any rule of interpretation providing for interpretation against the party who caused the uncertainty to exist or against the draftsman.

30.7 **Time**. Time is of the essence with respect to performance of every provision of this Lease in which time or performance is a factor. All references in this Lease to "days" shall mean calendar days unless specifically modified herein to be "business" days.

30.8 **Prior Agreements; Amendments**. This Lease, including the Summary and all Exhibits and Riders attached hereto contains all of the covenants, provisions, agreements, conditions and understandings between Landlord and Tenant concerning the Premises and any other matter covered or mentioned in this Lease, and no prior agreement or understanding, oral or written, express or implied, pertaining to the Premises or any such other matter shall be effective for any purpose. No provision of this Lease may be amended or added to except by an agreement in writing signed by the parties hereto or their respective successors in interest. The parties acknowledge that all prior agreements, representations and negotiations are deemed superseded by the execution of this Lease to the extent they are not expressly incorporated herein.

30.9 **Separability**. The invalidity or unenforceability of any provision of this Lease shall in no way affect, impair or invalidate any other provision hereof, and such other provisions shall remain valid and in full force and effect to the fullest extent permitted by Law.

30.10 **Recording**. Neither Landlord nor Tenant shall record this Lease. In addition, neither party shall record a short form memorandum of this Lease.

30.11 **Exhibits and Riders**. All Exhibits and Riders attached to this Lease are hereby incorporated in this Lease for all purposes as though set forth at length herein.

30.12 **Auctions**. Tenant shall have no right to conduct any auction in, on or about the Premises.

30.13 **Accord and Satisfaction**. No payment by Tenant or receipt by Landlord of a lesser amount than the Rent payment herein stipulated shall be deemed to be other than on account of the Rent, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as Rent be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or pursue any other remedy provided in this Lease. Tenant agrees that each of the foregoing covenants and agreements shall be applicable to any covenant or agreement either expressly contained in this Lease or imposed by any Law.

30.14 **[Reserved]**.

30.15 **No Partnership**. Landlord does not, in any way or for any purpose, become a partner of Tenant in the conduct of its business, or otherwise, or joint venturer or a member of a joint enterprise with Tenant by reason of this Lease.

30.16 **Force Majeure**. In the event that either party hereto shall be delayed or hindered in or prevented from the performance of any act required hereunder by reason of strikes, lock-outs, labor troubles, inability to procure materials, failure of power, governmental moratorium or other governmental action or inaction (including failure, refusal or delay in issuing permits, approvals and/or authorizations), injunction or court order, riots, insurrection, epidemic, pandemic or disease outbreak (including, without limitation, the COVID-19 virus), war, fire, earthquake, flood or other natural disaster or other reason of a like nature not the fault of the party delaying in performing work or doing acts required under the terms of this Lease (but excluding delays due to financial inability) (herein collectively, "**Force Majeure Delays**"), then performance of such act shall be excused for the period of the delay and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay. The provisions of this Section 30.16 shall not apply to nor operate to excuse Tenant from the payment of Rent strictly in accordance with the terms of this Lease.

30.17 **Counterparts**. This Lease may be executed in one or more counterparts, each of which shall constitute an original and all of which shall be one and the same agreement.

30.18 **Nondisclosure of Lease Terms**. Tenant acknowledges and agrees that the terms of this Lease are confidential and constitute proprietary information of Landlord. Disclosure of the terms could adversely affect the ability of Landlord to negotiate other leases and impair Landlord's relationship with other tenants. Accordingly, Tenant agrees that it, and its partners, officers, directors, employees, agents and attorneys, shall not intentionally and voluntarily disclose the terms and conditions of this Lease to any newspaper or other publication or any other tenant or apparent prospective tenant of the Building or other portion of the Premises, or real estate agent, either directly or indirectly, without the prior written consent of Landlord, provided, however, that Tenant may disclose this Lease (a) as required by applicable law, (b) to prospective subtenants or assignees under this Lease on a confidential basis, (c) to Tenant's legal, accounting and financial consultants on a confidential basis, and (d) to Tenant's current and prospective investors and lenders on a confidential basis. Notwithstanding this Section 30.18, Landlord hereby acknowledges that as of the date of this Lease, Tenant is a publicly-traded company and nothing in this Lease shall prohibit Tenant from disclosing the existence of this Lease, any key terms or other information as may be necessary to comply with any rules, regulations, requests of the US Securities and Exchange Commission or other applicable Law.

30.19 **Non-Discrimination**. Tenant acknowledges and agrees that there shall be no discrimination against, or segregation of, any person, group of persons, or entity on the basis of race, color, creed, religion, age, sex, marital status, national origin, or ancestry in the leasing, subleasing, transferring, assignment, occupancy, tenure, use, or enjoyment of the Premises, or any portion thereof.

30.20 **Waiver of Jury Trial**. To the greatest extend permitted by Laws, each party hereby waives any right to a trial by jury in any action seeking specific performance of any provision of this Lease, for damages for any breach under this Lease, or otherwise for enforcement of any right or remedy hereunder.

30.21 **Certified Access Specialist**. Pursuant to California Civil Code § 1938, Landlord hereby states that the Premises have not undergone inspection by a Certified Access Specialist (CASp) (defined in California Civil Code § 55.52(a)(3)). Pursuant to Section 1938 of the California Civil Code, Landlord hereby provides the following notification to Tenant: "A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction related accessibility standards within the premises." If Tenant requests to perform a CASp inspection of the Premises, Tenant shall, at its cost, retain a CASp approved by Landlord (provided that Landlord may designate the CASp, at Landlord's option) to perform the inspection of the Premises at a time agreed upon by the parties. Tenant shall provide Landlord with a copy of any report or certificate issued by the CASp (the "**CASp Report**") and Tenant shall, if it elects to make such modifications, at its cost, promptly complete any modifications necessary to correct violations of construction related accessibility standards identified in the CASp Report notwithstanding anything to the contrary in this Lease. Tenant agrees to keep the information in the CASp Report confidential except as necessary for the Tenant to complete such modifications.

31. <u>Lease Execution</u>.

31.1 **Authority**. If a party executes this Lease as a limited liability company, partnership or corporation, then the party and the persons and/or entities executing this Lease on behalf of such party represent and warrant that: (a) the party is a duly organized and validly existing limited liability company, partnership or corporation, as the case may be, and is qualified to do business in the state in which the Premises are located; (b) such persons and/or entities executing this Lease are duly authorized to execute and deliver this Lease on the party's behalf in accordance with the party's operating agreement or any resolutions thereof (if the party is a limited liability company), a party's partnership agreement (if the party is a

partnership), or a duly adopted resolution of a party's board of directors and the party's by-laws (if a party is a corporation); and (c) this Lease is binding upon the party in accordance with its terms. Each party shall, promptly following the other party's request therefor, deliver evidence, reasonably acceptable to the other party, of such qualification, organization, existence and authorization.

31.2 **Joint and Several Liability**. If more than one person or entity executes this Lease as a party: (a) each of them is and shall be jointly and severally liable for the covenants, conditions, provisions and agreements of this Lease to be kept, observed and performed by the party; and (b) the act or signature of, or notice from or to, any one or more of them with respect to this Lease shall be binding upon each and all of the persons and entities executing this Lease as a party with the same force and effect as if each and all of them had so acted or signed, or given or received such notice.

31.3 **No Option**. The submission of this Lease for examination or execution by Tenant does not constitute a reservation of or option for the Premises and this Lease shall not become effective as a Lease until it has been executed and delivered by both parties.

[SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties have executed this Lease as of the day and year first above written.

"LANDLORD"

9955 MESA RIM, A DE LLC,
a Delaware limited liability company

By: BRELPC Mesa Rim LLC,
a Delaware limited liability company,
its Sole Member

By: LO Mesa Rim LLC,
a Delaware limited liability company,
its Operating Member

By: /s/ Brig Black_____

Name: Brig Black_____

Its: _Vice President_____

"TENANT"

BIOCEPT, INC.,
a Delaware corporation

By: /s/ Michael Nall
Name: Michael W. Nall
Title: President and CEO

EXHIBIT "A"

SITE PLAN

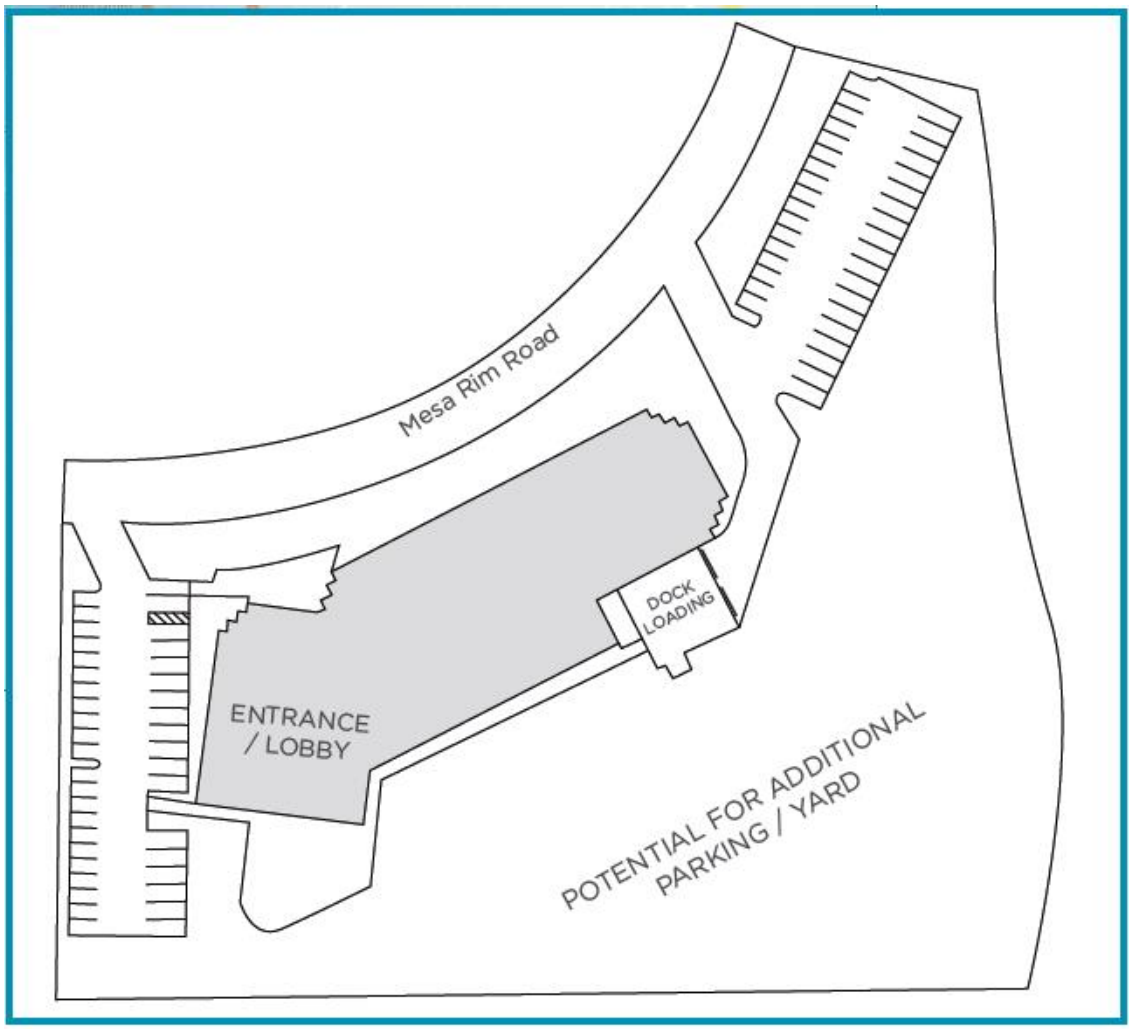

EXHIBIT "B"

LEGAL DESCRIPTION OF PREMISES

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF SAN DIEGO, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

LOT 11 OF RESUBDIVISION OF MESA RIM INDUSTRIAL PARK, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 10668, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JUNE 30, 1983.

APN: 341-341-11

EXHIBIT "C"

NOTICE OF LEASE TERM DATES

To:
Date:

Re: Single-Tenant Lease dated ("Lease")
Between ("Landlord"),
and ("Tenant")
Concerning ("Premises")

Dear :

In accordance with the above-referenced Lease, we wish to advise and/or confirm as follows:

- That Tenant has accepted and is in possession of the Premises and acknowledges the following:

  - Term of the Lease:
  - Commencement Date:
  - Expiration Date:

  That in accordance with the Lease, rental payments will/(has) commence(d) on _____.

- Rent is due and payable in advance on the first day of each and every month during the Term of the Lease.

- Your rent checks should be made payable to:

ACCEPTED AND AGREED

TENANT:	LANDLORD:
a	a
By: Print Name: Print Title:	By: Print Name: Print Title:

SAMPLE ONLY [NOT FOR EXECUTION]

EXHIBIT "D"

TENANT WORK LETTER

This Tenant Work Letter shall set forth the terms and conditions relating to the renovation of the tenant improvements in the Building. This Tenant Work Letter is essentially organized chronologically and addresses the issues of the renovation of the Building, in sequence, as such issues will arise.

SECTION 1

LANDLORD'S INITIAL CONSTRUCTION IN THE BUILDING

Landlord has constructed, at its sole cost and expense, the base, shell and core of the Building, (collectively, the "**Base, Shell and Core**"). Subject to completion of the Landlord's Work and Landlord's repair obligations set forth in the Lease, and other than as expressly set forth in the Lease, the Building and the Base, Shell and Core shall be delivered to Tenant in its current "as-is" condition. The improvements to be initially installed in the Building shall be designed and constructed pursuant to this Tenant Work Letter. Any costs of initial design and construction of any improvements to the Building shall be an "Improvement Allowance Item", as that term is defined in Section 2.2 of this Tenant Work Letter.

SECTION 2

IMPROVEMENTS

2.1 Improvement Allowance. Tenant shall be entitled to a one-time improvement allowance (the "**Improvement Allowance**") in the amount of $1,585,760.00 (based upon $40.00 per rentable square feet in the Building) for the costs relating to the initial design and construction of Tenant's improvements which are permanently affixed to the Building (the "**Improvements**") and the other Improvement Allowance Items described in Section 2.2 below. In no event shall Landlord be obligated to make disbursements pursuant to this Tenant Work Letter in a total amount which exceeds the Improvement Allowance and in no event shall Tenant be entitled to any credit for any unused portion of the Improvement Allowance not used by Tenant within eighteen (18) months following the date of full execution and delivery of the Lease by Landlord and Tenant ("**Allowance Deadline**"), which may be extended due to Force Majeure on a day-for-day basis that Tenant or any party on behalf of Tenant is unable to access, use or work at the Premises due to a Force Majeure delay ("**FM Extension**"), and further subject to Section 2.4 below. No FM Extension shall be deemed to have occurred unless Tenant has given Landlord written notice that an event giving rise to an FM Extension is about to occur or has occurred that will cause a delay in the completion of the Improvements and Landlord has failed to remedy the situation giving rise to a potential FM Extension within one (1) business day after Landlord's receipt of such notice, in which case the number of days of delay after such notice shall be a FM Extension.

2.2 Disbursement of the Improvement Allowance. Except as otherwise set forth in this Tenant Work Letter, the Improvement Allowance shall be disbursed by Landlord (each of which disbursements shall be made pursuant to Landlord's disbursement process) for all hard and soft costs related to the construction of the Improvements and for the following items and costs (collectively, the "**Improvement Allowance Items**"): (i) payment of the fees of the "Architect", as that terms is defined in Section 3.1 of this Tenant Work Letter, and payment of the fees incurred by, and the cost of documents and materials supplied by, Landlord and Landlord's consultants in connection with the preparation and review of the "Construction Drawings," as that term is defined in Section 3.1 of this Tenant Work Letter; (ii) the cost of permits and construction supervision fees; (iii) the cost of any changes in the Base, Shell and Core required by the Construction Drawings; (iv) the cost of any changes to the Construction Drawings or Improvements required by applicable building codes (the "**Code**"); (v) the "Landlord Coordination Fee", as that term is defined in Section 4.3.2 of this Tenant Work Letter; (vi) the fees of Tenant's project manager; and (viii) design and installation costs for telecommunications, data cabling and related infrastructure. However, in no event shall more than Three and 00/100 Dollars ($3.00) per rentable square foot of the Improvement Allowance be used for the item described in (vi) above; any additional amount incurred as a result of (vi) above shall be paid for by Tenant as part of the Over-Allowance Amount. During the construction of the Improvements, Landlord shall make monthly disbursements of the Improvement Allowance for Improvement Allowance Items for the benefit of Tenant and shall authorize the release of monies for the benefit of Tenant as follows.

2.2.1 Monthly Disbursements. On or before the first day of each calendar month during the construction of the Improvements (or such other date as Landlord may designate upon prior written notice), Tenant shall deliver to Landlord: (i) a request for payment of the "Contractor," as that term is defined in Section 4.1 of this Tenant Work Letter, approved by Tenant, in a form to be provided by Landlord, showing the schedule, by trade, of percentage of completion of the Improvements in the Building, detailing the portion of the work completed and the portion not completed; (ii) invoices from all of Tenant's Agents for labor rendered and materials delivered to the Building; and (iii) executed conditional mechanic's lien releases from all such Tenant's Agents which shall comply with the appropriate provisions, as reasonably determined by Landlord, of California Civil Code Section 8132. Thereafter, within fifteen (15) business days thereafter, Landlord shall deliver a check to Tenant in payment of the lesser of: (A) the amounts so requested by Tenant, as set forth in this Section 2.2.1, above, less a ten percent (10%) retention (the aggregate amount of such retentions to be known as the "**Final Retention**"), and (B) the balance of any remaining available portion of the Improvement Allowance (not including the Final Retention), provided that

Landlord does not dispute any request for payment based on non-compliance of any work with the "Approved Working Drawings," as that term is defined in Section 3.4 below.

2.2.2 Final Retention. Subject to the provisions of this Tenant Work Letter, a check for the Final Retention payable to Tenant shall be delivered by Landlord to Tenant following the Substantial Completion of construction of the Improvements, provided that (i) Tenant delivers to Landlord properly executed mechanics lien releases in compliance with both California Civil Code Section 8136 and Section 8138, (ii) Landlord has determined that no defects exist in any of the Improvements which adversely affects the mechanical, electrical, plumbing, heating, ventilating and air conditioning, life-safety or other systems of the Building, the curtain wall of the Building, the structure or exterior appearance of the Building and (iii) Architect delivers to Landlord a certificate, in a form reasonably acceptable to Landlord, certifying that the construction of the Improvements in the Building has been Substantially Completed.

2.3 Additional Amortized Improvement Allowance. Tenant shall have the option, exercisable by written notice to Landlord on or before the Cost Proposal Delivery Date (as defined in Section 4.2 below), to increase the amount of the Improvement Allowance by up to Forty Dollars ($40.00) per square foot of the Building ("**Additional Allowance**"). If Tenant exercises such option, Monthly Rent payable by Tenant throughout the initial one hundred twenty-seven (127) month initial Lease Term shall be increased by an amount sufficient to fully amortize such increase in the Improvement Allowance throughout said one hundred twenty-seven (127) month period based upon equal monthly payments of principal and interest, with interest imputed on the outstanding principal balance at the rate of seven percent (7%) per annum and the parties shall promptly execute an amendment to this Lease in order to memorialize such increase in the Improvement Allowance and such increase in the Monthly Rent. Tenant may use up to Ten Dollars ($10.00) per square foot of the Building of the Additional Allowance towards moving costs, cabling, furniture, fixtures and other related facilities costs for the Building as all such costs are reasonably approved in advance by Landlord in writing, and Landlord shall reimburse Tenant for the costs of such items within thirty (30) days after the later to occur of (a) the Commencement Date and (b) Landlord's receipt of paid invoices evidencing the costs of such items. Notwithstanding anything to the contrary in Section 2.4 below, in no event may any portion of the Additional Allowance be used by Tenant as a credit against Monthly Rent.

2.4 Unused Improvement Allowance. If Tenant uses less than the Improvement Allowance for the Improvements, Tenant may request in a written notice ("**Unused Allowance Notice**") delivered to Landlord on or before Allowance Deadline, that the unused portion of the Improvement Allowance be applied as (a) a credit against Tenant's Monthly Rent obligations not to exceed $5.00 per rentable square foot of the Building in the aggregate and/or (b) to reimburse Tenant for Tenant Changes undertaken by Tenant after the Commencement Date in accordance with Article 22 of the Lease. If Tenant timely and properly delivers the Unused Allowance Notice to Landlord and requests a credit against Monthly Rent, the credit against Tenant's Monthly Rent obligations shall commence following the later of (i) the expiration of the Abatement Period or (ii) thirty (30) days following the delivery of the Unused Allowance Notice to Landlord, and continue thereafter until exhausted. If Tenant timely and properly delivers the Unused Allowance Notice to Landlord and requests reimbursement for such Tenant Changes, Landlord shall reimburse Tenant for the costs of such Tenant Changes within thirty (30) days after the later to occur of (A) the Commencement Date and (B) Landlord's receipt of appropriate lien releases and paid invoices evidencing the costs of the Tenant Changes. Any portion of the Improvement Allowance that is not so requested by Tenant on or before the Allowance Deadline shall revert to Landlord.

SECTION 3

CONSTRUCTION DRAWINGS

3.1 Selection of Architect/Construction Drawings. Tenant shall retain either Ware Malcomb, McFarlane Architects or DGA as the architect (the "**Architect**") to prepare the "Construction Drawings," as that term is defined in this Section 3.1. Tenant shall also retain the Architect to prepare all plans and engineering working drawings relating to the structural, mechanical, electrical, plumbing, HVAC and life safety work of the Tenant Improvements. The plans and drawings to be prepared by Architect hereunder shall be known collectively as the "**Construction Drawings**." All Construction Drawings shall comply with the drawing format and specifications as reasonably determined by Landlord, and shall be subject to Landlord's reasonable approval; provided that any work to the exterior structure of the Building shall be in Landlord's sole good faith discretion; further provided that Landlord will not unreasonably withhold its consent to Tenant's plans to replace and/or add exterior windows to the Building if the same does not adversely affect the exterior appearance or structural integrity of the Building. Tenant and Architect shall verify, in the field, the dimensions and conditions as shown on the relevant portions of the base building plans, and Tenant and Architect shall be solely responsible for the same, and Landlord shall have no responsibility in connection therewith. Landlord's review of the Construction Drawings as set forth in this Section 3, shall be for its sole purpose and shall not imply Landlord's review of the same, or obligate Landlord to review the same, for quality, design, Code compliance or other like matters. Accordingly, notwithstanding that any Construction Drawings are reviewed by Landlord or its space planner, architect, engineers and consultants, and notwithstanding any advice or assistance which may be rendered to Tenant by Landlord or Landlord's space planner, architect, engineers, and consultants, Landlord shall have no liability whatsoever in connection therewith and shall not be responsible for any omissions or errors contained in the Construction Drawings.

3.2 Final Space Plan. Tenant and the Architect shall prepare the final space plan for Improvements in the Building (collectively, the "**Final Space Plan**"), which Final Space Plan shall include a layout and designation of all offices, rooms and other partitioning, their intended use, and equipment (if known) to be contained therein, and shall deliver the Final Space Plan to Landlord for Landlord's approval, not to be unreasonably withheld, conditioned or delayed provided that any work to the exterior structure of the Building shall be in Landlord's sole good faith discretion. Landlord shall approve or disapprove of such Final Space Plan within five (5) business days of receipt. If Landlord disapproves any portion of the Final Space Plan, Landlord shall provide Tenant with a reasonably detailed list of issues and Tenant shall prepare and deliver a revised Final Space Plan for Landlord's approval within five (5) days following Landlord's disapproval. The parties shall repeat the process set forth in this Section 3.2 until the Final Space Plan is approved.

3.3 Final Working Drawings. Tenant and the Architect shall complete the architectural and engineering drawings for the Building, and the final architectural working drawings in a form which is complete to allow subcontractors to bid on the work and to obtain all applicable permits (collectively, the "**Final Working Drawings**") and shall submit the same to Landlord for Landlord's approval, not to be unreasonably withheld, conditioned or delayed; provided that any work to the exterior structure of the Building shall be in Landlord's sole good faith discretion. Landlord shall approve or disapprove of such Final Working Drawings within five (5) business days of receipt. If Landlord disapproves any portion of the Final Working Drawings, Landlord shall provide Tenant with a reasonably detailed list of issues and Tenant shall prepare and deliver revised Final Working Drawings for Landlord's approval within five (5) days following Landlord's disapproval. The parties shall repeat the process set forth in this Section 3.3 until the Final Space Plan is approved.

3.4 Permits. The Final Working Drawings shall be approved by Landlord (the "**Approved Working Drawings**") prior to the commencement of the construction of the Improvements. Within three (3) business days following Landlord's approval of the Final Working Drawings, Tenant shall cause the Architect to immediately submit the Approved Working Drawings to the appropriate municipal authorities for all applicable building permits necessary to allow "Contractor," as that term is defined in Section 4.1, below, to commence and fully complete the construction of the Improvements (the "**Permits**"). No changes, modifications or alterations in the Approved Working Drawings may be made without the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed; provided that any changes to the exterior structure of the Building shall be in Landlord's sole good faith discretion. Landlord shall cooperate with Tenant and the Architect as reasonably necessary to obtain the Permits in an expeditious manner.

3.5 Time Deadlines. Tenant shall use its best efforts and all due diligence to cooperate with the Architect and Landlord to complete all phases of the Construction Drawings and the permitting process and to receive the permits, and with Contractor for approval of the "Cost Proposal," as that term is defined in Section 4.2 of this Tenant Work Letter, as soon as possible after the execution of the Lease, and, in that regard, shall meet with Landlord on a scheduled basis to be mutually agreed upon by the parties, to discuss Tenant's progress in connection with the same.

SECTION 4

CONSTRUCTION OF THE IMPROVEMENTS

4.1 Contractor; Construction Contract. The contractor that shall construct the Improvements shall be a contractor selected by Tenant and approved by Landlord (such approval not to be unreasonably withheld, conditioned or delayed) (the "**Contractor**"). Tenant shall retain the Contractor pursuant to a commercially reasonable construction contract (the "**Construction Contract**") to construct the Improvements in accordance with the Approved Working Drawings and to construct the Improvements in accordance with the Approved Working Drawings and (i) all state, federal, city or quasi-governmental laws, codes, ordinances and regulations, as each may apply according to the rulings of the controlling public official, agent or other person; (ii) applicable standards of the American Insurance Association (formerly, the National Board of Fire Underwriters) and the National Electrical Code; and (iii) building material manufacturer's specifications. The subcontractors utilized by the Contractor as to work affecting the structure of the Building and/or the systems and equipment of the Building shall be subject to Landlord's reasonable approval.

4.2 Cost Proposal. After the Approved Working Drawings are signed by Landlord and Tenant, Tenant shall provide Landlord with a cost proposal in accordance with the Approved Working Drawings, which cost proposal shall include, as nearly as possible, the cost of all Improvement Allowance Items to be incurred by Tenant in connection with the construction of the Improvements (the "**Cost Proposal**") for Landlord's approval (not to be unreasonably withheld, conditioned or delayed) solely for the purpose to ensure the costs of Improvement Allowance Items have not been unreasonably and/or intentionally overstated. Landlord shall approve or disapprove the Cost Proposal for such purpose within five (5) business days of the receipt of the same. If Landlord disapproves any portion of the Cost Proposal, Landlord shall provide Tenant with a list of unreasonable and/or overstated Improvement Allowance Items and Tenant shall prepare and deliver a revised Cost Proposal for Landlord's approval within five (5) days following Landlord's disapproval. The parties shall repeat the process set forth in this Section 4.2 until the Cost Proposal is approved. Upon receipt of the approved Cost Proposal by Landlord, Landlord shall commence releasing the Improvement Allowance in accordance with Section 2.2 above. The date by which Landlord approves the Cost Proposal shall be known hereafter as the "**Cost Proposal Delivery Date**".

4.3 Over-Allowance Amount. Any costs for the Improvements or otherwise incurred under this Tenant Work Letter in excess of the Improvement Allowance (the "**Over-Allowance Amount**") shall be shall be paid on a monthly basis by Tenant, *pari passu* with Landlord's disbursement of the Improvement Allowance. With each monthly draw request on the Improvement Allowance, subject to Section 2.2 above, Landlord shall disburse a portion of the Improvement Allowance equal to the requested amount multiplied by the ratio that the total Improvement Allowance bears to the total Cost Proposal, and Tenant shall pay the remainder as part of the Over-Allowance Amount. The Improvement Allowance shall be charged a construction coordination fee (the "**Landlord Coordination Fee**") payable to Landlord in an amount equal to the product of (i) two percent (2%) and (ii) an amount equal to the "hard costs" of the construction of the Improvements.

4.4 Indemnification & Insurance.

4.4.1 Indemnity. Tenant's indemnity of Landlord as set forth in Section 17.2 of the Lease shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to any negligent act or omission of Tenant or Tenant's agents performing work related to the Improvements ("**Tenant's Agents**").

4.4.2 Requirements of Tenant's Agents. Each of Tenant's Agents shall guarantee to Tenant and for the benefit of Landlord that the portion of the Improvements for which it is responsible shall be free from any defects in workmanship and materials for a period of not less than one (1) year from the date of completion thereof. All such warranties or guarantees as to materials or workmanship of or with respect to the Improvements shall be contained in the contract or subcontract and shall be written such that such guarantees or warranties shall inure to the benefit of both Landlord and Tenant, as their respective interests may appear, and can be directly enforced by either. Tenant agrees to enforce such guarantees or warranties upon thirty (30) days' prior written notice, or, upon Tenant's election to give to Landlord any assignment or other assurances which may be necessary to effect such right of direct enforcement.

4.4.3 Insurance Requirements.

4.4.3.1 General Coverages. All of Tenant's Agents shall carry worker's compensation insurance covering all of their respective employees, and shall also carry public liability insurance, including property damage, all with limits, in form and with companies as are required to be carried by Tenant as set forth in Article 20 of this Lease.

4.4.3.2 Special Coverages. Tenant or the Contractor shall carry "Builder's All Risk" insurance in an amount reasonably approved by Landlord covering the construction of the Improvements, and such other insurance as Landlord may require. Such insurance shall be in amounts and shall include such extended coverage endorsements as may be reasonably required by Landlord.

4.4.3.3 General Terms. Certificates for all insurance carried pursuant to this Section 4.4.3 shall be delivered to Landlord before the commencement of construction of the Improvements and before the Contractor's equipment is moved onto the site. In the event that the Improvements are damaged by any cause other than the negligence or willful misconduct of Landlord or its employees or agents during the course of the construction thereof, Tenant shall immediately repair the same at Tenant's sole cost and expense. Landlord may, in its reasonable discretion, require Tenant to obtain, from a surety reasonably approved by Landlord, an indemnity bond or some alternate form of security satisfactory to Landlord in an amount sufficient to ensure the lien-free completion of any portion of the Improvements which invoiced costs are reasonably expected to exceed $100,000.00 due to any particular contractor or subcontractor, and naming Tenant as the principal and Landlord as the obligee.

SECTION 5

COMPLETION OF THE IMPROVEMENTS

5.1 Substantial Completion. For purposes of this Lease, "**Substantial Completion**" of the Improvements in the Building shall occur upon the (a) completion of construction of the Improvements in the Building in a good, workmanlike manner pursuant to the Approved Working Drawings as determined by the Contractor, with the exception of any punch list items and any tenant fixtures, work-stations, built-in furniture, or equipment to be installed by Tenant, each of which are of such a nature that they do not materially interfere with or impair Tenant's use of the Premises for the Permitted Use, and (b) receipt of a certificate of occupancy allowing Tenant to legally occupy the Premises for the Permitted Use.

5.2 Tenant Delay of the Substantial Completion of the Building. Except as provided in this Section 5, the Commencement Date and Tenant's obligation to pay rent for the Building shall occur as set forth in the Lease. However, if there shall be an actual delay or delays in the Substantial Completion of the Improvements in the Building as a result of the following (collectively, "**Tenant Delays**"), all not due to the fault of Landlord or Landlord's agents or employees:

5.2.1 Tenant's failure to comply with any time deadlines set forth in this Tenant Work Letter;

5.2.2 Tenant's failure to timely approve or disapprove any matter requiring Tenant's approval;

5.2.3 A material breach by Tenant of the terms of this Tenant Work Letter or the Lease after expiration of all applicable notice and cure periods;

5.2.4 Reserved;

5.2.5 Tenant's request for changes in the Approved Working Drawings;

5.2.6 Tenant's requirement for materials, components, finishes or improvements which are not available in a commercially reasonable time given the anticipated date of Substantial Completion of the Improvements in the Building;

5.2.7 Changes to the Base, Shell and Core required by the Approved Working Drawings; or

5.2.8 Any other acts or omissions of Tenant, or its agents, or employees not resolved within 24 hours of Landlord's notice;

then, notwithstanding anything to the contrary set forth in the Lease or this Tenant Work Letter and regardless of the actual date of the Substantial Completion of Improvements in the Building, the date of Substantial Completion thereof shall be deemed to be the date that Substantial Completion would have occurred if no Tenant Delay or Delays, as set forth above, had occurred.

5.3 Landlord Delay of the Substantial Completion of the Building. Except as provided in this Section 5, the Commencement Date and Tenant's obligation to pay rent for the Premises shall occur as set forth in the Lease. The following shall be considered "**Landlord Delays**"), all to the extent not due to the fault of Tenant or Tenant's agents or employees or a Force Majeure event:

5.3.1 Landlord's failure to comply with any time deadlines set forth in this Tenant Work Letter;

5.3.2 Landlord's failure to timely approve or disapprove any matter requiring Landlord's approval;

5.3.3 A material breach by Landlord of the terms of this Tenant Work Letter or the Lease after expiration of all applicable notice and cure periods;

5.3.4 Landlord's request for changes in the Approved Working Drawings;

5.3.5 Landlord's requirement for materials, components, finishes or improvements which are not available in a commercially reasonable time given the anticipated date of Substantial Completion of the Improvements in the Building;

5.3.6 Material delay to construction of the Improvements caused by construction of the Landlord's Work; or

5.3.7 Landlord's failure to timely deliver physical possession of the Premises to Tenant on the Delivery Date.

The Anticipated Commencement Date shall be extended one (1) day for each day that Tenant is actually delayed in completing the Improvements as a result of a Landlord Delay provided that any delay pursuant to subsection 5.3.7 above shall automatically be deemed a Landlord Delay with no requirement of notice to Landlord or actual delay to Tenant in completing the Improvements. Subject to the immediately preceding sentence, no Landlord Delay shall be deemed to have occurred unless Tenant has given Landlord written notice that an act or omission on the part of Landlord or its agents is about to occur or has occurred that will cause a delay in the completion of the Improvements and Landlord has failed to cure such delay within one (1) business day after Landlord's receipt of such notice, in which case the number of days of delay after such notice shall be a Landlord Delay.

SECTION 6

MISCELLANEOUS

6.1 Tenant's Representative. Tenant has designated **Tim Kennedy of Biocept** as its sole representative with respect to the matters set forth in this Tenant Work Letter, who, until further notice to Landlord, shall have full authority and responsibility to act on behalf of the Tenant as required in this Tenant Work Letter.

6.2 Landlord's Representative. Prior to commencement of construction of Improvements, Landlord shall designate a representative with respect to the matters set forth in this Tenant Work Letter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of the Landlord as required in this Tenant Work Letter.

6.3 Time of the Essence in This Tenant Work Letter. Unless otherwise indicated, all references herein to a "number of days" shall mean and refer to calendar days.

6.4 Deemed Approval. If a party fails to respond to provide its approval or disapproval within the time period provided in this Tenant Work Letter ("**Non-Responsive Party**"), then the other party may provide a written "reminder notice" of same. If the Non-Responsive Party fails to respond within two (2) business days after receipt of such reminder notice, then such item to be approved shall be deemed approved by such Non-Responsive Party.

EXHIBIT "E"

LIST OF FF&E

- All lab benches, both affixed and movable
- All fume hoods
- All HVAC equipment, ducting and controls
- ISO 7 and 8 clean rooms and their associated infrastructure
- Deionized water system and its associated infrastructure
- Backup generator and its associated infrastructure

EXHIBIT "F"

EXHAUST FANS TO BE REPLACED

[TO BE AGREED UPON PRIOR TO LEASE EXECUTION]

EXHIBIT "G"

HVAC UNITS TO BE REPLACED

[TO BE AGREED UPON PRIOR TO LEASE EXECUTION]

EXHIBIT 10.4

FIFTH AMENDMENT TO LEASE

This Fifth Amendment (this "**Fifth Amendment**") to Lease is made as of __6/5_____, 2020, by and between **ARE-SD REGION NO. 18, LLC**, a Delaware limited liability company **("Landlord**"), and **BIOCEPT, INC**., a Delaware corporation ("**Tenant**").

RECITALS

A.Landlord and Tenant have entered into that certain Lease Agreement dated as of March 31, 2004, as amended by that certain First Amendment to Lease dated as of November 1, 2011, that certain Second Amendment to Lease dated as of September 10, 2012, that certain Third Amendment to Lease, dated as of April 16, 2013, and that certain Fourth Amendment to Lease, dated September 10, 2013 (as amended, the "**Lease**"), wherein Landlord leased to Tenant certain premises consisting of approximately 48,218 rentable square feet (the "**Premises**") located at 5810 Nancy Ridge Drive, San Diego, California, as more particularly described therein.

B.The Term of the Lease expires on July 31, 2020.

C.Landlord and Tenant desire to amend the Lease to, among other things, extend the Term of the Lease to expire on November 30, 2020 (the "**Expiration Date**").

AGREEMENT

Now, therefore, the parties hereto agree that the Lease is amended as follows:

1. **Base Term**. The Base Term of the Lease is hereby extended to expire on Expiration Date.

2. **Rent.** Tenant shall continue to pay Basic Annual Rent, Additional Rent and all other charges as set forth in the Lease through the Expiration Date. Notwithstanding anything to the contrary in the Lease, Tenant shall have no further right to extend the Term of the Lease beyond the Expiration Date.

3.Holdover Rent. If Tenant remains in possession of the Premises after the expiration or earlier termination of the Term as amended by this Fifth Amendment without the express written consent of Landlord, (A) Tenant shall become a tenant at sufferance upon the terms of this Lease except that the monthly rental shall be equal to 200% of Base Rent in effect during the last 30 days of the Term, and (B) Tenant shall be responsible for all damages suffered by Landlord resulting from or occasioned by Tenant's holding over, including consequential damages. No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease except as otherwise expressly provided, and this Section 3 shall not be construed as consent for Tenant to retain possession of the Premises. Acceptance by Landlord of Base Rent after the expiration of the Term or earlier termination of this Lease shall not result in a renewal or reinstatement of this Lease.

4.OFAC. Tenant and all beneficial owners of Tenant are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List or the Sectoral Sanctions Identifications List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute,

executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

5. **Miscellaneous**.

(a)This Fifth Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Fifth Amendment may be amended only by an agreement in writing, signed by the parties hereto.

(b)This Fifth Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

(c)This Fifth Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Fifth Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

(d)Landlord and Tenant each represent and warrant that it has not dealt with any broker, agent or other person ("**Broker**") in connection with this transaction, and that no Broker brought about this transaction. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

(e)Except as amended and/or modified by this Fifth Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Fifth Amendment. In the event of any conflict between the provisions of this Fifth Amendment and the provisions of the Lease, the provisions of this Fifth Amendment shall prevail. Whether or not specifically amended by this Fifth Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Fifth Amendment.

(Signatures on Next Page)

IN WITNESS WHEREOF, the parties hereto have executed this Fifth Amendment as of the day and year first above written.

TENANT:

BIOCEPT, INC.,
a Delaware corporation

By: /s/ Michael Nall
Its: President & CEO

LANDLORD:

ARE-SD REGION NO. 18, LLC,
a Delaware limited liability company

By: ALEXANDRIA REAL ESTATE EQUITIES, L.P,
a Delaware limited partnership,
managing member

By: ARE-QRS CORP.,
a Maryland corporation,
general partner

By: _/s/ Gary Dean_____
Senior Vice President, RE Legal Affairs

EXHIBIT 10.6

FIRST AMENDMENT TO
EMPLOYMENT AGREEMENT

This First Amendment to Employment Agreement (the "***Amendment***") is entered by and between Biocept, Inc., a Delaware corporation (the ***"Company"),*** and Michael Terry ***("Employee")*** and shall be effective as of September 11, 2018 (the "***Amendment Effective Date").***

Whereas, the Company and Employee are parties to that certain Employment Agreement, effective February 14, 2017 (the ***"Employment Agreement");*** and

Whereas, the Company and Employee now desire to amend the Employment Agreement as set forth herein;

Now Therefore, in consideration of the foregoing and the mutual promises herein contained, the parties agree as follows (capitalized terms used but not defined herein shall have the meaning set forth in the Employment Agreement):

1. **Amendment to Section 2 "Duties and Responsibilities."** The parties mutually agree that the Agreement is amended as of the Amendment Effective Date, by amending Section 2 to delete the first sentence and replace it with the following:

"Employee shall serve as the Senior Vice President, Business Development of the Company **(*"SVP Business Development"*)**."

The parties further agree that any and all references in the Employment Agreement to "SVP Commercial Operations" is hereby amended to read as "SVP Business Development."

2. **Unchanged Terms/Conflict.** Except as expressly modified by this Amendment, the Agreement shall remain unmodified and in full force and effect. Should there be any conflict between the terms and conditions of this Amendment and the terms and conditions of the Agreement, the parties agree that the terms and conditions of this Amendment shall control/prevail.

In Witness Whereof, the parties have executed this Amendment as of the date first set forth above.

Biocept, Inc.	**Employee**
By: /s/ Michael W. Nall	By: Michael Terry
Michael W. Nall	Michael Terry
President and Chief Executive Officer	

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (this "***Agreement***") is entered into by and between Biocept, Inc., a Delaware corporation (the ***"Company"),*** and Michael Terry ***("Employee"),*** and shall be effective as of February 14, 2017 (the "***Effective Date***"***).***

WHEREAS, the Company desires to employ Employee, and Employee desires to accept employment with the Company, on the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual promises herein contained, the parties agree as follows:

1. EMPLOYMENT PERIOD. Employee's employment hereunder shall commence on the Effective Date and shall continue until terminated pursuant to Section 4 below.

2. SERVICES TO BE RENDERED.

(a) Duties and Responsibilities. Employee shall serve as the Senior Vice President Commercial Operations of the Company ***("SVP Commercial Operations").*** In the performance of such duties, Employee shall report directly to the Chief Executive Officer of the Company (the ***"CEO")*** and shall be subject to the direction of the CEO and to such limits upon Employee's authority as the CEO may from time to time impose. Employee shall be subject to and comply with the policies and procedures generally applicable to employees of the Company to the extent the same are not inconsistent with any term of this Agreement.

(b) Exclusive Services. Employee shall at all times faithfully, industriously and to the best of his ability, experience and talent perform to the satisfaction of the CEO and the Board of Directors of the Company (the ***"Board")*** all of the duties that may be assigned to Employee hereunder and, unless approved in writing in advance by the CEO, shall devote 100% of his productive time and efforts to the performance of such duties. Subject to the terms of the Employee Proprietary Information and Inventions Agreement referred to in Section 5(b), this shall not preclude Employee from devoting time to personal and family investments or serving on community and civic boards, or participating in industry associations, *provided* such activities do not interfere with his duties to the Company, as determined in good faith by the Board. Employee agrees that he will not join any boards without the prior approval of the Board.

3. COMPENSATION AND BENEFITS. The Company shall pay or provide, as the case may be, to Employee the compensation and other benefits and rights set forth in this Section 3.

(a) Base Salary. As compensation for services as SVP Commercial Operations, Employee will be paid a salary of $225,000 per year, which shall be payable, less any required payroll deductions and withholdings in regular periodic payments in accordance with the Company's policy. Employee's base salary shall be subject to review annually by and at the sole discretion of the Company.

(b) Bonuses. Employee will be eligible to participate in the Company's annual cash incentive plan for its Employees, at the sole discretion of the Board.

(c) Benefits. Employee shall be entitled to participate in benefits under the Company's benefit plans and arrangements, including, without limitation, any employee benefit plan or arrangement made available by the Company to its employees, subject to and on a basis consistent with the terms, conditions and overall administration of such plans and arrangements. The Company shall have the right to amend or delete any such benefit plan or arrangement made available by the Company to its employees and not otherwise specifically provided for herein.

(d) Expenses. The Company shall reimburse Employee for reasonable out- of-pocket business expenses incurred in connection with the performance of his duties hereunder. subject to such policies as the Company

may from time to time establish, and Employee furnishing the Company with evidence in the form of receipts satisfactory to the Company substantiating the claimed expenditures.

(e) **Paid Time Off.** Employee shall be entitled to such periods of paid time off ***("PTO")*** each year as provided under the Company's PTO policy. Should Employee's employment terminate for any reason, Employee shall be entitled to unpaid PTO as of the date of termination of this Agreement.

(f) **Equity Plans.** Employee shall be entitled to participate in any equity or other employee benefit plan that is generally available to employees. Except as otherwise provided in this Agreement, Employee's participation in and benefits under any such plan shall be on the terms and subject to the conditions specified in the governing document of the particular plan. As additional compensation, and as an inducement material to Employee's commencement of employment with the Company, contingent and effective upon the commencement of Employee's services to the Company, subject to approval of the Board or the Compensation Committee of the Board, the Company will grant to Employee an option (the ***"Option")*** to purchase 50,000 shares of the Company's Common Stock. Except as otherwise set forth herein, 25% of the Option will vest on the one-year anniversary of the commencement of Employee's employment with the Company, and the remaining portion of the Option shall vest in equal quarterly installments over the following three years.

4. **AT-WILL EMPLOYMENT; TERMINATION; SEVERANCE.**

(a) **At-Will Employment.** Employee's employment relationship is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause (as defined below) or advance notice.

(b) **Termination Without Cause; Resignation for Good Reason (other than in connection with a Change in Control).** In the event Employee's employment with the Company is terminated by the Company without Cause, or Employee resigns for Good Reason (as defined below), in either case at any time other than during the three months before a Change in Control (as defined below) or during the 12 months following a Change in Control, then provided such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a ***"Separation from Service"),*** and provided that Employee complies with the conditions set forth in Section 4(e), the Company shall provide Employee with the following severance benefits:

(i) Severance pay in the form of a single lump sum payment equal to six months of Employee's base salary (the ***"Cash Severance").*** Such payment shall be calculated ignoring any decrease in Employee's base salary that forms the basis for Employee's resignation for Good Reason and shall be paid in a lump sum on the 60th day following Employee's Separation from Service.

(ii) ff Employee is eligible for and timely elects continued group health plan coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985 ***("COBRA")*** following Employee's termination, the Company will pay the COBRA group health insurance premiums for Employee and Employee's eligible dependents until the earliest of (A) the close of the six-month period following the termination of Employee's employment (the ***"COBRA Payment Period"),*** (B) the expiration of Employee's eligibility for the continuation coverage under COBRA, or (C) the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment. References to COBRA premiums shall not include any amounts payable by Employee under an Internal Revenue Code Section 125 health care reimbursement plan. Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot pay the COBRA premiums without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then regardless of whether Employee elects continued health coverage under COBRA, in lieu of providing the COBRA premiums, the Company will instead pay to Employee, on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premiums for that month, subject to applicable tax withholdings (such amount, the ***"Special Severance Payment"),*** which payments shall continue until the earlier of expiration of the COBRA Payment Period or the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment.

(c) **Termination Without Cause; Resignation for Good Reason** (in **connection with a Change** in **Control).** If Employee is terminated without Cause or if Employee resigns for Good Reason at any time within the three months prior to or 12 months following a Change in Control, then provided such termination constitutes a Separation from Service and provided that Employee complies with the conditions set forth in Section 4(e), then Company shall provide Employee with the following severance benefits:

(i) The Cash Severance described in Section 4(b)(i);

(ii) The COBRA benefits described in Section 4(b)(ii); and

(iii) Notwithstanding any contrary terms of any stock option grant, option agreement or other equity award agreement between the Company and Employee, all outstanding stock options and other equity awards covering the Company's common stock held by Employee as of the date of termination that are subject to time-based vesting requirements shall accelerate in full. In order to give effect to the foregoing provision, notwithstanding anything to the contrary set forth in Employee's equity award agreements, following any termination of Employee's employment that is without Cause or for Good Reason, none of Employee's equity awards shall terminate with respect to any vested or unvested portion subject to such award before the later of (A) the Separation Agreement Deadline or (B) three months following Employee's termination.

For the avoidance of doubt, in no event shall Employee be entitled to benefits under both Section 4(b) and this Section 4(c). If Employee is eligible for benefits under both Section 4(b) and this Section 4(c), Employee shall receive the benefits set forth in this Section 4(c) and such benefits will be reduced by any benefits previously provided to Employee under Section 4(b).

(d) **Related Entity.** Notwithstanding anything in this Agreement to the contrary, in no event shall Employee be entitled to benefits under either Section 4(b) or Section 4(c) in connection with any termination, resignation or change in Employee's employment with the Company or any of its affiliates that is effected in connection with Employee's employment, or engagement as a consultant, by an entity formed by or for the benefit of the Company for the purpose of engaging physicians to perform services related to the Company's business or otherwise for the purpose of benefitting the Company's business.

(e) **Conditions to Receipt of Severance Benefits.** The receipt of any and all severance benefits under this Agreement is expressly subject to and conditioned upon Employee signing and not revoking a separation agreement and release of claims in a form provided by the Company (the ***"Separation Agreement")*** within the applicable time period set forth therein, and permitting such Separation Agreement to become fully effective in accordance with its terms, which shall in no event be later than 60 days following Employee's Separation from Service (the ***"Separation Agreement Deadline").*** No severance benefits will be paid unless and until the Separation Agreement becomes effective. As a condition to the receipt of severance benefits, Employee shall also be required to comply with the terms of this Agreement and the terms of the Employee Proprietary Information and Inventions Agreement referred to in Section 5(b) and Employee must resign from all positions and terminate any relationships as an employee, advisor, officer or director with the Company and any of its affiliates, each effective on the date of termination.

(f) **Section 409A.** It is the intent for all payments and benefits under this Agreement to be exempt from the application of Section 409A of the Internal Revenue Code of 1986. as amended (the ***"Code")*** and any regulations and guidance that has been promulgated or may be promulgated from time to time thereunder and any state law of similar effect (collectively ***"Section 409A")*** or, if not exempt, to comply with the requirements of Section 409A so that none of the payments and benefits will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to so comply. Each payment and benefit payable under this Agreement is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the U.S. Treasury Regulations. Specifically, it is intended that all of the severance benefits and other payments payable under this Agreement satisfy, to the greatest extent possible, the exemptions from Section 409A provided under Treasury Regulations l.409A-l(b)(4), 1.409A-l(b)(5) and 1.409A-l(b)(9), and this Agreement will be construed to the greatest extent possible as consistent with those provisions. Notwithstanding any provision to the contrary in this Agreement, if Employee is deemed by the Company at the time of Employee's Separation from Service to be a "specified employee" for purposes of Section 409A(a)(2)(B)(i) of the Code, and if any of the payments upon Separation from

Service set forth herein and/or under any other agreement with the Company are deemed to be "deferred compensation", then to the extent delayed commencement of any portion of such payments is required in order to adverse taxation under Section 409A, such payments shall not be provided to Employee prior to the earliest of (i) the expiration of the six-month period measured from the date of Employee's Separation from Service with the Company, (ii) the date of Employee's death or (iii) such earlier date as permitted under Section 409A without the imposition of adverse taxation. Upon the first business day following the expiration of such applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this paragraph shall be paid in a lump sum to Employee, and any remaining payments due shall be paid as otherwise provided herein or in the applicable agreement. No interest shall be due on any amounts so deferred.

(g) Section 280G. If any payment or benefit Employee will or may receive from the Company or otherwise (a ***"280G Payment")*** would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the ***"Excise Tax"),*** then any such 2800 Payment (a ***"Payment")*** shall be equal to the Reduced Amount. The ***"Reduced Amount"*** shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Employee's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the ***"Reduction Method")*** that results in the greatest economic benefit for Employee. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata.

Unless Employee and the Company agree on an alternative accounting firm or law firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the Change in Control shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the Change in Control, the Company shall appoint a nationally recognized accounting or law firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting or law firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting or law firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Employee and the Company within 15 calendar days after the date on which Employee's right to a 280G Payment becomes reasonably likely to occur (if requested at that time by Employee or the Company) or such other time as requested by Employee or the Company.

If Employee receives a Payment for which the Reduced Amount was determined pursuant to clause (x) *of* the first paragraph of this Section 4(g) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, Employee agrees to promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 4(g) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt. if the Reduced Amount was determined pursuant to clause (y) or clause (x) of the first paragraph of this Section 4(g), Employee shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

(h) Definitions.

(i) Cause. For purposes of this Agreement, ***"Cause"*** for termination will mean: (i) the commission of an act of fraud, embezzlement or dishonesty by Employee that has a material adverse impact on the Company or any successor or affiliate thereof; (ii) a conviction of, or plea of "guilty" or "no contest" to, a felony by Employee; (iii) any unauthorized use or disclosure by Employee of confidential information or trade secrets of the Company or any successor or affiliate thereof that has a material adverse impact on any such entity; (iv) Employee's gross negligence, insubordination or material violation of any duty of loyalty to the Company or any other material misconduct on the part of Employee; (v) Employee's ongoing and repeated failure or refusal to perform or neglect of Employee's duties as required by this Agreement, which failure, refusal or neglect continues for 15 days following Employee's receipt of written notice from the CEO of any member of the Board stating with specificity the nature of

such failure, refusal or neglect; or (vi) Employee's breach of any material provision of this Agreement or the Employee Proprietary Information and Inventions Agreement referred to in Section *5(b); provided, however,* that prior to the determination that ***"Cause"*** has occurred, if the Board determines in good faith that Employee's action or breach is remediable, the Company shall (1) provide to Employee in writing, in reasonable detail, the reasons for the determination that such ***"Cause"*** exists (2) other than with respect to clause (v) above which specifies the applicable period of time for Employee to remedy his breach, afford Employee a reasonable opportunity to remedy any such breach, and only to the extent such breach is remediable, in the good faith determination of the Board, (3) provide Employee an opportunity to be heard prior to the final decision to terminate Employee's employment hereunder for such ***"Cause"*** and (4) make any decision that such ***"Cause"*** exists in good faith.

(i) **Good Reason.** For purposes of this Agreement, Employee shall have ***"Good Reason"*** for resignation from employment with the Company if any of the following actions are taken by the Company without Employee's prior written consent: (i) a material reduction in Employee's base salary (unless pursuant to a salary reduction program applicable generally to the Company's similarly situated employees); (ii) a material reduction in Employee's duties, authorities or responsibilities; (iii) the relocation of Employee's principle place of employment that causes an increase in Employee's one-way driving distance by more than 50 miles; or (iv) the Company's material breach of a material term of this Agreement. In order to resign for Good Reason, Employee must provide written notice to the Company within 30 days after the first occurrence of the event giving rise to Good Reason setting forth the basis for Employee's resignation, allow the Company at least 30 days from receipt of such written notice to cure such event, and if such event is not reasonably cured within such period, Employee must resign from all positions Employee then holds with the Company not later than 30 days after the expiration of the cure period.

(ii) **Change in Control.** For purposes of this Agreement, ***"Change in Control"*** shall mean: (i) a merger or consolidation of the Company with or into any other corporation or other entity or person; (ii) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets; or (iii) any other transaction, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (A) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (B) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (C) a reincorporation of the Company solely to change its jurisdiction; or (D) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction.

(iii) **Return of the Company's Property.** If Employee's employment is terminated for any reason, the Company shall have the right, at its option, to require Employee to vacate his offices prior to or on the effective date of termination and to cease all activities on the Company's behalf. Upon the termination of his employment in any manner, Employee shall immediately surrender to the Company all lists, books and records of, or in connection with, the Company's business, and all other property belonging to the Company, it being distinctly understood that all such lists, books and records, and other documents, are the property of the Company. Employee shall deliver to the Company a signed statement certifying compliance with this Section 4(i).

5. **CERTAIN COVENANTS.**

(a) **Noncompetition.** Except as may otherwise be approved by the Board, during the term of Employee's employment, Employee shall not have any ownership interest (of record or beneficial) in, or have any interest as an employee, salesman, consultant, officer or director in, or otherwise aid or assist in any manner, any firm, corporation, partnership, proprietorship or other business that engages in any county, city or part thereof in the United States and/or any foreign country in a business which competes directly or indirectly (as determined by the Board) with the Company's business in such county, city or part thereof, so long as the Company, or any successor in interest of the Company to the business and goodwill of the Company, remains engaged in such business in such county, city

or part thereof or continues to solicit customers or potential customers therein; *provided*, *however*, that Employee may own, directly or indirectly, solely as an investment, securities of any entity which are traded on any national securities exchange if Employee (x) is not a controlling person of, or a member of a group which controls, such entity; or (y) does not, directly or indirectly, own 1% or more of any class of securities of any such entity. Notwithstanding the foregoing, the Company acknowledges and agrees that Employee is, and will continue to be, a stockholder and director of L.W. Ligand, Inc., a Delaware corporation, which does not compete with the Company.

(b) **Confidential Information.** Employee and the Company shall enter into the Company's standard employee proprietary information and inventions agreement (the ***"Employee Proprietary Information and Inventions Agreement").*** Employee agrees to perform each and every obligation of Employee therein contained.

(c) **Solicitation of Employees.** Employee shall not during the term of Employee's employment (the ***"Restricted Period"),*** directly or indirectly, solicit or encourage to leave the employment of the Company or any of its affiliates, any employee of the Company or any of its affiliates.

(d) **Solicitation of Consultants.** Employee shall not during the Restricted Period, directly or indirectly, hire, solicit or encourage to cease work with the Company or any of its affiliates any consultant then under contract with the Company or any of its affiliates within one year of the termination of such consultant's engagement by the Company or any of its affiliates.

(e) **Rights and Remedies Upon Breach.** If Employee breaches or threatens to commit a breach of any of the provisions of this Section 5 (the ***"Restrictive Covenants"),*** the Company shall have the following rights and remedies, each of which rights and remedies shall be independent of the other and severally enforceable, and all of which rights and remedies shall be in addition to, and not in lieu of, any other rights and remedies available to the Company under law or in equity:

(i) ***Specific Performance.*** The right and remedy to have the Restrictive Covenants specifically enforced by any court having equity jurisdiction, all without the need to post a bond or any other security or to prove any amount of actual damage or that money damages would not provide an adequate remedy, it being acknowledged and agreed that any such breach or threatened breach will cause irreparable injury to the Company and that money damages will not provide adequate remedy to the Company; and

(ii) ***Accounting and Indemnification.*** The right and remedy to require Employee: (i) to account for and pay over to the Company all compensation, profits, monies, accruals, increments or other benefits derived or received by Employee or any associated party deriving such benefits as a result of any such breach of the Restrictive Covenants; and (ii) to indemnify the Company against any other losses, damages (including special and consequential damages), costs and expenses, including actual attorneys' fees and court costs, which may be incurred by them and which result from or arise out of any such breach or threatened breach of the Restrictive Covenants.

(f) **Severability of Covenants/Blue Penciling.** If any court determines that any of the Restrictive Covenants, or any part thereof, is invalid or unenforceable, the remainder of the Restrictive Covenants shall not thereby be affected and shall be given full effect, without regard to the invalid portions. If any court determines that any of the Restrictive Covenants, or any part thereof are unenforceable because of the duration of such provision or the area covered thereby, such court shall have the power to reduce the duration or area of such provision and, in its reduced form, such provision shall then be enforceable and shall be enforced. Employee hereby waives any and all right to attack the validity of the Restrictive Covenants on the grounds of the breadth of their geographic scope or the length of their term.

(g) **Enforceability in Jurisdictions.** The Company and Employee intend to and do hereby confer jurisdiction to enforce the Restrictive Covenants upon the courts of any jurisdiction within the geographical scope of such covenants. If the courts of any one or more of such jurisdictions hold the Restrictive Covenants wholly unenforceable by reason of the breadth of such scope or otherwise, it is the intention of the Company and Employee that such determination not bar or in any way affect the right of the Company to the relief provided above in the courts of any other jurisdiction within the geographical scope of such covenants, as to breaches of such covenants in such other respective jurisdictions, such covenants as they relate to each jurisdiction being, for this purpose, severable into diverse and independent covenants.

(h) **Definitions.** For purposes of this Section 5, the term ***"Company"*** means not only Biocept, Inc., but also any company, partnership or entity which, directly or indirectly, controls, is controlled by or is under common control with Biocept, Inc.

6. **Insurance.** The Company shall have the right to take out life, health, accident, ***"key-man"*** or other insurance covering Employee, in the name of the Company and at the Company's expense in any amount deemed appropriate by the Company. Employee shall assist the Company in obtaining such insurance, including, without limitation, submitting to any required examinations and providing information and data required by insurance companies.

7. **Arbitration.** Any dispute, claim or controversy based on, arising out of or relating to Employee's employment or this Agreement shall be settled by final and binding arbitration in San Diego, California, before a single neutral arbitrator in accordance with the National Rules for the Resolution of Employment Disputes (the ***"Rules"***) of the American Arbitration Association, and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction. Arbitration may be compelled pursuant to the California Arbitration Act (Code of Civil Procedure §§ 1280 *et seq.).* If the parties are unable to agree upon an arbitrator, one shall be appointed by the AAA in accordance with the Rules. Each party shall pay the fees of its own attorneys, the expenses of its witnesses and all other expenses connected with presenting its case; however, Employee and the Company agree that, to the extent permitted by law, the arbitrator may, in his or her discretion, award reasonable attorneys' fees to the prevailing party; *provided, further,* that the prevailing party shall be reimbursed for such fees, costs and expenses within 45 days following any such award, but in no event later than the last day of Employee's taxable year following the taxable year in which the fees, costs and expenses were incurred; *provided, further,* that the parties' obligations pursuant to this sentence shall terminate on the 10th anniversary of the date of Employee's termination of employment. Other costs of the arbitration, including the cost of any record or transcripts of the arbitration, AAA's administrative fees, the fee of the arbitrator, and all other fees and costs, shall be borne by the Company. This Section 7 is intended to be the exclusive method for resolving any and all claims by the parties against each other for payment of damages under this Agreement or relating to Employee's employment; *provided, however,* that Employee shall retain the right to file administrative charges with or seek relief through any government agency of competent jurisdiction, and to participate in any government investigation, including but not limited to (i) claims for workers' compensation, state disability insurance or unemployment insurance; (ii) claims for unpaid wages or waiting time penalties brought before the California Division of Labor Standards Enforcement; *provided, however,* that any appeal from an award or from denial of an award of wages and/or waiting time penalties shall be arbitrated pursuant to the terms of this Agreement; and (iii) claims for administrative relief from the United States Equal Employment Opportunity Commission and/or the California Department of Fair Employment and Housing (or any similar agency in any applicable jurisdiction other than California); *provided, further,* that Employee shall not be entitled to obtain any monetary relief through such agencies other than workers' compensation benefits or unemployment insurance benefits. This Agreement shall not limit either party's right to obtain any provisional remedy, including, without limitation, injunctive or similar relief, from any court of competent jurisdiction as may be necessary to protect their rights and interests pending the outcome of arbitration, including without limitation injunctive relief, in any court of competent jurisdiction pursuant to California Code of Civil Procedure § 1281.8 or any similar statute of an applicable jurisdiction. Seeking any such relief shall not be deemed to be a waiver of such party's right to compel arbitration. Both Employee and the Company expressly waive their right to a jury trial.

8. **General Relationship.** Employee shall be considered an employee of the Company within the meaning of all federal, state and local laws and regulations including, but not limited to, laws and regulations governing unemployment insurance, workers' compensation, industrial accident, labor and taxes.

9. **Miscellaneous.**

(a) **Modification; Prior Claims.** This Agreement sets forth the entire understanding of the parties with respect to the subject matter hereof, supersedes all existing agreements between them concerning such subject matter, including any offer letter between the Company and Employee, and may be modified only by a written instrument duly executed by each party.

(b) **Assignment; Assumption by Successor.** The rights of the Company under this Agreement may, without the consent of Employee, be assigned by the Company, in its sole and unfettered discretion, to any

person, firm, corporation or other business entity which at any time, whether by purchase, merger or otherwise, directly or indirectly, acquires all or substantially all of the assets or business of the Company. The Company will require any successor (whether direct or indirect, by purchase. merger or otherwise) to all or substantially all of the business or assets of the Company expressly to assume and to agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place; *provided*, *however,* that no such assumption shall relieve the Company of its obligations hereunder. As used in this Agreement, the ***"Company"*** shall mean the Company as hereinbefore defined and any successor to its business and/or assets as aforesaid which assumes and agrees to perform this Agreement by operation of law or otherwise.

(c) **Survival.** The covenants, agreements, representations and warranties contained in or made in Sections 5, 7 and 9 of this Agreement shall survive any termination of Employee's employment.

(d) **Third-Party Beneficiaries.** This Agreement does not create, and shall not be construed as creating, any rights enforceable by any person not a party to this Agreement.

(e) **Waiver.** The failure of either party hereto at any time to enforce performance by the other party of any provision of this Agreement shall in no way affect such party's rights thereafter to enforce the same, nor shall the waiver by either party of any breach of any provision hereof be deemed to be a waiver by such party of any other breach of the same or any other provision hereof.

(f) **Section Headings.** The headings of the several sections in this Agreement are inserted solely for the convenience of the parties and are not a part of and are not intended to govern, limit or aid in the construction of any term or provision hereof.

(g) **Notices.** Any notice required or permitted by this Agreement shall be in writing and shall be delivered as follows with notice deemed given as indicated: (i) by personal delivery when delivered personally; (ii) by overnight courier upon written verification of receipt; (iii) by email or facsimile transmission upon acknowledgment of receipt of electronic transmission; or (iv) by certified or registered mail, return receipt requested, upon verification of receipt. Notice shall be sent to Employee at the address listed on the Company's personnel records and to the Company at its principal place of business, or such other address as either party may specify in writing.

(h) **Severability.** All Sections, clauses and covenants contained in this Agreement are severable, and in the event any of them shall be held to be invalid by any court, this Agreement shall be interpreted as if such invalid Sections, clauses or covenants were not contained herein.

(i) **Governing Law and Venue.** This Agreement is to be governed by and construed in accordance with the laws of the State of California applicable to contracts made and to be performed wholly within such State, and without regard to the conflicts of laws principles thereof. Except as provided in Section 5 and 7, any suit brought hereon shall be brought in the state or federal courts sitting in San Diego, California, the parties hereto hereby waiving any claim or defense that such forum is not convenient or proper. Each party hereby agrees that any such court shall have *in personam* jurisdiction over it and consents to service of process in any manner authorized by California law.

(j) **Non-transferability of Interest.** None of the rights of Employee to receive any form of compensation payable pursuant to this Agreement shall be assignable or transferable except through a testamentary disposition or by the laws of descent and distribution upon the death of Employee. Any attempted assignment, transfer, conveyance, or other disposition (other than as aforesaid) of any interest in the rights of Employee to receive any form of compensation to be made by the Company pursuant to this Agreement shall be void.

(k) **Gender.** Where the context so requires, the use of the masculine gender shall include the feminine and/or neuter genders and the singular shall include the plural, and vice versa, and the word ***"person"*** shall include any corporation, firm, partnership or other form of association.

(l) **Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement. Electronically delivered signatures shall be as effective as original signatures.

(m) **Construction.** The language in all parts of this Agreement shall in all cases be construed simply, according to its fair meaning, and not strictly for or against any of the parties hereto. Without limitation, there shall be no presumption against any party on the ground that such party was responsible for drafting this Agreement or any part thereof.

(n) **Withholding and other Deductions.** All compensation payable to Employee hereunder shall be subject to such deductions as the Company is from time to time required to make pursuant to law, governmental regulation or order.

(Signature Page Follows)

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

BIOCEPT, INC.

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

EMPLOYEE

/s/ Michael Terry
Print Name: Michael Terry

EXHIBIT A

CERTIFICATION

I hereby certify that:

- I have read and understand the Company's Insider Trading Policy.
- I understand that the Company's Compliance Officer is available to answer any questions I have regarding this Insider Trading Policy, or in his/her absence I should contact the Company's Chief Executive Officer.
- I will continue to comply with the Insider Trading Policy for as long as I am a director, officer, employee or contractor of the Company.
- I understand that insider trading is a crime, may subject me to serious financial penalties and termination of employment, and is strictly prohibited by the Insider Trading Policy.

/s/ Michael Terry — 3-11-17
Signature — Date

Michael Terry
Printed Name (Please print legibly)

SVP Commercial Operations
Title

EXHIBIT 10.7

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT (this "***Agreement***") is entered into by and between Biocept, Inc., a Delaware corporation (the "***Company***"), and Cory Dunn("***Employee***"), and shall be effective as of February 1, 2020 (the "***Effective Date***").

WHEREAS, the Company desires to ensure Employee continues her employment by the Company, and Employee desires to continue employment with the Company, on the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual promises herein contained, the parties agree as follows:

1. EMPLOYMENT PERIOD. Employee's employment as a Senior Vice President, Commercial Operations ("***SVP, Commercial Operations***") hereunder shall commence on the Effective Date and shall continue until terminated pursuant to Section 4 below. The parties agree that nothing contained in this Agreement shall apply to Employee's employment with Company prior to the Effective Date.

2. SERVICES TO BE RENDERED.

(a) Duties and Responsibilities. As of the Effective Date, Employee shall serve as the SVP, Commercial Operations for the Company. In the performance of such duties, Employee shall report directly to the Chief Executive Officer of the Company (the "***CEO***") and shall be subject to the direction of the CEO and to such limits upon Employee's authority as the SVP, Commercial Operations may from time to time impose. Employee shall be subject to and comply with the policies and procedures generally applicable to employees of the Company to the extent the same are not inconsistent with this Agreement.

(b) Exclusive Services. Employee shall at all times faithfully, industriously and to the best of her ability, experience and talent perform to the satisfaction of the CEO, and the Board of Directors of the Company (the "***Board***") all of the duties that may be assigned to Employee hereunder and, unless approved in writing in advance by the CEO, shall devote one hundred percent (100%) of her productive time and efforts to the performance of such duties. Subject to the terms of the Employee Proprietary Information and Inventions Agreement referred to in Section 5(b), this shall not preclude Employee from devoting time to personal and family investments or serving on community and civic boards, or participating in industry associations, *provided* such activities do not interfere with her duties to the Company, as determined in good faith by the Board. Employee agrees that she will not join any boards without the prior approval of the Board.

3. COMPENSATION AND BENEFITS. The Company shall continue to pay or provide, as the case may be, to Employee the compensation and other benefits and rights set forth in this Section 3.

(a) **Base Salary**. As compensation for services as SVP, Commercial Operations, Employee will be paid a salary of Two Hundred Fifty Thousand ($250,000) Dollars per year, which shall be payable, less any required payroll deductions and withholdings in regular periodic payments in accordance with the Company's policy. Employee's base salary shall be subject to review annually by and at the sole discretion of the Company.

(b) **Commissions.** Employee shall be entitled to receive commissions in accordance with the Company's written commission plan.

(c) **Benefits**. Employee shall be entitled to participate in benefits under the Company's benefit plans and arrangements, including, without limitation, any employee benefit plan or arrangement made available by the Company to its employees, subject to and on a basis consistent with the terms, conditions and overall administration of such plans and arrangements. The Company shall have the right to amend or delete any such benefit plan or arrangement made available by the Company to its employees and not otherwise specifically provided for herein.

(d) **Expenses**. The Company shall reimburse Employee for reasonable out-of-pocket business expenses incurred in connection with the performance of her duties hereunder, subject to such policies as the Company may from time to time establish, and Employee furnishing the Company with evidence in the form of receipts satisfactory to the Company substantiating the claimed expenditures.

(e) **Paid Time Off**. Employee shall be entitled to such periods of paid time off ("***PTO***") each year as provided under the Company's PTO policy. Should Employee's employment terminate for any reason, Employee shall be entitled to unpaid PTO as of the date of termination of this Agreement.

(f) **Equity Plans**. Employee shall be entitled to continue to participate in any equity or other employee benefit plan that is generally available to employees. Except as otherwise provided in this Agreement, Employee's participation in and benefits under any such plan shall be on the terms and subject to the conditions specified in the governing document of the particular plan. Except as otherwise set forth herein, twenty-five percent (25%) of the Option will vest on the one-year anniversary of the commencement of Employee's employment with the Company, and the remaining portion of the Option shall vest in equal quarterly installments over the following three (3) years.

4. **AT-WILL EMPLOYMENT; TERMINATION; SEVERANCE.**

(a) **At-Will Employment.** Employee's employment relationship is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause (as defined below) or advance notice.

(b) **Termination Without Cause; Resignation for Good Reason (other than in connection with a Change in Control).** In the event Employee's employment with the Company is terminated by the Company without Cause, or Employee resigns for Good Reason (as defined below), in either case at any time other than during the three (3) months before a Change in Control (as defined below) or during the twelve (12) months following a Change in Control,

then provided such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and provided that Employee complies with the conditions set forth in Section 4(e), the Company shall provide Employee with the following severance benefits:

(i) Severance pay in the form of a single lump sum payment equal to three (3) months of Employee's base salary (the "***Cash Severance***"). Such payment shall be calculated ignoring any decrease in Employee's base salary that forms the basis for Employee's resignation for Good Reason and shall be paid in a lump sum on the sixtieth (60th) day following Employee's Separation from Service.

(ii) If Employee is eligible for and timely elects continued group health plan coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985 ("***COBRA***") following Employee's termination, the Company will pay the COBRA group health insurance premiums for Employee and Employee's eligible dependents until the earliest of (A) the close of the three-month period following the termination of Employee's employment (the "***COBRA Payment Period***"), (B) the expiration of Employee's eligibility for the continuation coverage under COBRA, or (C) the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment. References to COBRA premiums shall not include any amounts payable by Employee under an Internal Revenue Code Section 125 health care reimbursement plan. Notwithstanding the foregoing, if at any time the Company determines, in its sole discretion, that it cannot pay the COBRA premiums without potentially incurring financial costs or penalties under applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then regardless of whether Employee elects continued health coverage under COBRA, in lieu of providing the COBRA premiums, the Company will instead pay to Employee, on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premiums for that month, subject to applicable tax withholdings (such amount, the "***Special Severance Payment***"), which payments shall continue until the earlier of expiration of the COBRA Payment Period or the date when Employee becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment.

(c) Termination Without Cause; Resignation for Good Reason (in connection with a Change in Control). If Employee is terminated without Cause or if Employee resigns for Good Reason at any time within the three (3) months prior to or twelve (12) months following a Change in Control, then provided such termination constitutes a Separation from Service and provided that Employee complies with the conditions set forth in Section 4(e), then Company shall provide Employee with the following severance benefits:

(i) The Cash Severance described in Section 4(b)(i);

(ii) The COBRA benefits described in Section 4(b)(ii); and

(iii) Notwithstanding any contrary terms of any stock option grant, option agreement or other equity award agreement between the Company and Employee, all outstanding stock options and other equity awards covering the Company's common stock held by Employee as of the date of termination that are subject to time-based vesting requirements shall

accelerate in full. In order to give effect to the foregoing provision, notwithstanding anything to the contrary set forth in Employee's equity award agreements, following any termination of Employee's employment that is without Cause or for Good Reason, none of Employee's equity awards shall terminate with respect to any vested or unvested portion subject to such award before the later of (A) the Separation Agreement Deadline or (B) three (3) months following Employee's termination.

For the avoidance of doubt, in no event shall Employee be entitled to benefits under both Section 4(b) and this Section 4(c). If Employee is eligible for benefits under both Section 4(b) and this Section 4(c), Employee shall receive the benefits set forth in this Section 4(c) and such benefits will be reduced by any benefits previously provided to Employee under Section 4(b).

(d) Related Entity. Notwithstanding anything in this Agreement to the contrary, in no event shall Employee be entitled to benefits under either Section 4(b) or Section 4(c) in connection with any termination, resignation or change in Employee's employment with the Company or any of its affiliates that is effected in connection with Employee's employment, or engagement as a consultant, by an entity formed by or for the benefit of the Company for the purpose of engaging physicians to perform services related to the Company's business or otherwise for the purpose of benefitting the Company's business.

(e) Conditions to Receipt of Severance Benefits. The receipt of any and all severance benefits under this Agreement is expressly subject to and conditioned upon Employee signing and not revoking a separation agreement and release of claims in a form provided by the Company (the "***Separation Agreement***") within the applicable time period set forth therein, and permitting such Separation Agreement to become fully effective in accordance with its terms, which shall in no event be later than sixty (60) days following Employee's Separation from Service (the "***Separation Agreement Deadline***"). No severance benefits will be paid unless and until the Separation Agreement becomes effective. As a condition to the receipt of severance benefits, Employee shall also be required to comply with the terms of this Agreement and the terms of the Employee Proprietary Information and Inventions Agreement referred to in Section 5(b) and Employee must resign from all positions and terminate any relationships as an employee, advisor, officer or director with the Company and any of its affiliates, each effective on the date of termination.

(f) Section 409A. It is the intent for all payments and benefits under this Agreement to be exempt from the application of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***") and any regulations and guidance that has been promulgated or may be promulgated from time to time thereunder and any state law of similar effect (collectively "***Section 409A***") or, if not exempt, to comply with the requirements of Section 409A so that none of the payments and benefits will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to so comply. Each payment and benefit payable under this Agreement is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the U.S. Treasury Regulations. Specifically, it is intended that all of the severance benefits and other payments payable under this Agreement satisfy, to the greatest extent possible, the exemptions from Section 409A provided under Treasury Regulations 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9), and this Agreement will be construed to the greatest extent possible as consistent with those provisions. Notwithstanding any provision to the contrary

in this Agreement, if Employee is deemed by the Company at the time of Employee's Separation from Service to be a "specified employee" for purposes of Section 409A(a)(2)(B)(i) of the Code, and if any of the payments upon Separation from Service set forth herein and/or under any other agreement with the Company are deemed to be "deferred compensation", then to the extent delayed commencement of any portion of such payments is required in order to adverse taxation under Section 409A, such payments shall not be provided to Employee prior to the earliest of (i) the expiration of the six-month period measured from the date of Employee's Separation from Service with the Company, (ii) the date of Employee's death or (iii) such earlier date as permitted under Section 409A without the imposition of adverse taxation. Upon the first business day following the expiration of such applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this paragraph shall be paid in a lump sum to Employee, and any remaining payments due shall be paid as otherwise provided herein or in the applicable agreement. No interest shall be due on any amounts so deferred.

(g) Section 280G. If any payment or benefit Employee will or may receive from the Company or otherwise (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Employee's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for Employee. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata.

Unless Employee and the Company agree on an alternative accounting firm or law firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the Change in Control shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the Change in Control, the Company shall appoint a nationally recognized accounting or law firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting or law firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting or law firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Employee and the Company within fifteen (15) calendar days after the date on which Employee's right to a 280G Payment becomes reasonably likely to occur (if requested at that time by Employee or the Company) or such other time as requested by Employee or the Company.

If Employee receives a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 4(g) and the Internal Revenue Service determines

thereafter that some portion of the Payment is subject to the Excise Tax, Employee agrees to promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 4(g) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) or clause (x) of the first paragraph of this Section 4(g), Employee shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

(h) Definitions.

(i) Cause. For purposes of this Agreement, "***Cause***" for termination will mean: (i) the commission of an act of fraud, embezzlement or dishonesty by Employee that has a material adverse impact on the Company or any successor or affiliate thereof; (ii) a conviction of, or plea of "guilty" or "no contest" to, a felony by Employee; (iii) any unauthorized use or disclosure by Employee of confidential information or trade secrets of the Company or any successor or affiliate thereof that has a material adverse impact on any such entity; (iv) Employee's gross negligence, insubordination or material violation of any duty of loyalty to the Company or any other material misconduct on the part of Employee; (v) Employee's ongoing and repeated failure or refusal to perform or neglect of Employee's duties as required by this Agreement, which failure, refusal or neglect continues for fifteen (15) days following Employee's receipt of written notice from the SVP – Commercial, CEO of any member of the Board stating with specificity the nature of such failure, refusal or neglect; or (vi) Employee's breach of any material provision of this Agreement, Employee Handbook, Code of Ethical Business Conduct or the Employee Proprietary Information and Inventions Agreement referred to in Section 5(b); *provided*, *however*, that prior to the determination that "***Cause***" has occurred, if the Board determines in good faith that Employee's action or breach is remediable, the Company shall (1) provide to Employee in writing, in reasonable detail, the reasons for the determination that such "***Cause***" exists, (2) other than with respect to clause (v) above which specifies the applicable period of time for Employee to remedy her breach, afford Employee a reasonable opportunity to remedy any such breach, and only to the extent such breach is remediable, in the good faith determination of the Board, (3) provide Employee an opportunity to be heard prior to the final decision to terminate Employee's employment hereunder for such "***Cause***" and (4) make any decision that such "***Cause***" exists in good faith.

(ii) Good Reason. For purposes of this Agreement, Employee shall have "***Good Reason***" for resignation from employment with the Company if any of the following actions are taken by the Company without Employee's prior written consent: (i) a material reduction in Employee's base salary (unless pursuant to a salary reduction program applicable generally to the Company's similarly situated employees); (ii) a material reduction in Employee's duties, authorities or responsibilities; (iii) the relocation of Employee's principle place of employment that causes an increase in Employee's one-way driving distance by more than fifty (50) miles; or (iv) the Company's material breach of a material term of this Agreement. In order to resign for Good Reason, Employee must provide written notice to the Company within thirty (30) days after the first occurrence of the event giving rise to Good Reason setting forth the basis for Employee's resignation, allow the Company at least thirty (30) days from receipt of such written notice to cure such event, and if such event is not reasonably cured within such period, Employee must resign from all positions Employee then holds with the Company not later than thirty (30) days after the expiration of the cure period.

(iii) **Change in Control**. For purposes of this Agreement, "***Change in Control***" shall mean: (i) a merger or consolidation of the Company with or into any other corporation or other entity or person; (ii) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets; or (iii) any other transaction, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (A) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (B) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (C) a reincorporation of the Company solely to change its jurisdiction; or (D) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction.

(i) **Return of the Company's Property**. If Employee's employment is terminated for any reason, the Company shall have the right, at its option, to require Employee to vacate her offices prior to or on the effective date of termination and to cease all activities on the Company's behalf. Upon the termination of her employment in any manner, Employee shall immediately surrender to the Company all lists, books and records of, or in connection with, the Company's business, and all other property belonging to the Company, it being distinctly understood that all such lists, books and records, and other documents, are the property of the Company. Employee shall deliver to the Company a signed statement certifying compliance with this Section 4(i).

5. **CERTAIN COVENANTS.**

(a) **Noncompetition**. Except as may otherwise be approved by the Board, during the term of Employee's employment, Employee shall not have any ownership interest (of record or beneficial) in, or have any interest as an employee, salesman, consultant, officer or director in, or otherwise aid or assist in any manner, any firm, corporation, partnership, proprietorship or other business that engages in any county, city or part thereof in the United States and/or any foreign country in a business which competes directly or indirectly (as determined by the Board) with the Company's business in such county, city or part thereof, so long as the Company, or any successor in interest of the Company to the business and goodwill of the Company, remains engaged in such business in such county, city or part thereof or continues to solicit customers or potential customers therein; *provided*, *however*, that Employee may own, directly or indirectly, solely as an investment, securities of any entity which are traded on any national securities exchange if Employee (x) is not a controlling person of, or a member of a group which controls, such entity; or (y) does not, directly or indirectly, own one percent (1%) or more of any class of securities of any such entity.

(b) **Confidential Information**. Employee and the Company shall enter into the Company's standard employee proprietary information and inventions agreement (the "***Employee Proprietary Information and Inventions Agreement***"). Employee agrees to perform each and every obligation of Employee therein contained.

(c) **Solicitation of Employees**. Employee shall not during the term of Employee's employment (the "***Restricted Period***"), directly or indirectly, solicit or encourage to leave the employment of the Company or any of its affiliates, any employee of the Company or any of its affiliates.

(d) **Solicitation of Consultants**. Employee shall not during the Restricted Period, directly or indirectly, hire, solicit or encourage to cease work with the Company or any of its affiliates any consultant then under contract with the Company or any of its affiliates within one (1) year of the termination of such consultant's engagement by the Company or any of its affiliates.

(e) **Rights and Remedies Upon Breach**. If Employee breaches or threatens to commit a breach of any of the provisions of this Section 5 (the "***Restrictive Covenants***"), the Company shall have the following rights and remedies, each of which rights and remedies shall be independent of the other and severally enforceable, and all of which rights and remedies shall be in addition to, and not in lieu of, any other rights and remedies available to the Company under law or in equity:

(i) ***Specific Performance***. The right and remedy to have the Restrictive Covenants specifically enforced by any court having equity jurisdiction, all without the need to post a bond or any other security or to prove any amount of actual damage or that money damages would not provide an adequate remedy, it being acknowledged and agreed that any such breach or threatened breach will cause irreparable injury to the Company and that money damages will not provide adequate remedy to the Company; and

(ii) ***Accounting and Indemnification***. The right and remedy to require Employee: (i) to account for and pay over to the Company all compensation, profits, monies, accruals, increments or other benefits derived or received by Employee or any associated party deriving such benefits as a result of any such breach of the Restrictive Covenants; and (ii) to indemnify the Company against any other losses, damages (including special and consequential damages), costs and expenses, including actual attorneys' fees and court costs, which may be incurred by them and which result from or arise out of any such breach or threatened breach of the Restrictive Covenants.

(f) **Severability of Covenants/Blue Penciling**. If any court determines that any of the Restrictive Covenants, or any part thereof, is invalid or unenforceable, the remainder of the Restrictive Covenants shall not thereby be affected and shall be given full effect, without regard to the invalid portions. If any court determines that any of the Restrictive Covenants, or any part thereof, are unenforceable because of the duration of such provision or the area covered thereby, such court shall have the power to reduce the duration or area of such provision and, in its reduced form, such provision shall then be enforceable and shall be enforced. Employee hereby waives

any and all right to attack the validity of the Restrictive Covenants on the grounds of the breadth of their geographic scope or the length of their term.

(g) Enforceability in Jurisdictions. The Company and Employee intend to and do hereby confer jurisdiction to enforce the Restrictive Covenants upon the courts of any jurisdiction within the geographical scope of such covenants. If the courts of any one or more of such jurisdictions hold the Restrictive Covenants wholly unenforceable by reason of the breadth of such scope or otherwise, it is the intention of the Company and Employee that such determination not bar or in any way affect the right of the Company to the relief provided above in the courts of any other jurisdiction within the geographical scope of such covenants, as to breaches of such covenants in such other respective jurisdictions, such covenants as they relate to each jurisdiction being, for this purpose, severable into diverse and independent covenants.

(h) Definitions. For purposes of this Section 5, the term "***Company***" means not only Biocept, Inc., but also any company, partnership or entity which, directly or indirectly, controls, is controlled by or is under common control with Biocept, Inc.

6. INSURANCE. The Company shall have the right to take out life, health, accident, "***key-man***" or other insurance covering Employee, in the name of the Company and at the Company's expense in any amount deemed appropriate by the Company. Employee shall assist the Company in obtaining such insurance, including, without limitation, submitting to any required examinations and providing information and data required by insurance companies.

7. ARBITRATION. Any dispute, claim or controversy based on, arising out of or relating to Employee's employment or this Agreement shall be settled by final and binding arbitration in San Diego, California, before a single neutral arbitrator in accordance with the National Rules for the Resolution of Employment Disputes (the "***Rules***") of the American Arbitration Association, and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction. Arbitration may be compelled pursuant to the California Arbitration Act (Code of Civil Procedure §§ 1280 *et seq*.). If the parties are unable to agree upon an arbitrator, one shall be appointed by the AAA in accordance with the Rules. Each party shall pay the fees of its own attorneys, the expenses of its witnesses and all other expenses connected with presenting its case; however, Employee and the Company agree that, to the extent permitted by law, the arbitrator may, in his or her discretion, award reasonable attorneys' fees to the prevailing party; *provided*, *further*, that the prevailing party shall be reimbursed for such fees, costs and expenses within 45 days following any such award, but in no event later than the last day of Employee's taxable year following the taxable year in which the fees, costs and expenses were incurred; *provided*, *further*, that the parties' obligations pursuant to this sentence shall terminate on the 10th anniversary of the date of Employee's termination of employment. Other costs of the arbitration, including the cost of any record or transcripts of the arbitration, AAA's administrative fees, the fee of the arbitrator, and all other fees and costs, shall be borne by the Company. This Section 7 is intended to be the exclusive method for resolving any and all claims by the parties against each other for payment of damages under this Agreement or relating to Employee's employment; *provided*, *however*, that Employee shall retain the right to file administrative charges with or seek relief through any government agency of competent jurisdiction, and to participate in any government investigation, including but not limited to (i) claims for workers' compensation, state disability insurance or unemployment insurance; (ii) claims for unpaid wages or waiting time

penalties brought before the California Division of Labor Standards Enforcement; *provided*, *however*, that any appeal from an award or from denial of an award of wages and/or waiting time penalties shall be arbitrated pursuant to the terms of this Agreement; and (iii) claims for administrative relief from the United States Equal Employment Opportunity Commission and/or the California Department of Fair Employment and Housing (or any similar agency in any applicable jurisdiction other than California); *provided*, *further*, that Employee shall not be entitled to obtain any monetary relief through such agencies other than workers' compensation benefits or unemployment insurance benefits. This Agreement shall not limit either party's right to obtain any provisional remedy, including, without limitation, injunctive or similar relief, from any court of competent jurisdiction as may be necessary to protect their rights and interests pending the outcome of arbitration, including without limitation injunctive relief, in any court of competent jurisdiction pursuant to California Code of Civil Procedure § 1281.8 or any similar statute of an applicable jurisdiction. Seeking any such relief shall not be deemed to be a waiver of such party's right to compel arbitration. Both Employee and the Company expressly waive their right to a jury trial.

8. **GENERAL RELATIONSHIP**. Employee shall be considered an employee of the Company within the meaning of all federal, state and local laws and regulations including, but not limited to, laws and regulations governing unemployment insurance, workers' compensation, industrial accident, labor and taxes.

9. **MISCELLANEOUS**.

(a) **Modification; Prior Claims**. This Agreement sets forth the entire understanding of the parties with respect to the subject matter hereof, supersedes all existing agreements between them concerning such subject matter, including any offer letter between the Company and Employee, and may be modified only by a written instrument duly executed by each party.

(b) **Assignment; Assumption by Successor**. The rights of the Company under this Agreement may, without the consent of Employee, be assigned by the Company, in its sole and unfettered discretion, to any person, firm, corporation or other business entity which at any time, whether by purchase, merger or otherwise, directly or indirectly, acquires all or substantially all of the assets or business of the Company. The Company will require any successor (whether direct or indirect, by purchase, merger or otherwise) to all or substantially all of the business or assets of the Company expressly to assume and to agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place; *provided*, *however*, that no such assumption shall relieve the Company of its obligations hereunder. As used in this Agreement, the "***Company***" shall mean the Company as hereinbefore defined and any successor to its business and/or assets as aforesaid which assumes and agrees to perform this Agreement by operation of law or otherwise.

(c) **Survival**. The covenants, agreements, representations and warranties contained in or made in Sections 5, 7 and 9 of this Agreement shall survive any termination of Employee's employment.

(d) **Third-Party Beneficiaries**. This Agreement does not create, and shall not be construed as creating, any rights enforceable by any person not a party to this Agreement.

(e) **Waiver**. The failure of either party hereto at any time to enforce performance by the other party of any provision of this Agreement shall in no way affect such party's rights thereafter to enforce the same, nor shall the waiver by either party of any breach of any provision hereof be deemed to be a waiver by such party of any other breach of the same or any other provision hereof.

(f) **Section Headings**. The headings of the several sections in this Agreement are inserted solely for the convenience of the parties and are not a part of and are not intended to govern, limit or aid in the construction of any term or provision hereof.

(g) **Notices**. Any notice required or permitted by this Agreement shall be in writing and shall be delivered as follows with notice deemed given as indicated: (i) by personal delivery when delivered personally; (ii) by overnight courier upon written verification of receipt; (iii) by email or facsimile transmission upon acknowledgment of receipt of electronic transmission; or (iv) by certified or registered mail, return receipt requested, upon verification of receipt. Notice shall be sent to Employee at the address listed on the Company's personnel records and to the Company at its principal place of business, or such other address as either party may specify in writing.

(h) **Severability**. All Sections, clauses and covenants contained in this Agreement are severable, and in the event any of them shall be held to be invalid by any court, this Agreement shall be interpreted as if such invalid Sections, clauses or covenants were not contained herein.

(i) **Governing Law and Venue**. This Agreement is to be governed by and construed in accordance with the laws of the State of Employee's residence applicable to contracts made and to be performed wholly within such State, and without regard to the conflicts of laws principles thereof. Except as provided in Section 5 and 7, any suit brought hereon shall be brought in the state or federal courts sitting in San Diego, California, the parties hereto hereby waiving any claim or defense that such forum is not convenient or proper. Each party hereby agrees that any such court shall have *in personam* jurisdiction over it and consents to service of process in any manner authorized by California law.

(j) **Non-transferability of Interest**. None of the rights of Employee to receive any form of compensation payable pursuant to this Agreement shall be assignable or transferable except through a testamentary disposition or by the laws of descent and distribution upon the death of Employee. Any attempted assignment, transfer, conveyance, or other disposition (other than as aforesaid) of any interest in the rights of Employee to receive any form of compensation to be made by the Company pursuant to this Agreement shall be void.

(k) **Gender**. Where the context so requires, the use of the masculine gender shall include the feminine and/or neuter genders and the singular shall include the plural, and vice versa, and the word "***person***" shall include any corporation, firm, partnership or other form of association.

(l) Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement. Electronically delivered signatures shall be as effective as original signatures.

(m) Construction. The language in all parts of this Agreement shall in all cases be construed simply, according to its fair meaning, and not strictly for or against any of the parties hereto. Without limitation, there shall be no presumption against any party on the ground that such party was responsible for drafting this Agreement or any part thereof.

(n) Withholding and other Deductions. All compensation payable to Employee hereunder shall be subject to such deductions as the Company is from time to time required to make pursuant to law, governmental regulation or order.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

BIOCEPT, INC.

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

EMPLOYEE

/s/ Cory Dunn
Print Name: Cory Dunn

EXHIBIT 31.1

CERTIFICATION

I, Michael W. Nall, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Biocept, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiary, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of a report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 13, 2020

/s/ Michael W. Nall
Michael W. Nall
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION

I, Timothy Kennedy, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Biocept, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiary, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of a report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 13, 2020

/s/ Timothy Kennedy
Timothy Kennedy
Chief Financial Officer, Senior Vice President of Operations
(Principal Financial and Accounting Officer)

EXHIBIT 32.1

CERTIFICATION

I, Michael W. Nall, hereby certify pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that, to my knowledge, the Quarterly Report on Form 10-Q of Biocept, Inc. for the period ended June 30, 2020 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Biocept, Inc.

Date: August 13, 2020

/s/ Michael W. Nall
Michael W. Nall
President and Chief Executive Officer
(Principal Executive Officer)

This certification accompanies the Report pursuant to Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934.

EXHIBIT 32.2

CERTIFICATION

I, Timothy Kennedy, hereby certify pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that, to my knowledge, the Quarterly Report on Form 10-Q of Biocept, Inc. for the period ended June 30, 2020 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Biocept, Inc.

Date: August 13, 2020

/s/ Timothy Kennedy
Timothy Kennedy
Chief Financial Officer, Senior Vice President of Operations
(Principal Financial and Accounting Officer)

This certification accompanies the Report pursuant to Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934.