

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2016

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: 001-36783

BELLICUM PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

2836

(Primary Standard Industrial
Classification Code Number)

20-1450200

(I.R.S. Employer
Identification Number)

2130 W. Holcombe Blvd., Ste. 800

Houston, TX 77030

(832) 384-1100

(Address, including zip code, and telephone number, including
area code, of registrant's principal executive offices)

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). **Yes** **No**

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	(Do not check if a smaller reporting company)	
		Smaller reporting company	<input type="checkbox"/>

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). **Yes** **No**
As of April 29, 2016, there were 26,984,725 outstanding shares of Bellicum's common stock, par value, \$0.01 per share.

TABLE OF CONTENTS

	<u>Page</u>
PART I. FINANCIAL INFORMATION	3
Item 1.	
Financial Statements	3
Balance Sheets as of March 31, 2016 (Unaudited) and December 31, 2015	3
Statements of Operations and Comprehensive Loss for the three months ended March 31, 2016 and 2015 (Unaudited)	4
Statements of Cash Flows for the three months ended March 31, 2016 and 2015 (Unaudited)	5
Notes to Financial Statements (Unaudited)	6
Item 2.	
Management’s Discussion and Analysis of Financial Condition and Results of Operations	13
Item 3.	
Quantitative and Qualitative Disclosures About Market Risk	22
Item 4.	
Controls and Procedures	22
PART II. OTHER INFORMATION	24
Item 1.	
Legal Proceedings	24
Item 1A.	
Risk Factors	24
Item 2.	
Unregistered Sales of Equity Securities and Use of Proceeds	24
Item 6.	
Exhibits	24
SIGNATURES	25

PART I. FINANCIAL INFORMATION**Item 1. Financial Statements**

Bellicum Pharmaceuticals, Inc.
Balance Sheets
(In thousands, except share and par value amounts)

	March 31, 2016 (Unaudited)	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 61,790	\$ 70,241
Investment securities, available for sale - short-term	46,482	23,820
Accounts receivable, interest and other receivables	361	440
Prepaid expenses and other current assets	2,268	2,389
Total current assets	110,901	96,890
Investment securities, available for sale - long-term	43,536	56,304
Property and equipment, net	8,731	6,882
Other assets	346	330
TOTAL ASSETS	\$ 163,514	\$ 160,406
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,774	\$ 2,106
Accrued expenses and other current liabilities	5,369	5,080
Current portion of capital lease obligation	15	13
Current portion of deferred rent	246	246
Total current liabilities	7,404	7,445
Long-term liabilities:		
Long-term debt	14,829	—
Capital lease obligation	132	118
Deferred rent and other liabilities	783	826
TOTAL LIABILITIES	23,148	8,389
Commitments and contingencies: (Note: 9)		
Stockholders' equity:		
Preferred stock: \$0.01 par value; 10,000,000 shares authorized: no shares issued and outstanding	—	—
Common stock, \$0.01 par value; 200,000,000 shares authorized at March 31, 2016 and December 31, 2015, respectively; 27,652,387 shares issued and 26,974,924 shares outstanding at March 31, 2016; 27,609,344 shares issued and 26,931,881 shares outstanding at December 31, 2015	277	276
Treasury stock: 677,463 shares held at March 31, 2016 and December 31, 2015	(5,056)	(5,056)
Additional paid-in capital	321,768	318,591
Accumulated other comprehensive loss	(56)	(302)
Accumulated deficit	(176,567)	(161,492)
Total stockholders' equity	140,366	152,017
Total liabilities and stockholders' equity	\$ 163,514	\$ 160,406

See accompanying notes, which are an integral part of these unaudited financial statements.

Bellicum Pharmaceuticals, Inc.
Statements of Operations and Comprehensive Loss
(In thousands, except share and per share amounts)

(Unaudited)

	Three months ended March 31,	
	2016	2015
REVENUES		
Grants	\$ 92	\$ 107
Total revenues	92	107
OPERATING EXPENSES		
Research and development (includes share-based compensation of \$1,386 and \$599 for the three months ended March 31, 2016 and 2015, respectively)	10,988	5,718
General and administrative (includes share-based compensation of \$1,679 and \$890 for the three months ended March 31, 2016 and 2015, respectively)	4,284	2,197
Total operating expenses	15,272	7,915
Loss from operations	(15,180)	(7,808)
OTHER INCOME (EXPENSE):		
Interest income	227	50
Interest expense	(122)	—
Total other income	105	50
NET LOSS	\$ (15,075)	\$ (7,758)
Net loss per common share attributable to common shareholders, basic and diluted	\$ (0.56)	\$ (0.30)
Weighted-average shares outstanding, basic and diluted	26,882,526	26,259,392
Net loss	\$ (15,075)	\$ (7,758)
Other comprehensive loss:		
Unrealized gain on investment securities	246	—
Comprehensive loss	\$ (14,829)	\$ (7,758)

See accompanying notes, which are an integral part of these unaudited financial statements.

Bellicum Pharmaceuticals, Inc.
Statements of Cash Flows
(In thousands)
(Unaudited)

	Three months ended March 31,	
	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	\$ (15,075)	\$ (7,758)
Adjustments to reconcile net loss to net cash used in operating activities:		
Share-based compensation	3,065	1,489
Depreciation expense	463	196
Amortization of premium on investment securities, net	184	—
Amortization of lease liability	(43)	(17)
Amortization of deferred financing costs	28	—
Changes in operating assets and liabilities:		
Receivables	79	204
Prepaid expenses and other current assets	105	91
Accounts payable	(332)	(94)
Accrued liabilities and other	289	(1,136)
NET CASH USED IN OPERATING ACTIVITIES	(11,237)	(7,025)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of investment securities	(21,015)	—
Proceeds from sale of investment securities	11,183	—
Purchases of property and equipment	(2,293)	(933)
CASH USED IN INVESTING ACTIVITIES	(12,125)	(933)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from exercise of stock options	113	2
Payment of issuance costs on common stock	—	(8)
Payment on capital lease obligation	(3)	—
Payment of debt issuance costs	(199)	—
Proceeds from line of credit or notes payable or debt	15,000	—
NET CASH PROVIDED BY (USED IN) FINANCING ACTIVITIES	14,911	(6)
NET CHANGE IN CASH AND CASH EQUIVALENTS	(8,451)	(7,964)
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	70,241	191,602
CASH AND CASH EQUIVALENTS AT END OF PERIOD	\$ 61,790	\$ 183,638
SUPPLEMENTAL CASH FLOW INFORMATION:		
Interest paid on capital lease obligation	\$ 9	\$ —
NON-CASH INVESTING AND FINANCING ACTIVITIES		
Capital lease obligation incurred for property and equipment	\$ 19	\$ —
Accrued liabilities for purchase of property and equipment	\$ 560	\$ —
Accrued issuance costs for long-term debt	\$ 1,216	\$ —

See accompanying notes, which are an integral part of these unaudited financial statements.

Bellicum Pharmaceuticals, Inc.**Notes to Unaudited Financial Statements****NOTE 1 - ORGANIZATION AND BUSINESS DESCRIPTION**

Bellicum Pharmaceuticals, Inc., the Company or Bellicum, was incorporated in Delaware in July 2004 and is based in Houston, Texas. The Company is a clinical stage biopharmaceutical company focused on discovering and developing novel cellular immunotherapies for various forms of cancer, including both hematological cancers and solid tumors, as well as orphan inherited blood disorders. The Company is devoting substantially all of its present efforts to developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including, hematopoietic stem cell transplantation, CAR-T and TCR cell therapy. The Company has not generated any revenue from product sales to date and does not anticipate generating revenues from product sales in the foreseeable future.

The Company is subject to risks common to companies in the biotechnology industry and the future success of the Company is dependent on its ability to successfully complete the development of, and obtain regulatory approval for, its product candidates, manage the growth of the organization, obtain additional financing necessary in order to develop launch and commercialize its product candidates, and compete successfully with other companies in its industry.

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES***Basis of Presentation***

The accompanying interim financial statements are unaudited. These unaudited interim financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) and following the requirements of the U.S. Securities and Exchange Commission (SEC) for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by GAAP have been omitted. In management's opinion, the unaudited interim financial statements have been prepared on the same basis as the audited financial statements and include all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of the Company's financial position and its results of operations and its cash flows for the periods presented. These statements do not include all disclosures required by GAAP and should be read in conjunction with the Company's Annual Report on Form 10-K filed for the fiscal year ended December 31, 2015 (the Annual Report). A copy of the Annual Report is available on the SEC's website, www.sec.gov, under the Company's ticker symbol "BLCM" or on Bellicum's website, www.bellicum.com. The results for the interim periods are not necessarily indicative of the results expected for the full fiscal year or any other interim period. Any reference in these footnotes to applicable guidance is meant to refer to GAAP as found in the Accounting Standards Codification (ASC) and Accounting Standards Update (ASU) of the Financial Accounting Standards Board (FASB).

Use of Estimates

The preparation of the financial statements in accordance with GAAP requires management to make certain estimates and judgments that affect the reported amounts of assets, liabilities, and expenses. Actual results could differ from those estimates.

Net Loss and Net Loss per Share of Common Stock Attributable to Common Stockholders

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period without consideration for common stock equivalents. Diluted net loss per share of common stock is the same as basic net loss per share of common stock, since the effects of potentially dilutive securities are antidilutive. The following outstanding shares of common stock equivalents were excluded from the computations of diluted net loss per shares of common stock attributable to common stockholders for the periods presented, as the effect of including such securities would be anti-dilutive.

	As of March 31,	
	2016	2015
Common Stock Equivalents:	Number of shares	
Warrants to purchase common stock	—	355,392
Unvested shares of restricted stock	88,236	117,647
Options to purchase common stock	4,467,412	3,443,011
	<u>4,555,648</u>	<u>3,916,050</u>

Investment Securities

Consistent with its investment policy, the Company invests its cash allocated to fund its short-term liquidity requirements with prominent financial institutions in bank depository accounts and institutional money market funds and the Company invests the remainder of its cash in corporate debt securities and municipal bonds rated at least A quality or equivalent, U.S. Treasury notes and bonds and U.S. and state government agency-backed securities.

The Company determines the appropriate classification of investment securities at the time of purchase and reevaluates its classification as of each balance sheet date. All investment securities owned during the three months ended March 31, 2016, were classified as available-for-sale. The cost of securities sold is based on the specific identification method. Investment securities are recorded as of each balance sheet date at fair value, with unrealized gains and, to the extent deemed temporary, unrealized losses included in stockholders' equity. Interest and dividend income on investment securities, accretion of discounts and amortization of premiums and realized gains and losses are included in interest income in the Statements of Operations and Comprehensive Income Loss.

An investment security is considered to be impaired when a decline in fair value below its cost basis is determined to be other than temporary. The Company evaluates whether a decline in fair value of an investment security is below its cost basis and is other than temporary using available evidence. In the event that the cost basis of the investment security exceeds its fair value, the Company evaluates, among other factors, the amount and duration of the period that the fair value is less than the cost basis, the financial health of and business outlook for the issuer, including industry and sector performance, and operational and financing cash flow factors, overall market conditions and trends, the Company's intent to sell the investment security and whether it is more likely than not the Company would be required to sell the investment security before its anticipated recovery. If a decline in fair value is determined to be other than temporary, the Company records an impairment charge in the statement of comprehensive income (loss) and establishes a new cost basis in the investment.

Debt Issuance Costs

Costs related to debt issuance are presented in the balance sheet as a direct deduction from the carrying amount of the debt liability, consistent with debt discounts.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, "Leases." ASU 2016-01 requires companies that lease assets to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in its balance sheet. The pronouncement will also require additional disclosures about the amount, timing and uncertainty of cash flows arising from leases. This pronouncement is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018, and early adoption is permitted. Management is currently evaluating the impact of this pronouncement on the Company's statements.

In March 2016, the FASB issued ASU No. 2016-09, "Compensation-Stock Compensation." ASU 2016-09 simplifies accounting for share-based compensation arrangements, primarily as it relates to accounting for the income tax effects of share-based compensation. Under the pronouncement, an entity can make an entity-wide accounting policy decision to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures as they occur. The pronouncement is effective for annual periods beginning after December 31, 2016, and interim periods within those annual periods. Earlier application is permitted in any interim or annual period. The Company does not believe the adoption of this standard will have a material impact on the Company's financial statements.

In April 2015, the FASB issued ASU No. 2015-03, "Simplifying the Presentation of Debt Issuance Costs." ASU 2015-03 requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. During the three months ended March 31, 2016, the Company adopted ASU No. 2015-03.

The Company has evaluated other recent accounting pronouncements and believes that none of them will have a material effect on the Company's financial statements.

NOTE 3 - FAIR VALUE MEASUREMENTS AND INVESTMENT SECURITIES
Fair Value Measurement

The Company follows ASC, Topic 820, *Fair Value Measurements and Disclosures*, or ASC 820, for application to financial assets. ASC 820 defines fair value, provides a consistent framework for measuring fair value under GAAP and requires fair value financial statement disclosures. ASC 820 applies only to the measurement and disclosure of financial assets that are required or permitted to be measured and reported at fair value under other ASC topics (except for standards that relate to share-based payments such as ASC Topic 718, *Compensation – Stock Compensation*).

The valuation techniques required by ASC 820 may be based on either observable or unobservable inputs. Observable inputs reflect readily obtainable data from independent sources, and unobservable inputs reflect the Company's market assumptions.

These inputs are classified into the following hierarchy:

Level 1 Inputs – quoted prices (unadjusted) in active markets for identical assets that the reporting entity has the ability to access at the measurement date;

Level 2 Inputs – inputs other than quoted prices included within Level 1 that are observable for the asset, either directly or indirectly; and

Level 3 Inputs – unobservable inputs for the assets.

The following tables present the Company's investment securities (including, if applicable, those classified on the Company's balance sheet as cash equivalents) that are measured at fair value on a recurring basis as of March 31, 2016 and December 31, 2015, respectively:

	Balance at March 31, 2016	Fair Value Measurements at Reporting Date		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
(in thousands)				
Cash Equivalents:				
Money market funds	\$ 54,891	\$ 54,891	\$ —	\$ —
Total Cash Equivalents	\$ 54,891	\$ 54,891	\$ —	\$ —
Investment Securities:				
U.S. government agency-backed securities	\$ 33,984	\$ —	\$ 33,984	\$ —
Corporate debt securities	51,852	—	51,852	—
Municipal bonds	4,182	—	4,182	—
Total Investment Securities	\$ 90,018	\$ —	\$ 90,018	\$ —

	Fair Value Measurements at Reporting Date			
	Balance at December 31, 2015	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
(in thousands)				
Cash Equivalents:				
Money market funds	\$ 52,714	\$ 52,714	\$ —	\$ —
U.S. government agency-backed securities	9,500		9,500	
Total Cash Equivalents	\$ 62,214	\$ 52,714	\$ 9,500	\$ —
Investment Securities:				
U.S. government agency-backed securities	\$ 22,388	\$ —	\$ 22,388	\$ —
Corporate debt securities	51,547	—	51,547	—
Municipal bonds	6,189	—	6,189	—
Total Investment Securities	\$ 80,124	\$ —	\$ 80,124	\$ —

Corporate debt securities and municipal bonds are valued based on various observable inputs such as benchmark yields, reported trades, broker/dealer quotes, benchmark securities and bids.

Investment securities, all classified as available-for-sale, consisted of the following as of March 31, 2016:

	March 31, 2016			Aggregate Estimated Fair Value
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	
(in thousands)				
Investment Securities:				
U.S. government agency-backed securities	\$ 33,981	\$ 15	\$ (12)	\$ 33,984
Corporate debt securities	51,916	48	(112)	51,852
Municipal bonds	4,177	6	(1)	4,182
Total Investment Securities	\$ 90,074	\$ 69	\$ (125)	\$ 90,018

The Company's investment securities as of March 31, 2016, will reach maturity between April 2016 and July 2026, with a weighted-average maturity date in May 2017.

Management believes that the carrying value of the debt facility approximates its fair value, as the Company's debt facility bears interest at a rate that approximates prevailing market rates for instruments with similar characteristics. The fair value of the Company's debt facility is determined under Level 2 in the fair value hierarchy.

NOTE 4 – ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued liabilities and other liabilities consist of the following:

	March 31, 2016	December 31, 2015
	(in thousands)	
Accrued manufacturing costs	\$ 3,062	\$ 2,412
Accrued payroll	465	1,332
Accrued medical facility fees	146	282
Accrued patient treatment costs	235	333
Accrued property and equipment purchases	560	—
Accrued other	901	721
Total accrued expenses	\$ 5,369	\$ 5,080

NOTE 5 - DEBT

On March 10, 2016 (the Closing Date), the Company, entered into a Loan and Security Agreement (the Loan Agreement) with Hercules Capital, Inc. (Hercules), as agent and a lender, Hercules Technology II, L.P., as a lender, and Hercules Technology III, L.P., as a lender, under which the Company borrowed \$15.0 million on the Closing Date and may borrow an additional \$5.0 million on or prior to September 15, 2016. Subject to the terms and conditions of the Loan Agreement, including approval by Hercules' investment committee and the Company's achievement of specified milestones in the Loan Agreement (the Milestones), the Company may borrow an additional \$10.0 million through March 15, 2017. The Company intends to use the proceeds received under the Loan Agreement for funding the build-out of our manufacturing facilities and general corporate purposes.

The interest rate will be calculated at a rate equal to the greater of either (i) 9.35% plus the prime rate as reported in The Wall Street Journal minus 3.50%, and (ii) 9.35%. Payments under the Loan Agreement are interest only for 18 months from the Closing Date, extendable to 24 months upon the Company achieving the Milestones. The interest only period will be followed by equal monthly payments of principal and interest amortized over a 30 months schedule through the maturity date of March 1, 2020 (the "Loan Maturity Date"); provided that if the Milestones are achieved, the Company will make equal monthly payments of principal and interest amortized over a 24 months schedule through the Loan Maturity Date. The remaining principal balance will be due and payable on the Loan Maturity Date. In addition, upon the Loan Maturity date or such earlier date specified in the Loan Agreement, a final payment equal to \$1,216,250 (the Final Facility Charge), plus, subject to and contingent on the funding of the additional \$5.0 million loan advance, \$173,750; plus, subject to and contingent on the funding of the additional \$10.0 million loan advance, \$695,000. The Company's obligations under the Loan Agreement are secured by a security interest in substantially all of its assets, other than its intellectual property.

If the Company prepays the loan, including interest, prior to December 31, 2016, there will be no prepayment penalty. If the Company prepays the loan, including interest, after January 1, 2017 but prior to the date that is 24 months following the Closing Date, it will pay Hercules a prepayment charge based on a prepayment fee equal to 2.00% of the amount prepaid; if the prepayment occurs thereafter, it will pay Hercules a prepayment charge based on a prepayment fee equal to 1.00% of the amount prepaid. The prepayment charge is also applicable upon the occurrence of a change of control of the Company. In addition to a prepayment charge, if any, the Company will pay Hercules the Final Facility Charge.

The Loan Agreement includes customary affirmative and restrictive covenants, but does not include any financial maintenance covenants, and also includes standard events of default, including payment defaults. Upon the occurrence of an event of default, a default interest rate of an additional 5% may be applied to the outstanding loan balance and Hercules may declare all outstanding obligations immediately due and payable and take such other actions as set forth in the Loan Agreement.

The Company paid expenses related to the Loan Agreement of \$199,000, which, along with the Final Facility Charge of \$1,216,250, have been recorded as deferred financing costs, which offset long-term debt on the Company's balance sheet. Deferred financing costs of \$1,415,250 will be amortized over the term of the loan, and included in interest expense. During the three months ended March 31, 2016, interest expense included \$28,000 of amortized deferred financing costs.

NOTE 6 - SHARE-BASED COMPENSATION

At March 31, 2016, the Company had share-based awards outstanding under four share-based compensation plans as follows:

The 2006 Stock Option Plan (the 2006 Plan) provided for the issuance of non-qualified stock options to employees, including officers, non-employee directors and consultants to the Company. As of March 31, 2016, 151,410 shares of common stock were reserved for issuance pursuant to outstanding options previously granted under the 2006 Plan to purchase common stock of the Company. The 2006 Plan was terminated by the Board in October 2014.

The 2011 Stock Option Plan (the 2011 Plan) provided for the issuance of incentive and non-qualified stock options to employees, including officers, non-employee directors and consultants to the Company. As of March 31, 2016, 2,211,515 shares of common stock were reserved for issuance pursuant to outstanding options previously granted under the 2011 Plan to purchase common stock of the Company. The 2011 Plan terminated upon the effectiveness of the 2014 Plan described below.

The 2014 Equity Incentive Plan (the 2014 Plan) became effective in December 2014, upon the closing of the Company's initial public offering. The 2014 Plan provides for the issuance of equity awards, including incentive and non-qualified stock options and restricted stock awards to employees, including officers, non-employee directors and consultants to the Company or its affiliates. The 2014 Plan also provides for the grant of performance cash awards and performance-based stock awards. The aggregate number of shares of common stock that are authorized for issuance under the 2014 Plan is 2,990,354 shares, plus any shares subject to outstanding options that were granted under the 2011 Plan or 2006 Plan that are forfeited, terminated, expired or are otherwise not issued.

The 2014 Employee Stock Purchase Plan (the ESPP) provides for eligible Company employees, as defined by the ESPP, to be given an opportunity to purchase our common stock at a discount, through payroll deductions, with stock purchases being made upon defined purchase dates. The ESPP authorizes the issuance of up to 550,000 shares of our common stock, pursuant to purchase rights granted to our employees. No shares were purchased under the ESPP during the periods presented.

A summary of activity within the ESPP follows:

	Three months ended March 31,	
	2016	2015
	(in thousands)	
Deductions from employees	\$ 98	\$ 101
Share-based compensation expense recognized	\$ 65	\$ —
Remaining share-based compensation expense	\$ 180	\$ —

The Company granted options to purchase 895,124 shares of its common stock during the three months ended March 31, 2016.

The fair value of the option grants during the three months ended March 31, 2016 and 2015 was estimated at the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	Three months ended March 31,	
	2016	2015
Expected volatility	72.1%	91.2%
Expected term (in years)	6.08	6.08
Risk-free interest rate	1.87%	1.60%
Expected dividend yield	—%	—%

At March 31, 2016, there was \$34.4 million of unrecognized compensation expense related to unvested stock options and stock that is expected to be recognized over a weighted-average period of 3.0 years.

During the three months ended March 31, 2016 and 2015, the Company received cash proceeds from the exercise of stock options of approximately \$113,000 and \$2,000, respectively. The aggregate intrinsic value of options exercised during the three months ended March 31, 2016 and 2015 was \$0.7 million and \$0.1 million, respectively.

The following table summarizes the stock option activity for all stock plans during the three months ended March 31, 2016:

	Options	Weighted-Average Exercise Price Per Share	(in years) Weighted-Average Contractual Life	(in thousands) Aggregate Intrinsic Value ⁽¹⁾
Outstanding at December 31, 2015	3,628,973	\$ 10.32	8.03	\$ 39,021
Granted	895,124	\$ 18.41		
Exercised	(43,043)	\$ 2.63		
Canceled or forfeited	(13,642)	\$ 15.83		
Outstanding at March 31, 2016	4,467,412	\$ 12.00	8.20	\$ 11,492
Exercisable at March 31, 2016	1,922,004	\$ 6.14	6.92	\$ 9,880

⁽¹⁾ The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the estimated fair value of the common stock for the options that were in the money at March 31, 2016.

At March 31, 2016 and December 31, 2015, there were 88,236 shares of unvested common stock outstanding.

NOTE 7 - GRANT REVENUE

NIH Grant

During both 2015 and 2016, the Company was awarded \$0.3 million, under grants from the National Institutes of Health (NIH). The awards cover the period from April 2015 through March 2017. The awards were made pursuant to the authority of 42 USC 241 42 CFR 52, and are subject to the requirements of the statute. Funds spent on the grant are reimbursed through monthly reimbursement requests. Funds spent under the grant were approximately \$0.1 million in the three month periods ended March 31, 2016 and 2015. As of March 31, 2016 and December 31, 2015, the Company had a receivable of \$25,200 and \$57,000, respectively, pursuant to the grants.

NOTE 8 - LICENSE AGREEMENTS

License Agreements - Baylor

In March 2016, the Company and Baylor College of Medicine (BCM) entered into two additional license agreements pursuant to which the Company obtained exclusive rights to technologies and patent rights owned by BCM. The Company paid BCM a non-refundable license fee of \$0.1 million, and could incur additional payments upon the achievement of certain milestone events as set forth in the agreement. If the Company is successful in developing any of the licensed technologies, resulting sales would be subject to a royalty payment in the low single digits.

NOTE 9 - COMMITMENTS AND CONTINGENCIES

Litigation

The Company, from time to time, may be involved in litigation relating to claims arising out of its ordinary course of business. Management believes that there are no material claims or actions pending or threatened against the Company.

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 Annual Report on Form 10-K for the year ended December 31, 2015, or our Annual Report, as well as our unaudited financial statements and related notes included in this Quarterly Report on Form 10-Q, or this Quarterly Report.

Forward-Looking Statements

This report contains forward-looking statements and information within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, which are subject to the “safe harbor” created by those sections. These forward-looking statements include, but are not limited to, statements concerning our strategy, future operations, future financial position, future revenues, projected costs, prospects and plans and objectives of management. The words “anticipate,” “believe,” “could,” “designed,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “project,” “will,” “would,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements that we make. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those in the forward-looking statements, including, without limitation, the risks set forth in Part I, Item 1A, “Risk Factors” in our Annual Report and in our other filings with the SEC. The forward-looking statements are applicable only as of the date on which they are made, and we do not assume any obligation to update any forward-looking statements.

Overview

We are a clinical stage biopharmaceutical company focused on discovering and developing novel cellular immunotherapies for various forms of cancer, including both hematological cancers and solid tumors, as well as orphan inherited blood disorders. We are using our proprietary Chemical Induction of Dimerization, or CID, technology platform to engineer and then control components of the immune system in real time. By incorporating our CID platform, our product candidates may offer better safety and efficacy outcomes than are seen with current cellular immunotherapies.

We are developing next-generation product candidates in some of the most important areas of cellular immunotherapy, including hematopoietic stem cell transplantation, or HSCT, chimeric antigen receptor T cell therapy, or CAR-Ts, and T cell receptors, or TCRs. HSCT, also known as bone marrow transplantation, has for decades been curative for many patients with hematological cancers or orphan inherited blood disorders. However, adoption of HSCT to date has been limited by the risks of transplant-related morbidity and mortality from graft-versus-host-disease, or GvHD, and the potential for serious infections due to the lack of an effective immune system following a transplant. CAR-T and TCR cell therapies are an innovative approach in which a patient’s T cells are genetically modified to carry chimeric antigen receptors, or CARs, or TCRs which redirect the T cells against cancer cells. While high objective response rates have been reported in some hematological malignancies, serious and sometimes fatal toxicities have arisen in patients treated with CAR-T cell therapies. These toxicities include instances in which the CAR-T cells have caused high levels of cytokines due to over-activation, referred to as “cytokine release syndrome”, frequent transient neurologic toxicities and cases in which they have attacked healthy organs as well as the targeted tumor, sometimes resulting in death. In solid tumors, where the behavior of CAR-T cells is particularly unpredictable and results have been inconsistent, researchers are developing enhanced CAR-T cell approaches called “armored CARs” that raise even greater safety concerns.

Our proprietary CID platform is designed to address these challenges. Events inside a cell are controlled by cascades of specialized signaling proteins. CID consists of molecular switches, modified forms of these signaling proteins, which are triggered inside the patient by infusion of a small molecule, rimiducid, instead of by natural upstream signals. We include these molecular switches in the appropriate immune cells and deliver the cells to the patient in the manner of conventional cellular immunotherapy. We have developed two such switches: a “safety switch,” designed to initiate programmed cell death, or apoptosis, of the immunotherapy cells, and an “activation switch,” designed to stimulate activation and in some cases proliferation of the immunotherapy cells. Each of our technologies incorporates one of these switches, for enhanced, real time control of safety and efficacy:

- CaspaCIDE is our safety switch, incorporated into our HSCT, and in certain of our CAR-T or TCR, product candidates, where it is inactive unless the patient experiences a serious side effect. In that event, rimiducid is

administered to fully or partially eliminate the cells, with the goal of terminating or attenuating the therapy and resolving the serious side effect.

- CIDECAR consists of CAR-T cells modified to include the signaling domains of two proteins, MyD88 and CD40. Together, these form our proprietary dual co-stimulatory domain, or MC, which is designed to activate T cells. Incorporation of CaspaCIDE in a CIDECAR product candidate is intended to allow the enhanced potency of MC co-stimulation to be deployed safely in patients.
- GoCAR-T consists of CAR-T cells that are modified to include MC. In contrast to CIDECAR, MC is structured in GoCAR-T as a rimiducid-driven molecular switch, separate from the chimeric antigen receptor. GoCAR-T is designed to allow control of the activation and proliferation of the CAR-T cells through the scheduled administration of a course of rimiducid infusions that may continue until the desired patient outcome is achieved. In the event of emergence of side effects, the level of activation of the GoCAR-T cells is designed to be attenuated by extending the interval between rimiducid doses and/or reducing the dosage per infusion.

By incorporating our novel switch technologies, we are developing product candidates with the potential to elicit positive clinical outcomes and ultimately change the treatment paradigm in various areas of cellular immunotherapy. Our lead clinical product candidate is described below.

- **BPX-501.** We are developing a CaspaCIDE product candidate, BPX-501, as an adjunct T-cell therapy administered after allogeneic HSCT. BPX-501 is designed to improve transplant outcomes by enhancing the recovery of the immune system following an HSCT procedure. BPX-501 addresses the risk of infusing donor T cells by enabling the elimination of donor T cells through the activation of the CaspaCIDE safety switch if there is an emergence of uncontrolled GvHD.

In addition, our preclinical product candidates are designed to overcome the current limitations of CAR-T and TCR therapies and include the following:

- **BPX-701** is a CaspaCIDE-enabled natural high affinity T cell receptor, or TCR, product candidate designed to target malignant cells expressing the preferentially-expressed antigen in melanoma, or PRAME. Initial planned indications for BPX-701 development are Refractory or Relapsed Acute Myeloid Leukemia, or AML, and Myelodysplastic Syndromes, or MDS, with an additional study planned for metastatic uveal melanoma. Each of these is an orphan indication where PRAME is highly expressed and for which current treatment options are limited.
- **BPX-601** is a GoCAR-T product candidate containing our proprietary iMC, inducible MyD88/CD40, activation switch, designed to treat solid tumors expressing prostate stem cell antigen, or PSCA. Preclinical data shows enhanced T-cell proliferation, persistence and *in vivo* anti-tumor activity compared to traditional CAR T therapies. The initial planned indication for BPX-601 development is non-resectable pancreatic cancer.
- **BPX-401** is a CIDECAR product candidate incorporating our proprietary MC co-stimulatory domain and the CaspaCIDE safety switch, designed to target blood cancers expressing CD19.

On January 11, 2016, we submitted required documentation, including clinical trial protocols, for BPX-701 and BPX-601 for review by the National Institutes of Health, or NIH, Recombinant DNA Advisory Committee (RAC). Public review of those programs occurred at the RAC Meeting on March 9, 2016.

We expect to file Investigational New Drug Applications, or INDs, for our three most advanced CAR T and TCR adoptive cell therapy product candidates. INDs for BPX-601 and BPX-701 are expected to be filed during the first half of 2016 and for BPX-401 during the second half of the year. Our IND-enabling activities for each of these preclinical product candidates include manufacturing key components and developing a robust process to produce cell products that comply with regulations of the FDA and other regulatory agencies. We have developed an efficient and scalable process to manufacture genetically modified T cells of high quality. This process is currently being implemented by our third-party contract manufacturers to produce BPX-501 for our clinical trials. We expect to leverage this process, as well as our resources, capabilities and expertise for the manufacture of our CAR-T and TCR product candidates. We expect to begin enrolling patients in Phase 1 trials of BPX-701 and BPX-601 in mid-2016 and BPX-401 in the second half of 2016.

Recent Developments

On March 10, 2016, or the Closing Date, we entered into a Loan and Security Agreement, or the Loan Agreement, with Hercules Capital, Inc., or Hercules, as agent and a lender, Hercules Technology II, L.P., as a lender, and Hercules Technology III, L.P., as a lender, under which we borrowed \$15.0 million on the Closing Date and may borrow an additional \$5.0 million on or prior to September 15, 2016. Subject to the terms and conditions of the Loan Agreement, including approval by Hercules' investment committee and our achievement of specified milestones in the Loan Agreement, we may borrow an additional \$10.0 million through March 15, 2017. We intend to use the proceeds received under the Loan Agreement for funding the build-out of our manufacturing facilities and for general corporate purposes.

On February 22, 2016, the Company announced that the FDA granted orphan drug designation for the combination of BPX-501 genetically modified T cells and activator agent rimiducid as "replacement T-cell therapy for the treatment of immunodeficiency and graft versus host disease after allogeneic hematopoietic stem cell transplant." BPX-501 is an adjunct T-cell therapy incorporating the Company's proprietary CaspaCIDE safety switch.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires us to make judgments, estimates and assumptions in the preparation of our financial statements and accompanying notes. Actual results could differ from those estimates. We believe there have been no material changes in our critical accounting policies as discussed in our Annual Report.

Financial Operations Overview

Financial Operations Overview

Revenues

To date, we have only recognized revenue from government grants and we have not generated any product revenue. We have received funds from the National Institutes of Health, or NIH, which was awarded based on the progress of the program being funded. In cases when the grant money is not received until expenses for the program are incurred, we accrue the revenue based on the costs incurred for the programs associated with the grant.

During 2013, we entered into a grant agreement with the NIH. The grant is a modular five year grant with funds being awarded each year based on the progress of the program being funded. Grant money is not received until expenses for the program are incurred. We have been awarded approximately \$1.0 million to date, of which \$0.9 million has been received. We accrue the revenue based on the costs incurred for the programs associated with the grant.

In the future, we may generate revenue from a combination of product sales, government or other third-party grants, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements or a combination of these approaches. We expect that any revenue we generate will fluctuate from quarter to quarter as a result of the timing and amount of license fees, milestone and other payments, and the amount and timing of payments that we receive upon the sale of our products, to the extent any are successfully commercialized. If we fail to complete the development of our product candidates in a timely manner or obtain regulatory approval of them, our ability to generate future revenue, and our results of operations and financial position, would be materially adversely affected.

Research and Development Expenses

To date, our research and development expenses have related primarily to the development of our CID platform and the identification and development of our product candidates. Research and development expenses consist of expenses incurred in performing research and development activities, including compensation and benefits for research and development employees and consultants, facilities expenses, overhead expenses, cost of laboratory supplies, manufacturing expenses, fees paid to third parties and other outside expenses.

Research and development costs are expensed as incurred. Clinical trial and other development costs incurred by third parties are expensed as the contracted work is performed. We accrue for costs incurred as the services are being provided by monitoring the status of the clinical trial or project and the invoices received from our external service providers. We adjust our accrual as actual costs become known. Where contingent milestone payments are due to third parties under research and development arrangements, the milestone payment obligations are expensed when the milestone events are achieved.

We utilize our research and development personnel and infrastructure resources across several programs, and many of our costs are not specifically attributable to a single program. Accordingly, we cannot state precisely our total costs incurred on a program-by-program basis.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase over the next several years as we seek to conduct our ongoing and planned clinical trials for BPX-501, BPX-401, BPX-601 and BPX-701 and as we selectively develop additional product candidates. However, it is difficult to determine with certainty the duration and completion costs of our current or future preclinical programs and clinical trials of our product candidates.

The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors that include, but are not limited to, the following:

- per patient clinical trial costs;
- the number of patients that participate in the clinical trials;
- the number of sites included in the clinical trials;
- the process of collection, differentiation, selection and expansion of immune cells for our cellular immuno-therapies;
- the countries in which the clinical trials are conducted;

- the length of time required to enroll eligible patients;
- the number of doses that patients receive;
- the drop-out or discontinuation rates of patients;
- potential additional safety monitoring or other studies requested by regulatory agencies;
- the duration of patient follow-up; and
- the efficacy and safety profile of the product candidates.

In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability and commercial viability. We will determine which programs to pursue and how much to fund each program in response to the ongoing scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential.

General and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs, including share-based compensation, for personnel in executive, finance, accounting, business development, legal and human resources functions. Other significant costs include facility costs not otherwise included in research and development expenses, legal fees relating to corporate matters, insurance costs and professional fees for consultancy, legal, accounting, audit and investor relations.

We anticipate that our general and administrative expenses will increase in the future to support our continued research and development activities, potential commercialization of our product candidates and the increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we anticipate increased costs associated with being a public company, including expenses related to services associated with maintaining compliance with NASDAQ listing rules and SEC requirements, insurance and investor relations costs.

Income Taxes

We did not recognize any income tax expense for the three months ended March 31, 2016 or 2015.

Results of Operations

Comparison of the Three Months Ended March 31, 2016 and 2015

The following table sets forth our results of operations for the three months ended March 31, 2016 and 2015:

	Three Months Ended March 31,		
	2016	2015	Change
	(in thousands)		
Grant revenues	\$ 92	\$ 107	\$ (15)
Operating expenses:			
Research and development	10,988	5,718	5,270
General and administrative	4,284	2,197	2,087
Total operating expenses	15,272	7,915	7,357
Loss from operations	(15,180)	(7,808)	(7,372)
Other income (expense):			
Interest income	227	50	177
Interest expense	(122)	—	(122)
Total other income (expense)	105	50	55
Net loss	\$ (15,075)	\$ (7,758)	\$ (7,317)

Research and Development Expenses

Research and development expenses were \$11.0 million and \$5.7 million for the three months ended March 31, 2016 and March 31, 2015, respectively. The \$5.3 million increase in research and development expenses for the three months ended March 31, 2016, was due to an increase in clinical and manufacturing costs of \$2.3 million related to BPX-501, primarily due to increased patient enrollment in our clinical trials. The higher research and development expenses were also due to an increase of \$1.0 million for IND enabling activities on our product candidates, BPX-601, BPX-701 and BPX-401, plus an increase of \$2.0 million of general research and development costs, which includes an increase of \$1.6 million in research and development personnel costs, \$0.6 million in allocated overhead costs and a decrease of \$0.2 million in other costs.

The following table presents our research and development expense by project/category for the periods indicated:

Product Candidates	Three Months Ended March 31,		
	2016	2015	Change
	(in thousands)		
BPX-401	\$ 176	\$ —	\$ 176
BPX-501	5,058	2,745	2,313
BPX-601	589	—	589
BPX-701	212	—	212
General	4,953	2,973	1,980
Total	\$ 10,988	\$ 5,718	\$ 5,270

General and Administrative Expenses

General and administrative expenses were \$4.3 million for the three months ended March 31, 2016 and \$2.2 million for the three months ended March 31, 2015. The \$2.1 million increase in G&A expenses for the 2016 period was primarily due to our overall

growth, including an increase of \$1.4 million in costs related to personnel, of which \$0.8 million was attributable to share based compensation expense, higher facility costs and increased legal, accounting and travel expenses.

Liquidity and Capital Resources

Sources of Liquidity

We are a clinical stage biopharmaceutical company with a limited operating history. To date, we have financed our operations primarily through equity and debt financings and grants. We have not generated any revenue from the sale of any products. As of March 31, 2016 and December 31, 2015, we had cash, cash equivalents and investment securities of \$151.8 million and \$150.4 million, respectively. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation.

On March 10, 2016, we entered into a term loan arrangement with Hercules Capital, Inc. as agent and lender, and borrowed \$15.0 million on the closing date. We have the ability to borrow another \$5.0 million on or prior to September 15, 2016, and, subject to the achievement of specified milestones in the loan agreements and approval by the loan committee, may borrow another \$10 million through March 15, 2017. We intend to use the proceeds to fund the build-out of our manufacturing facilities, and for general corporate purposes.

We will make monthly interest only payments through September 2017. The interest only feature can be extended for an additional six months if we achieve the specified milestones. After the expiration of the interest only period, we will repay the loan over the remaining term of the loan, through its final maturity date of March 1, 2020.

We incurred issuance costs of \$0.2 million, and have accrued an additional \$1.2 million for a facility charge which is payable at the earlier of the repayment of the loan in full or the final maturity date. The \$1.4 million debt issuance costs will be recognized over the term of the loan as additional interest expense.

We will pay interest on the loan at the greater of either (i) 9.35% plus the prime rate as reported in the Wall Street Journal minus 3.5% and (ii) 9.35%. For additional information about the loan, see Note 5 - Debt to the unaudited financial statements included herein.

Cash Flows

The following table sets forth a summary of our cash flows for the three months ended March 31, 2016 and 2015:

	Three Months Ended March 31,		
	2016	2015	Change
	(in thousands)		
Net cash used in operating activities	\$ (11,237)	\$ (7,025)	\$ (4,212)
Net cash used in investing activities	(12,125)	(933)	(11,192)
Net cash provided by (used in) financing activities	14,911	(6)	14,917
Net change in cash and cash equivalents	\$ (8,451)	\$ (7,964)	\$ (487)

Operating Activities

Net cash used in operating activities for the three months ended March 31, 2016 was comprised of a net loss of \$15.1 million, which included depreciation expense of \$0.5 million and share-based compensation expense of \$3.1 million. Net cash used in operating activities was also comprised of the following primary components: a decrease in receivables of \$0.1 million and a decrease in prepaid expenses and other assets of \$0.1 million.

Net cash used in operating activities for the three months ended March 31, 2015, was comprised of a net loss of \$7.8 million, which included depreciation expense of \$0.2 million and share-based compensation expense of \$1.5 million. Net cash used in operating activities was also comprised of the following primary components: a decrease in receivables of \$0.2 million, a decrease in other assets of \$1.0 million and a decrease in accounts payable and other liabilities of \$1.3 million.

Investing Activities

Net cash used in investing activities for the three months ended March 31, 2016 was \$12.1 million, consisting of the purchase of investment securities of \$21.0 million, offset by the proceeds from sale of investment securities of \$11.2 million and the purchase of property and equipment of \$2.3 million. Net cash used in investing activities for the three months ended March 31, 2015 consisted of \$0.9 million, which was derived solely from the purchase of property and equipment.

Financing Activities

Net cash provided by financing activities for the three months ended March 31, 2016 was \$14.9 million, which was derived from borrowings on long-term debt of approximately \$15.0 million, payment of debt issuance costs of approximately \$0.2 million, and \$0.1 million of proceeds from the exercise of stock options. Net cash provided by financing activities for the three months ended March 31, 2015 was \$6,000, which was derived from \$2,000 of proceeds from exercise of stock options, offset by \$8,000 of expenses related to our December 2014 initial public offering.

Funding Requirements

Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, third-party clinical research and development services, laboratory and related supplies, clinical costs, legal and other regulatory expenses, facility costs and general overhead costs. In addition, we expect to use capital to expand our manufacturing capabilities.

The successful development of any of our product candidates is highly uncertain. As such, at this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the development of BPX-501 or our other current and future product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from the sale of product candidates. This is due to the numerous risks and uncertainties associated with developing medical treatments, including, but not limited to, the uncertainty of:

- successful enrollment in, and completion of, clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity;
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others; and
- market acceptance of our products, if and when approved.

A change in the outcome of any of these variables with respect to the development of any of our product candidates would significantly change the costs and timing associated with the development of that product candidate.

Because all of our product candidates are in the early stages of clinical and preclinical development and the outcome of these efforts is uncertain, we cannot estimate the actual amounts necessary to successfully complete the development and commercialization of product candidates or whether, or when, we may achieve profitability. Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity or debt financings and collaboration arrangements.

We plan to continue to fund our operations and capital funding needs through equity and/or debt financing. We may also consider new collaborations or selectively partnering our technology. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our stockholders will be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our existing stockholders. The incurrence of indebtedness would result in increased fixed payment obligations and could involve certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms unfavorable to us. Any of these actions could harm our business, results of operations and future prospects.

Outlook

Based on our research and development plans and our timing expectations related to the progress of our programs, we expect that our cash and cash equivalents as of March 31, 2016 will enable us to fund our operating expenses and capital expenditure requirements through 2017. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. Furthermore, our operating plan may change, and we may need additional funds to meet operational needs and capital requirements for product development and commercialization sooner than planned. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates and the extent to which we may enter into additional collaborations with third parties to participate in their development and commercialization, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical trials. Our future funding requirements will depend on many factors, as we:

- initiate or continue clinical trials of BPX-501, BPX-701, BPX-601 and BPX-401, and any other product candidates;
- continue the research and development of our product candidates; seek to discover additional product candidates; seek regulatory approvals for our product candidates if they successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize any products that may receive regulatory approval; enhance operational, financial and information management systems and hire additional personnel, including personnel to support development of our product candidates and, if a product candidate is approved, our commercialization efforts; and
- incur additional costs associated with being a public company.

Contractual Obligations and Commitments

Our contractual obligations as of March 31, 2016 were as follows:

	Commitment	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years
	(in thousands)				
License agreements (1)	\$ 140,236	\$ 1,858	\$ 6,361	\$ 19,695	\$ 112,322
Operating lease agreements (2)	7,953	1,868	3,877	2,208	—
Manufacturing arrangements (3)	4,935	4,769	166	—	—
Toxicology studies (4)	1,648	1,648	—	—	—
Equipment lease agreements (5)	267	50	99	99	19
Sponsored research agreements (6)	235	122	113	—	—
Other	1,688	1,688	—	—	—
Total contractual obligations	<u>\$ 156,962</u>	<u>\$ 12,003</u>	<u>\$ 10,616</u>	<u>\$ 22,002</u>	<u>\$ 112,341</u>

- (1) License agreements - We have entered into several license agreements under which we obtained rights to certain intellectual property. Under the agreements, we could be obligated for payments upon successful completion of clinical and regulatory milestones regarding the products covered by this license. The obligations listed in the table above represent estimates of when the milestones will be achieved. We cannot assure that the timing of the milestones will be completed when estimated or at all.
- (2) Operating lease agreements - The amounts above are comprised of two five-year lease agreements. The first lease will expire on January 31, 2020 and the second lease expires on August 31, 2020.
- (3) Manufacturing arrangements - We have entered into several manufacturing service arrangements with various terms. The obligations listed in the table above represent estimates of when certain services will be performed.
- (4) Toxicology studies - We have entered into several toxicology arrangements with various terms. The obligations listed in the table above represent estimates of when certain services will be performed.

- (5) Capital lease agreements - We have entered into several office capital lease agreements with various terms. The commitments include equipment, maintenance and supplies.
- (6) Sponsored research agreements - During 2015, we entered into two separate sponsored research agreements to undertake research which is of mutual interest to all parties. One agreement includes a commitment over 14 months and the other includes a commitment over a three-year period.

Recent Accounting Pronouncements

See Note 2 to the Notes to Unaudited Financial Statements in "Item 1 - Financial Statements" in this Quarterly Report for discussion regarding recent accounting pronouncements.

Off-Balance Sheet Arrangements

During the periods presented, we did not have, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the Securities and Exchange Commission.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

The primary objective of our investment activities is to preserve our capital and meet our liquidity needs to fund operations. We also seek to generate competitive rates of return from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities that are of high credit quality based on ratings from commonly relied upon rating agencies. As of March 31, 2016, we had cash, cash equivalents and investment securities of \$151.8 million. Our cash, cash equivalents and investments in investment securities may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our cash is invested in accounts with market interest rates and because our cash equivalents and investments in investment securities are traded in active markets, we believe that our exposure to interest rate risk is not significant and estimate that an immediate and uniform 10% increase in market interest rates from levels as of March 31, 2016 would not have a material impact on the total fair value of our portfolio.

We sometimes contract for the conduct of clinical trials or other research and development and manufacturing activities with contract research organizations, clinical trial sites and contract manufacturers in Europe, and in the future potentially elsewhere outside of the United States. We may be subject to exposure to fluctuations in foreign currency exchange rates in connection with these agreements. If the average exchange rate between the currency of our payment obligations under any of these agreements and the U.S. dollar were to strengthen or weaken by 10% against the corresponding exchange rate as of March 31, 2016, we estimate that the impact on our financial position, results of operations and cash flows would not be material. We do not hedge our foreign currency exposures.

We have not used derivative financial instruments for speculation or trading purposes.

Item 4. Controls and Procedures

Management's Evaluation of our Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial and Accounting Officer (our principal executive officer and principal financial officer, respectively), evaluated the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of March 31, 2016. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2016, our

Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during our latest fiscal quarter 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

Our business and results of operations are subject to a number of risks and uncertainties. You should carefully consider the risk factors described under the heading “Risk Factors” in our Annual Report and in other reports we file with the SEC.

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

Recent Sales of Unregistered Securities

None.

Use of Proceeds from Initial Public Offering of Common Stock

On December 23, 2014, we completed the initial public offering of our common stock pursuant to a registration statement on Form S-1 (File Nos. 333-200328 and 333-201031), which was declared effective by the SEC on December 17, 2014.

As of March 31, 2016, we have used the net offering proceeds from our initial public offering to fund operations, capital expenditures, working capital and other general corporate purposes and for debt repayment. We are holding the balance of the net proceeds from the offering in cash, cash equivalents and investment securities. There has been no material change in our planned use of the balance of the net proceeds from the offering described in our final prospectus filed with the SEC on December 17, 2014 pursuant to Rule 424(b) under the Securities Act.

Purchase of Equity Securities

We did not purchase any of our registered securities during the period covered by this Quarterly Report.

Item 6. Exhibits

The exhibits filed as part of this Quarterly Report are set forth on the Exhibit Index, which is incorporated herein 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.

Bellicum Pharmaceuticals, Inc.

Date: May 9, 2016

By: /s/ Thomas J. Farrell

Thomas J. Farrell

President and Chief Executive Officer

Date: May 9, 2016

By: /s/ Alan A. Musso

Alan A. Musso

Chief Financial Officer and Treasurer

Principal Financial and Accounting Officer

EXHIBIT INDEX

Exhibit number	Description of exhibit
3.1(1)	Amended and Restated Certificate of Incorporation of the Registrant.
3.2(1)	Amended and Restated Bylaws of the Registrant.
4.1	Reference is made to Exhibits 3.1 and 3.2.
4.2(2)	Form of Common Stock Certificate of the Registrant.
4.3(2)	Second Amended and Restated Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated August 22, 2014.
4.4(3)	Registration Rights Agreement by and among the Registrant and Baker Brothers Life Sciences, LP, and two of its affiliated funds, dated January 15, 2016.
10.1	Loan and Security Agreement by and between the Registrant and Hercules Capital, Inc., dated March 10, 2016.
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certifications of Chief Executive Officer and 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

(1) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on December 23, 2014.

(2) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-200328), as amended, originally filed with the SEC on November 18, 2014.

(3) Incorporated by reference to the Registrant's Annual Report on Form 10-K, filed with the SEC on March 14, 2016.

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT is made and dated as of March 10, 2016 and is entered into by and among BELLICUM PHARMACEUTICALS, INC., a Delaware corporation, and each of its Qualified Subsidiaries (hereinafter collectively referred to as “Borrower”), the several banks and other financial institutions or entities from time to time parties to this Agreement (collectively, referred to as “Lender”) and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent for itself and Lender (in such capacity, “Agent”).

RECITALS

A. Borrower has requested Lender to make available to Borrower a loan in an aggregate principal amount of up to \$20,000,000 (the “Tranche I Term Loan” and such amount, the “Maximum Tranche I Term Loan Amount”);

B. Subject to and conditioned on Borrower’s achievement of each element of the Milestone in accordance with the definition thereof, Lender will make available to Borrower a loan in the principal amount of up to \$10,000,000 (the “Tranche II Term Loan” and such amount, the “Maximum Tranche II Term Loan Amount”); and

C. Lender is willing to make the Tranche I Term Loan on the terms and conditions set forth in this Agreement, and, subject to and conditioned on Borrower’s achievement of each element of the Milestone in accordance with the definition thereof, Lender is willing to make the Tranche II Term Loan.

AGREEMENT

NOW, THEREFORE, Borrower, Agent and Lender agree as follows:

SECTION 1. DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Unless otherwise defined herein, the following capitalized terms shall have the following meanings:

“Account Control Agreement(s)” means any agreement entered into by and among Agent, Borrower and a third party Bank or other institution (including a Securities Intermediary) in which Borrower maintains a Deposit Account or an account holding Investment Property and pursuant to which Agent obtains “control” (as such term is defined in the UCC) over the subject account or accounts.

“ACH Authorization” means the ACH Debit Authorization Agreement in substantially the form of Exhibit H, on which account numbers shall be redacted for security purposes if and when filed publicly by Borrower.

“Additional Tranche I Term Loan Advance” has the meaning given to it in Section 2.1(a).

“Additional Tranche I Term Loan Advance Period” means the period beginning on the Closing Date and ending on September 15, 2016.

“Advance” means any Term Loan Advance(s) made pursuant to this Agreement.

“Advance Date” means the funding date of any Advance.

“Advance Request” means a request for an Advance submitted by Borrower to Agent in substantially the form of Exhibit A, which request may omit account numbers for security purposes if and when filed publicly by Borrower.

“Affiliate” means (a) any Person that directly or indirectly controls, is controlled by, or is under common control with the Person in question, (b) any Person directly or indirectly owning, controlling or holding with power to vote 10% or more of the outstanding voting securities of another Person, (c) any Person 10% or more of whose outstanding voting securities are directly or indirectly owned, controlled or held by another Person with power to vote such securities, or (d) any Person related by blood or marriage to any Person described in subsection (a), (b) or (c) of this paragraph. As used in the definition of “Affiliate,” the term “control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through ownership of voting securities, by contract or otherwise.

“Agent” has the meaning given to it in the preamble to this Agreement.

“Agreement” means this Loan and Security Agreement, as amended from time to time.

“Amortization Date” means October 1, 2017; provided, however, if the Interest Only Extension Condition is satisfied, then the Amortization Date shall mean April 1, 2018.

“Assignee” has the meaning given to it in Section 11.13.

“Borrower” has the meaning given to it in the preamble to this Agreement.

“Borrower Products” means all products, software, service offerings, technical data or technology currently being designed, manufactured or sold by Borrower or which Borrower intends to sell, license or distribute in the future including any products or service offerings under development, collectively, together with all products, software, service offerings, technical data or technology that have been sold, licensed or distributed by Borrower since its incorporation.

“Business Day” means any day other than Saturday, Sunday and any other day on which banking institutions in the State of California are closed for business.

“Cash” means all cash, cash equivalents and liquid funds.

“Change in Control” means any reorganization, recapitalization, consolidation or merger (or similar transaction or series of related transactions) of Borrower, sale or exchange of outstanding shares (or similar transaction or series of related transactions) of Borrower in which the holders of Borrower’s outstanding shares immediately before consummation of such transaction or series of

related transactions do not, immediately after consummation of such transaction or series of related transactions, retain shares representing more than 50% of the voting power of the surviving entity of such transaction or series of related transactions (or the parent of such surviving entity if such surviving entity is wholly owned by such parent), in each case without regard to whether Borrower is the surviving entity.

“Claims” has the meaning given to it in Section 11.10.

“Closing Date” means the date of this Agreement.

“Collateral” means the property described in Section 3.

“Common Stock” means the Common Stock, \$0.01 par value per share, of Borrower.

“Confidential Information” has the meaning given to it in Section 11.12.

“Contingent Obligation” means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any Indebtedness, lease, dividend, letter of credit or other obligation of another Person, including any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term “Contingent Obligation” shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

“Copyright License” means any written agreement granting any right to use any Copyright or Copyright registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Copyrights” means all copyrights, whether registered or unregistered, held pursuant to the laws of the United States, any state thereof or any other country.

“Deposit Accounts” means any “deposit accounts,” as such term is defined in the UCC, and includes any checking account, savings account or certificate of deposit.

“Domestic Subsidiary” means any Subsidiary that is not a Foreign Subsidiary.

“Eligible Foreign Subsidiary” means any Foreign Subsidiary whose execution of a Joinder Agreement would not result in a material adverse tax consequence to Borrower.

“End of Term Amount” means \$1,216,250, plus, subject to and contingent on the funding of the Additional Tranche I Term Loan Advance by Lender, \$173,750, plus, subject to and contingent on the funding of the Tranche II Term Loan Advance by Lender, \$695,000.

“Equity Event” means any sale or issuance of Borrower securities for financing purposes (whether in a private placement, registered offering or otherwise).

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

“Event of Default” has the meaning given to it in Section 9.

“Financial Statements” has the meaning given to it in Section 7.1.

“Foreign Subsidiary” means any Subsidiary other than a Subsidiary organized under the laws of any state within the United States.

“GAAP” means generally accepted accounting principles in the United States of America, as in effect from time to time.

“Indebtedness” means indebtedness of any kind, including (a) all indebtedness for borrowed money or the deferred purchase price of property or services (excluding trade credit entered into in the ordinary course of business due within 90 days), including reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, and (d) all Contingent Obligations.

“Indemnified Person” has the meaning given to it in Section 6.3.

“Initial Facility Charge” means \$150,000.

“Insolvency Proceeding” means any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other similar relief.

“Intellectual Property” means all of Borrower’s Copyrights, Trademarks, Patents, Licenses, trade secrets and inventions, mask works; Borrower’s applications therefor and reissues, extensions, or renewals thereof; and Borrower’s goodwill associated with any of the foregoing, together with Borrower’s rights to sue for past, present and future infringement of Intellectual Property and the goodwill associated therewith.

“Interest Only Extension Condition” means the achievement by Borrower of each element of the Milestone in accordance with the definition thereof.

“Investment” means any beneficial ownership (including stock, partnership or limited liability company interests) of or in any Person, or any loan, advance or capital contribution to any Person or the acquisition of all, or substantially all, of the assets of another Person.

“Joinder Agreements” means for each Qualified Subsidiary, a completed and executed Joinder Agreement in substantially the form attached hereto as Exhibit G.

“Lender” has the meaning given to it in the preamble to this Agreement.

“Liabilities” has the meaning given to it in Section 6.3.

“License” means any Copyright License, Patent License, Trademark License or other license of rights or interests.

“Lien” means any mortgage, deed of trust, pledge, hypothecation, assignment for security, security interest, encumbrance, levy, lien or charge of any kind, whether voluntarily incurred or arising by operation of law or otherwise, against any property, any conditional sale or other title retention agreement, and any lease in the nature of a security interest.

“Loan” means the Advance(s) made under this Agreement.

“Loan Documents” means this Agreement, the Notes (if any), the ACH Authorization, the Account Control Agreements, the Joinder Agreements, all UCC Financing Statements and any other documents executed in connection with the Secured Obligations or the transactions contemplated hereby, as the same may from time to time be amended, modified, supplemented or restated.

“Material Adverse Effect” means a material adverse effect upon: (i) the business, operations, properties, assets or financial condition of Borrower and its Subsidiaries taken as a whole; or (ii) the ability of Borrower to perform or pay the Secured Obligations in accordance with the terms of the Loan Documents, or the ability of Agent or Lender to enforce any of its rights or remedies with respect to the Secured Obligations; or (iii) the Collateral or Agent’s Liens on the Collateral or the priority of such Liens.

“Maximum Rate” has the meaning given to it in Section 2.2.

“Maximum Tranche I Term Loan Amount” has the meaning given to it in the Recitals.

“Maximum Tranche II Term Loan Amount” has the meaning given to it in the Recitals.

“Milestone” means, as of (A) the date of Borrower’s request for the Tranche II Term Loan and/or (B) for purposes of determining Borrower’s satisfaction of the Interest Only Extension Condition, not later than March 15, 2017: (i) Borrower’s achievement of, each of the following as confirmed by Agent, (a) Borrower’s continued receipt of favorable interim data from the Phase 1/2 clinical trial of BPX-501 for the BP-004 protocol and (b) Borrower’s initiation of Phase 1 clinical trials for two candidates among the BPX-401, BPX-601 and BPX-701 product candidates; and (ii) the approval of the Tranche II Term Loan by the Investment Committee of Agent.

“Note(s)” means any Term Note(s).

“Patent License” means any written agreement granting any right with respect to any invention on which a Patent is in existence or a Patent application is pending, in which agreement Borrower now holds or hereafter acquires any interest.

“Patents” means all letters patent of, or rights corresponding thereto, in the United States or in any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto, in the United States or any other country.

“Permitted Indebtedness” means: (i) Indebtedness of Borrower in favor of Lender or Agent arising under this Agreement or any other Loan Document; (ii) Indebtedness existing on the Closing Date which is disclosed in Schedule 1A; (iii) Indebtedness of up to \$500,000 outstanding at any time secured by a Lien described in clause (vii) of the defined term “Permitted Liens,” provided such Indebtedness does not exceed the cost of the Equipment financed with such Indebtedness; (iv) Indebtedness to trade creditors incurred in the ordinary course of business, including Indebtedness incurred in the ordinary course of business with corporate credit cards; (v) Indebtedness that also constitutes a Permitted Investment; (vi) Subordinated Indebtedness; (vii) reimbursement obligations in connection with corporate credit cards and letters of credit that are secured by Cash and issued on behalf of Borrower or a Subsidiary thereof in an amount not to exceed \$250,000 at any time outstanding; (viii) other Indebtedness in an amount not to exceed \$250,000 at any time outstanding; (ix) intercompany Indebtedness as long as either (A) each of the Subsidiary obligor and the Subsidiary obligee under such Indebtedness is a Qualified Subsidiary that has executed a Joinder Agreement or (B) such amount does not exceed \$250,000 in the aggregate during any fiscal year; (x) up to \$500,000 in repayment obligations of Borrower under any foreign exchange contract, currency swap agreement, interest rate swap, cap or collar agreement or other similar agreement or arrangement designed to alter the risks to Borrower arising from fluctuations in currency values or interest rates entered into in the ordinary course of business and not for speculative purposes; (xi) Indebtedness secured by a Lien described in clause (xi) of the defined term Permitted Liens; (xii) Indebtedness consisting solely of fees, royalties, advances for research and development activities, and other amounts paid by third parties to Borrower, in each case in the ordinary course of Borrower’s business and which, by the express terms of the applicable agreement, license, contract or other instrument to which they relate, are payable in advance, and with respect to the payment of which Borrower may have contingent liabilities; (xiii) Indebtedness consisting solely of pre-paid fees, royalties, advances for research and development activities, and other amounts payable by or obligations of Borrower to third parties, in each case in the ordinary course of Borrower’s business, under in-bound and out-bound licenses of Intellectual Property used to improve Borrower’s product portfolio and competitive position; and (xiv) extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose materially more burdensome terms upon Borrower or its Subsidiary, as the case may be.

“Permitted Investment” means: (i) Investments existing on the Closing Date which are disclosed in Schedule 1B; (ii) (a) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one year from

the date of acquisition thereof, (b) commercial paper maturing no more than one year from the date of creation thereof and currently having a rating of at least A-2 or P-2 from either Standard & Poor's Corporation or Moody's Investors Service, (c) certificates of deposit issued by any bank with assets of at least \$500,000,000 maturing no more than one year from the date of investment therein, and (d) money market accounts; (iii) repurchases of stock from former employees, directors, or consultants of Borrower under the terms of applicable repurchase agreements at the original issuance price of such securities in an aggregate amount not to exceed \$250,000 in any fiscal year, provided that no Event of Default has occurred, is continuing or would exist after giving effect to the repurchases; (iv) Investments accepted in connection with Permitted Transfers; (v) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of Borrower's business; (vi) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business, provided that this subparagraph (vii) shall not apply to Investments of Borrower in any Subsidiary; (viii) Investments consisting of loans not involving the net transfer on a substantially contemporaneous basis of cash proceeds to employees, officers or directors relating to the purchase of capital stock of Borrower pursuant to employee stock purchase plans or other similar agreements approved by Borrower's Board of Directors; (ix) Investments consisting of travel advances in the ordinary course of business and relocation loans not to exceed \$500,000 in aggregate principal amount outstanding at any one time; (x) Investments in newly-formed or acquired Domestic Subsidiaries, provided that each such Domestic Subsidiary enters into a Joinder Agreement promptly after its formation or acquisition by Borrower and executes such other documents as shall be reasonably requested by Agent; (xi) Investments in Foreign Subsidiaries approved in advance in writing by Agent; (xii) joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the nonexclusive licensing of technology (provided that such licenses may be exclusive in respects other than territory and may be exclusive as to territory only as to discreet geographical areas outside the United States and may have such other exclusivity terms as consented to in writing by Agent, which consent shall not be unreasonably withheld), the development of technology or the providing of technical support, and provided that any cash Investments by Borrower do not exceed \$500,000 in the aggregate in any fiscal year; (xiii) Investments consisting of accounts receivable, endorsements for collection, deposits or similar Investments arising in the ordinary course of business; (xiv) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; (xv) expenditures of Cash for Borrower's establishment of European operations for the development and commercialization of Borrower's products in accordance with the budgets provided by Borrower to Agent from time-to-time; and (xvi) additional Investments that do not exceed \$250,000 in the aggregate.

"Permitted Liens" means any and all of the following: (i) Liens in favor of Agent or Lender; (ii) Liens existing on the Closing Date which are disclosed in Schedule 1C; (iii) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP; (iv) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of Borrower's business, including any such Liens securing claims or demands of materialman,

atrisans, mechanics, carriers, warehousemen and landlords in connection with the Borrower's buildout of the Borrower's location at 2130 W. Holcombe Blvd., Houston, Texas 77030, and in each case imposed without action of such parties; provided, that the payment thereof is not yet required; (v) Liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder; (vi) the following deposits, to the extent made in the ordinary course of business: deposits under worker's compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations (other than Liens arising under ERISA or environmental Liens) or surety or appeal bonds, or to secure indemnity, performance or other similar bonds; (vii) Liens on Equipment or software or other intellectual property constituting purchase money Liens and Liens in connection with capital leases securing Indebtedness permitted in clause (iii) of the definition of "Permitted Indebtedness"; (viii) Liens incurred in connection with Subordinated Indebtedness; (ix) leasehold interests in leases or subleases and licenses granted in the ordinary course of business and not interfering in any material respect with the business of the licensor; (x) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due; (xi) Liens securing the payment of financed insurance premiums that are promptly paid on or before the date they become due (provided that such Liens extend only to the insurance policies and all money due Borrower thereunder (including the return of premiums and dividends) and not to any other property or assets); (xii) statutory and common law rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms; (xiii) easements, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business so long as they do not materially impair the value or marketability of the related property; (xiv) (A) Liens on Cash securing obligations permitted under clause (vii) of the definition of Permitted Indebtedness and (B) security deposits in connection with real property leases in an aggregate amount not to exceed \$250,000 at any time; (xv) Liens of landlords (A) arising by statute or (B) under any lease entered into in the ordinary course of business, in each case solely with respect to fixtures and movable tangible property located on the real property leased or subleased from such landlord and securing amounts that are not yet due or that are being contested in good faith by appropriate proceedings, provided that the Borrower maintains adequate reserves therefor in accordance with GAAP, and which are subordinated to the security interests of the Agent granted under this Agreement and pursuant to a landlord waiver (or, with respect to clause (A) only, under any lease for which no landlord waiver is required hereunder); and (xvi) Liens incurred in connection with the extension, renewal or refinancing of the Indebtedness secured by Liens of the type described in clauses (i) through (xv) above; provided, that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase.

"Permitted Transfers" means (i) sales of Inventory in the ordinary course of business; (ii) non-exclusive licenses and similar arrangements for the use of Intellectual Property in the ordinary course of business and licenses that could not result in a legal transfer of title of the licensed property but that may be exclusive in respects other than territory and that may be exclusive as to territory

only as to discreet geographical areas outside of the United States in the ordinary course of business; (iii) dispositions of worn-out, obsolete or surplus Equipment at fair market value in the ordinary course of business; (iv) other Transfers of assets having a fair market value of not more than \$250,000 in the aggregate in any fiscal year; and (v) for the avoidance doubt, sales by Borrower of its equity securities in an Equity Event.

“Person” means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, other entity or government.

“Preferred Stock” means at any given time any equity security issued by Borrower that has any rights, preferences or privileges senior to Borrower’s Common Stock.

“Prepayment Charge” has the meaning given to it in Section 2.4.

“Publicity Materials” has the meaning given to it in Section 11.18.

“Qualified Subsidiary” means any direct or indirect Domestic Subsidiary or Eligible Foreign Subsidiary.

“Receivables” means (i) all of Borrower’s Accounts, Instruments, Documents, Chattel Paper, Supporting Obligations, letters of credit, proceeds of any letter of credit, and Letter of Credit Rights, and (ii) all customer lists, software, and business records related thereto.

“Required Lenders” means at any time, the holders of more than 50% of the sum of the aggregate unpaid principal amount of the Term Loan then outstanding.

“SBA” has the meaning given to it in Section 7.15.

“SBIC” has the meaning given to it in Section 7.15.

“SBIC Act” has the meaning given to it in Section 7.15.

“SEC” means the Securities and Exchange Commission.

“Second Facility Charge” means \$75,000.

“Secured Obligations” means Borrower’s obligations under this Agreement and any Loan Document, including any obligation to pay any amount now owing or later arising.

“Subordinated Indebtedness” means Indebtedness subordinated to the Secured Obligations in amounts and on terms and conditions satisfactory to Agent in its sole discretion.

“Subsidiary” means an entity, whether corporate, partnership, limited liability company, joint venture or otherwise, in which Borrower owns or controls 50% or more of the outstanding voting securities, including each entity listed on Schedule 1 hereto.

“Term Loan” means the Tranche I Term Loan and, as applicable, the Tranche II Term Loan.

“Term Loan Advance(s)” means any Term Loan funds advanced under this Agreement.

“Term Loan Interest Rate” means for any day a per annum rate of interest equal to the greater of either (i) 9.35% plus the prime rate as reported in The Wall Street Journal minus 3.50%, and (ii) 9.35%.

“Term Loan Maturity Date” means March 1, 2020.

“Term Note” means a Promissory Note in substantially the form of Exhibit B.

“Trademark License” means any written agreement granting any right to use any Trademark or Trademark registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

“Trademarks” means all trademarks (registered, common law or otherwise) and any applications in connection therewith, including registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country or any political subdivision thereof.

“Tranche I Term Loan” has the meaning given to it in the Recitals.

“Tranche I Term Loan Commitment” means as to any Lender, the obligation of such Lender, if any, to make a Tranche I Term Loan Advance to Borrower in a principal amount not to exceed the amount set forth under the heading “Tranche I Term Loan Commitment” opposite such Lender’s name on Schedule 1.1.

“Tranche II Contingent Term Loan Commitment” means as to any Lender, the obligation of such Lender, if any, to make a Tranche II Term Loan Advance to Borrower in a principal amount not to exceed the amount set forth under the heading “Tranche II Contingent Term Loan Commitment” opposite such Lender’s name on Schedule 1.2.

“Tranche II Term Loan” has the meaning given to it in the Recitals.

“Tranche II Term Loan Advance” is defined in Section 2.1(a).

“Tranche II Term Loan Advance Period” means the period commencing on the date that Borrower has achieved each element of the Milestone in accordance with the definition thereof, and on which Lender is obligated to make the Tranche II Term Loan pursuant to this Agreement, through and including March 15, 2017.

“UCC” means the Uniform Commercial Code as the same is, from time to time, in effect in the State of California; provided, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection or priority of, or remedies with respect to, Agent’s Lien on any Collateral is governed by the Uniform Commercial Code as the same is, from time to time, in effect in a jurisdiction other than the State of California, then the term “UCC” shall mean the

Uniform Commercial Code as in effect, from time to time, in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority or remedies and for purposes of definitions related to such provisions.

Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a “Section,” “subsection,” “Exhibit,” “Annex,” or “Schedule” shall refer to the corresponding Section, subsection, Exhibit, Annex, or Schedule in or to this Agreement. Unless otherwise specifically provided herein, any accounting term used in this Agreement or the other Loan Documents shall have the meaning customarily given such term in accordance with GAAP, and all financial computations hereunder shall be computed in accordance with GAAP, consistently applied. Unless otherwise defined herein or in the other Loan Documents, terms that are used herein or in the other Loan Documents and defined in the UCC shall have the meanings given to them in the UCC.

SECTION 2. THE LOAN

2.1 Term Loan.

(a) Tranche I Term Loan; Tranche II Term Loan.

(i) *Tranche I Term Loan.* Subject to the terms and conditions of this Agreement, Lender will severally (and not jointly) make in an amount not to exceed its respective Tranche I Term Loan Commitment, and Borrower agrees to draw, an initial Tranche I Term Loan Advance of \$15,000,000 on the Closing Date. During the Additional Tranche I Term Loan Advance Period, at Borrower’s request, Lender shall advance an additional Tranche I Term Loan Advance in an amount equal to \$5,000,000 (the “Additional Tranche I Term Loan Advance”). The aggregate outstanding Tranche I Term Loan Advances shall not exceed the Maximum Tranche I Term Loan Amount.

(ii) *Tranche II Term Loan.* Subject to the terms and conditions of this Agreement and conditioned on Borrower’s achievement of each element of the Milestone in accordance with the definition thereof, during the Tranche II Term Loan Advance Period, at Borrower’s request, Lender will severally (and not jointly) make in an amount not to exceed its respective Tranche II Contingent Term Loan Commitment, the Tranche II Term Loan in an amount equal to \$10,000,000 (the “Tranche II Term Loan Advance”). The aggregate outstanding Tranche II Term Loan Advance shall not exceed the Maximum Tranche II Term Loan Amount.

(b) Advance Request. To obtain a Term Loan Advance, Borrower shall complete, sign and deliver to Agent an Advance Request at least one Business Day before the Closing Date and at least three Business Days before an Advance Date other than the Closing Date. Lender shall fund each Term Loan Advance in the manner requested by the Advance Request; provided that each of the conditions precedent to such Term Loan Advance is satisfied as of the requested Advance Date.

(c) Term Loan Interest Rate. The principal balance of each Term Loan Advance shall bear interest thereon from the applicable Advance Date at the Term Loan Interest Rate based

on a year consisting of 360 days, with interest computed daily based on the actual number of days elapsed. The Term Loan Interest Rate will float and change on the day the prime rate changes from time to time.

(d) Payment. Borrower will pay interest on the outstanding principal amount of each Term Loan Advance on the first Business Day of each month, beginning the month after the Advance Date. Borrower shall repay the aggregate Term Loan principal balance that is outstanding on the day immediately preceding the Amortization Date in equal monthly installments of principal and interest (mortgage style) beginning on the Amortization Date and continuing on the first Business Day of each month thereafter until the Secured Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) are repaid. The entire Term Loan principal balance and all accrued but unpaid interest hereunder, shall be due and payable on the Term Loan Maturity Date. Borrower shall make all payments under this Agreement without setoff, recoupment or deduction and regardless of any counterclaim or defense. Lender will initiate debit entries to Borrower's account as authorized on the ACH Authorization on each payment date of all (i) periodic obligations payable to Lender under each Term Advance and (ii) out-of-pocket legal fees and costs incurred by Agent or Lender in connection with Section 11.11 of this Agreement.

2.2 Maximum Interest. Notwithstanding any provision in this Agreement or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (which under the laws of the State of California shall be deemed to be the laws relating to permissible rates of interest on commercial loans) (the "Maximum Rate"). If a court of competent jurisdiction shall finally determine that Borrower has actually paid to Lender an amount of interest in excess of the amount that would have been payable if all of the Secured Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrower shall be applied as follows: first, to the payment of the Secured Obligations consisting of the outstanding principal; second, after all principal is repaid, to the payment of Lender's accrued interest, costs, expenses, professional fees and any other Secured Obligations; and third, after all Secured Obligations are repaid, the excess (if any) shall be refunded to Borrower.

2.3 Default Interest. In the event any payment is not paid on the scheduled payment date, an amount equal to 5% of the past due amount shall be payable on demand. In addition, upon the occurrence and during the continuation of an Event of Default hereunder, all Secured Obligations, including principal, interest, compounded interest, and professional fees, shall bear interest at a rate per annum equal to the rate set forth in Section 2.1(c) plus 5% per annum. In the event any interest is not paid when due hereunder, delinquent interest shall be added to principal and shall bear interest on interest, compounded at the rate set forth in Section 2.1(c) or this Section 2.3, as applicable.

2.4 Prepayment. At its option upon at least seven Business Days prior notice to Agent, Borrower may prepay all, but not less than all, of the outstanding Advances by paying the entire principal balance, all accrued and unpaid interest thereon, together with a prepayment charge equal to the following percentage of the Advance amount being prepaid (each, a "Prepayment Charge"): (i) if the Advance amount is prepaid on or before December 31, 2016, no Prepayment Charge shall

apply; (ii) if the Advance amount is prepaid on or after January 1, 2017 but prior to the date that is 24 months following the Closing Date, the prepayment percentage shall be 2.00%; and (iii) if the Advance amount is prepaid thereafter, the prepayment percentage shall be 1.00%. Borrower agrees that the Prepayment Charge is a reasonable calculation of Lender's lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the Advances. Borrower shall prepay the outstanding amount of all principal and accrued interest through the prepayment date and the Prepayment Charge upon the occurrence of a Change in Control. Notwithstanding the foregoing, Agent and Lender agree to waive the Prepayment Charge if Agent and Lender (in its sole and absolute discretion) agree in writing to refinance the Advances prior to the Term Loan Maturity Date.

2.5 End of Term Charge. On the earliest to occur of (i) the Term Loan Maturity Date, (ii) the date that Borrower prepays the outstanding Secured Obligations (other than any inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) in full, or (iii) the date that the Secured Obligations become due and payable, Borrower shall pay Lender the End of Term Amount. Notwithstanding the required payment date of such charge, it shall be deemed earned by Lender as of the Closing Date.

2.6 Notes. If so requested by Lender by written notice to Borrower, then Borrower shall execute and deliver to Lender (and/or, if applicable and if so specified in such notice, to any Person who is an assignee of Lender pursuant to Section 11.13) promptly after Borrower's receipt of such notice a Note or Notes to evidence Lender's Loans.

2.7 Pro Rata Treatment. Each payment (including prepayment) on account of any fee and any reduction of the Term Loan shall be made pro rata according to the aggregate Tranche I Term Loan Commitments and Tranche II Contingent Term Loan Commitments of the relevant Lender.

SECTION 3. SECURITY INTEREST

3.1 As security for the prompt and complete payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Borrower grants to Agent a security interest in all of Borrower's right, title, and interest in and to the following personal property whether now owned or hereafter acquired (collectively, the "Collateral"): (a) Receivables; (b) Equipment; (c) Fixtures; (d) General Intangibles (which, for the avoidance of doubt, shall exclude Intellectual Property pursuant to Section 3.2); (e) Inventory; (f) Investment Property; (g) Deposit Accounts; (h) Cash; (i) Goods; and all other tangible and intangible personal property of Borrower whether now or hereafter owned or existing, leased, consigned by or to, or acquired by, Borrower and wherever located, and any of Borrower's property in the possession or under the control of Agent; and, to the extent not otherwise included, all Proceeds of each of the foregoing and all accessions to, substitutions and replacements for, and rents, profits and products of each of the foregoing; provided, however, that the Collateral shall include all Accounts and General Intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights in, the Intellectual Property (the "Rights to Payment"). Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the

Collateral shall automatically, and effective as of the date of this Agreement, include the Intellectual Property to the extent necessary to permit perfection of Agent's security interest in the Rights to Payment.

3.2 Notwithstanding the broad grant of the security interest set forth in Section 3.1, above, the Collateral shall not include: (a) more than 65% of the presently existing and hereafter arising issued and outstanding shares of capital stock owned by Borrower of any Foreign Subsidiary (other than an Eligible Foreign Subsidiary) which shares entitle the holder thereof to vote for directors or any other matter; (b) nonassignable licenses or contracts, which by their terms require the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, Sections 9406, 9407 and 9408 of the UCC); (c) Cash securing obligations permitted under clause (vii) of the definition of Permitted Indebtedness; (d) any Intellectual Property, whether now owned or hereafter acquired (other than any Rights to Payment in respect thereof); and (e) property owned by Borrower that is subject to a purchase money Lien or a capital lease (and the proceeds thereof) permitted under this Agreement if the contractual obligation pursuant to which such Lien is granted (or in the document providing for such capital lease) prohibits, or requires the consent of any person other than Borrower which has not been obtained as a condition to the creation of, any other Lien on such property (but only to the extent that such prohibition or consent requirement is enforceable under applicable law, including, without limitation, Sections 9406, 9407 and 9408 of the UCC).

3.3 The lien and security interest created hereunder shall be automatically released (a) with respect to all Collateral upon the payment in full of all Secured Obligations in accordance with this Agreement (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement), (b) with respect to Collateral that is sold or to be sold as part of or in connection with any Permitted Transfer, or (c) if otherwise approved, authorized or ratified in writing by Agent in accordance with this Agreement. Upon such release, Agent shall, upon the reasonable request and at the sole cost and expense of Borrower, assign, transfer and deliver to Borrower, against receipt and without recourse to or warranty by Agent, except as to the fact that Agent has not encumbered the released assets, such of the Collateral or any part thereof to be released as is in possession of Agent and as shall not have been sold or otherwise applied pursuant to the terms hereof and customary documents and instruments (including UCC-3 termination financing statements or releases) acknowledging the release of such Collateral.

SECTION 4. CONDITIONS PRECEDENT TO LOAN

The obligations of Lender to make the Loan hereunder are subject to the satisfaction by Borrower of the following conditions:

4.1 Initial Tranche I Term Loan Advance. On or prior to the Closing Date, Borrower shall have delivered to Agent the following:

(a) executed copies of the Loan Documents, Account Control Agreements, a legal opinion of Borrower's counsel, and all other documents and instruments reasonably required by Agent to effectuate the transactions contemplated hereby or to create and perfect the Liens of

Agent with respect to all Collateral, in all cases in form and substance reasonably acceptable to Agent;

(b) certified copy of resolutions of Borrower's board of directors evidencing approval the Loan and other transactions evidenced by the Loan Documents;

(c) certified copies of the Certificate of Incorporation and the Bylaws, as amended through the Closing Date, of Borrower;

(d) a certificate of good standing for Borrower from its state of incorporation and similar certificates from all other jurisdictions in which it does business and where the failure to be qualified would have a Material Adverse Effect;

(e) payment of the Initial Facility Charge and reimbursement of Agent's and Lender's current expenses reimbursable pursuant to this Agreement, which amounts may be deducted from the initial Advance (Agent and Lender acknowledge receipt of a \$25,000 deposit from Borrower); and

(f) such other documents as Agent may reasonably request.

4.2 All Advances. On each Advance Date for the Additional Tranche I Term Loan Advance and, as applicable, the Tranche II Term Loan Advance:

(a) Agent shall have received an Advance Request for the relevant Advance as required by Section 2.1(b), duly executed by Borrower's Chief Executive Officer or Chief Financial Officer, and (ii) any other documents Agent may reasonably request.

(b) The representations and warranties set forth in this Agreement shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date.

(c) Borrower shall be in compliance with all the terms and provisions set forth herein and in each other Loan Document on its part to be observed or performed, and at the time of and immediately after such Advance no Event of Default shall have occurred and be continuing.

(d) Each Advance Request shall be deemed to constitute a representation and warranty by Borrower on the relevant Advance Date as to the matters specified in paragraphs (b) and (c) of this Section 4.2 and as to the matters set forth in the Advance Request.

(e) With respect to the Tranche II Term Loan Advance, Lender's obligation to make such Advance is subject to and conditioned on Borrower's achievement of each element of the Milestone in accordance with the definition thereof.

(f) With respect to, and as a condition to Lender making the Tranche II Term Loan Advance, Borrower shall pay the Second Facility Charge, which amount may be deducted from the Tranche II Term Loan Advance.

4.3 No Default. As of the Closing Date and each Advance Date, (i) no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default and (ii) no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing.

SECTION 5. REPRESENTATIONS AND WARRANTIES OF BORROWER

Borrower represents and warrants that:

5.1 Corporate Status. Borrower is a corporation duly organized, legally existing and in good standing under the laws of the State of Delaware, and is duly qualified as a foreign corporation in all jurisdictions in which the nature of its business or location of its properties require such qualifications and where the failure to be qualified could reasonably be expected to have a Material Adverse Effect. Borrower's present name, former names (if any), locations, place of formation, tax identification number, organizational identification number and other information are correctly set forth in Exhibit C, as may be updated by Borrower in a written notice (including any Compliance Certificate) provided to Agent after the Closing Date.

5.2 Collateral. Borrower owns the Collateral and the Intellectual Property, free of all Liens, except for Permitted Liens. Borrower has the power and authority to grant to Agent a Lien in the Collateral as security for the Secured Obligations.

5.3 Consents. Borrower's execution, delivery and performance of this Agreement and all other Loan Documents (i) have been duly authorized by all necessary corporate action of Borrower, (ii) will not result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens and the Liens created by this Agreement and the other Loan Documents, (iii) do not violate any provisions of Borrower's Certificate or Articles of Incorporation (as applicable), bylaws, or any, law, regulation, order, injunction, judgment, decree or writ to which Borrower is subject and (iv) except as described on Schedule 5.3, do not violate any contract or agreement or require the consent or approval of any other Person which has not already been obtained. The individual or individuals executing the Loan Documents are duly authorized to do so.

5.4 Material Adverse Effect. No event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing. Borrower is not aware of any event likely to occur that is reasonably expected to result in a Material Adverse Effect.

5.5 Actions Before Governmental Authorities. There are no actions, suits or proceedings at law or in equity or by or before any governmental authority now pending or, to the knowledge of Borrower, threatened against or affecting Borrower or its property, that is reasonably expected to result in a Material Adverse Effect.

5.6 Laws. Borrower is not in violation of any law, rule or regulation, or in default with respect to any judgment, writ, injunction or decree of any governmental authority, where such violation or default is reasonably expected to result in a Material Adverse Effect. Borrower is not in default in any manner under any provision of any agreement or instrument evidencing material Indebtedness, or any other material agreement to which it is a party or by which it is bound. Borrower,

its Affiliates and, to the knowledge of Borrower and its Affiliates, any agent or other party acting on behalf of Borrower or its Affiliates are in compliance with all applicable anti-money laundering, economic sanctions and anti-bribery laws and regulations, and none of the funds to be provided under this Agreement will be used, directly or indirectly, for any activities in violation of such laws and regulations. Borrower is not an “investment company” or a company “controlled” by an “investment company” within the meaning of the Investment Company Act of 1940, as amended, or the rules promulgated thereunder.

5.7 Information Correct and Current. No information, report, Advance Request, financial statement, exhibit or schedule furnished, by or on behalf of Borrower to Agent in connection with any Loan Document or included therein or delivered pursuant thereto contained, or, when taken as a whole, contains or will contain any material misstatement of fact or, when taken together with all other such information or documents, omitted, omits or will omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were, are or will be made, not materially misleading at the time such statement was made or deemed made. Additionally, any and all financial or business projections provided by Borrower to Agent, whether prior to or after the Closing Date, shall be (i) provided in good faith and based on the most current data and information available to Borrower, and (ii) the most current of such projections provided to Borrower’s Board of Directors (it being understood that such projections are subject to significant uncertainties and contingencies, many of which are beyond the control of Borrower, that no assurance is given that any particular projections will be realized, and that actual results may differ).

5.8 Tax Matters. Except as described on Schedule 5.8 and except those being contested in good faith with adequate reserves under GAAP, (a) Borrower has filed all material federal, state and local tax returns that it is required to file, (b) Borrower has duly paid or fully reserved for all taxes or installments thereof (including any interest or penalties) as and when due, which have or may become due pursuant to such returns, and (c) Borrower has paid or fully reserved for any tax assessment received by Borrower for the three (3) years preceding the Closing Date, if any (including any taxes being contested in good faith and by appropriate proceedings).

5.9 Intellectual Property Claims. Borrower is the sole owner of, or otherwise has the right to use, the Intellectual Property material to Borrower’s business. Except as described on Schedule 5.9, to the best of Borrower’s knowledge, (i) each of the material Copyrights, Trademarks and Patents is valid and enforceable, (ii) no material part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and (iii) no claim has been made to Borrower that any material part of the Intellectual Property violates the rights of any third party. Exhibit D is a true, correct and complete list of each of Borrower’s Patents, registered Trademarks, registered Copyrights, and material agreements under which Borrower licenses Intellectual Property from third parties (other than shrink-wrap software licenses), together with application or registration numbers, as applicable, owned by Borrower or any Subsidiary, in each case as of the Closing Date. Borrower is not in material breach of, nor has Borrower failed to perform any material obligations under, any of the foregoing contracts, licenses or agreements and, to Borrower’s knowledge, no third party to any such contract, license or agreement is in material breach thereof or has failed to perform any material obligations thereunder.

5.10 Intellectual Property. Except as described on Schedule 5.10, Borrower has all material rights with respect to Intellectual Property necessary or material in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower. Without limiting the generality of the foregoing, and in the case of Licenses, except for restrictions that are unenforceable under Division 9 of the UCC, Borrower has the right, to the extent required to operate Borrower's business, to freely transfer, license or assign Intellectual Property necessary or material in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower, without condition, restriction or payment of any kind (other than license payments in the ordinary course of business) to any third party, except for Intellectual Property subject to Licenses to the extent such Licenses constitute Permitted Transfers of the type described in clause (ii) of the definition thereof and Borrower owns or has the right to use, pursuant to valid licenses, all software development tools, library functions, compilers and all other third-party software and other items that are material to Borrower's business and used in the design, development, promotion, sale, license, manufacture, import, export, use or distribution of Borrower Products except customary covenants in inbound license agreements and equipment leases where Borrower is the licensee or lessee.

5.11 Borrower Products. Except as described on Schedule 5.11, no Intellectual Property owned by Borrower or Borrower Product has been or is subject to any actual or, to the knowledge of Borrower, threatened litigation, proceeding (including any proceeding in the United States Patent and Trademark Office or any corresponding foreign office or agency) or outstanding decree, order, judgment, settlement agreement or stipulation that restricts in any manner Borrower's use, transfer or licensing thereof or that may affect the validity, use or enforceability thereof. There is no decree, order, judgment, agreement, stipulation, arbitral award or other provision entered into in connection with any litigation or proceeding that obligates Borrower to grant licenses or ownership interest in any future Intellectual Property related to the operation or conduct of the business of Borrower or Borrower Products. Borrower has not received any written notice or claim, or, to the knowledge of Borrower, oral notice or claim, challenging or questioning Borrower's ownership in any Intellectual Property (or written notice of any claim challenging or questioning the ownership in any licensed Intellectual Property of the owner thereof) or suggesting that any third party has any claim of legal or beneficial ownership with respect thereto nor, to Borrower's knowledge, is there a reasonable basis for any such claim. Neither Borrower's use of its Intellectual Property nor the production and sale of Borrower Products infringes the Intellectual Property or other rights of others.

5.12 Financial Accounts. Exhibit E, as may be updated by Borrower in a written notice provided to Agent after the Closing Date, is a true, correct and complete list of (a) all banks and other financial institutions at which Borrower or any Subsidiary maintains Deposit Accounts and (b) all institutions at which Borrower or any Subsidiary maintains an account holding Investment Property, and such exhibit correctly identifies the name, address and telephone number of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor.

5.13 Employee Loans. Except for Permitted Investments of the type described in clauses (i), (viii) or (ix) of the definition thereof, Borrower has no outstanding loans to any employee, officer

or director of Borrower nor has Borrower guaranteed the payment of any loan made to an employee, officer or director of Borrower by a third party.

5.14 Capitalization and Subsidiaries. Borrower's capitalization as of the Closing Date is as set forth in the certificate separately provided to Agent on the Closing Date. Borrower does not own any stock, partnership interest or other securities of any Person, except for Permitted Investments. Attached as Schedule 5.14, as may be updated by Borrower in a written notice provided after the Closing Date, is a true, correct and complete list of each Subsidiary.

SECTION 6. INSURANCE; INDEMNIFICATION

6.1 Coverage. Borrower shall cause to be carried and maintained commercial general liability insurance, on an occurrence form, against risks customarily insured against in Borrower's line of business. Such risks shall include the risks of bodily injury, including death, property damage, personal injury, advertising injury, and contractual liability per the terms of the indemnification agreement found in Section 6.3. Borrower must maintain a minimum of \$2,000,000 of commercial general liability insurance for each occurrence. Borrower has and agrees to maintain a minimum of \$2,000,000 of directors' and officers' insurance for each occurrence and \$5,000,000 in the aggregate. So long as there are any Secured Obligations outstanding (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement), Borrower shall also cause to be carried and maintained insurance upon the Collateral, insuring against all risks of physical loss or damage howsoever caused, in an amount not less than the full replacement cost of the Collateral, provided that such insurance may be subject to standard exceptions and deductibles.

6.2 Certificates. Borrower shall deliver to Agent certificates of insurance that evidence Borrower's compliance with its insurance obligations in Section 6.1 and the obligations contained in this Section 6.2. Borrower's insurance certificate shall state Agent is an additional insured for commercial general liability, a loss payee for all risk property damage insurance, subject to the insurer's approval, and a loss payee for property insurance and additional insured for liability insurance for any future insurance that Borrower may acquire from such insurer. Attached to the certificates of insurance will be additional insured endorsements for liability and lender's loss payable endorsements for all risk property damage insurance. All certificates of insurance will provide for a minimum of 30 days' advance written notice to Agent of cancellation (other than cancellation for non-payment of premiums, for which 10 days' advance written notice shall be sufficient) or any other change adverse to Agent's interests. Any failure of Agent to scrutinize such insurance certificates for compliance is not a waiver of any of Agent's rights, all of which are reserved.

6.3 Indemnity. Borrower agrees to indemnify and hold Agent, Lender and their officers, directors, employees, agents, in-house attorneys, representatives and shareholders (each, an "Indemnified Person") harmless from and against any and all claims, costs, expenses, damages and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort), including reasonable attorneys' fees and disbursements and other costs of investigation or defense (including those incurred upon any appeal) (collectively, "Liabilities"), that may be instituted or asserted against or incurred by such Indemnified Person as

the result of credit having been extended, suspended or terminated under this Agreement and the other Loan Documents or the administration of such credit, or in connection with or arising out of the transactions contemplated hereunder and thereunder, or any actions or failures to act in connection therewith, or arising out of the disposition or utilization of the Collateral, excluding in all cases Liabilities to the extent resulting from any Indemnified Person's gross negligence or willful misconduct. Borrower agrees to pay, and to save Agent and Lender harmless from, any and all liabilities with respect to, or resulting from any delay in paying, any and all excise, sales or other similar taxes (excluding taxes imposed on or measured by the net income of Agent or Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement. In no event shall any Indemnified Person be liable on any theory of liability for any special, indirect, consequential or punitive damages (including any loss of profits, business or anticipated savings). This Section 6.3 shall survive the repayment of indebtedness under, and otherwise shall survive the expiration or other termination of, this Agreement.

SECTION 7. COVENANTS OF BORROWER

Borrower agrees as follows:

7.1 Financial Reports. Borrower shall furnish to Agent the financial statements and reports listed hereinafter (the "Financial Statements"):

(a) as soon as practicable (and in any event within 30 days) after the end of each month, unaudited interim and year-to-date financial statements as of the end of such month (prepared on a consolidated and consolidating basis, if applicable), including a balance sheet and related statements of income and cash flows accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that would reasonably be expected to have a Material Adverse Effect, all certified by Borrower's Chief Executive Officer or Chief Financial Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, (ii) that they are subject to normal year-end adjustments, and (iii) they do not contain certain non-cash items that are customarily included in quarterly and annual financial statements;

(b) as soon as practicable (and in any event within 40 days) after the end of each calendar quarter, unaudited interim and year-to-date financial statements as of the end of such calendar quarter (prepared on a consolidated and consolidating basis, if applicable), including balance sheet and related statements of income and cash flows accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that would reasonably be expected to have a Material Adverse Effect, certified by Borrower's Chief Executive Officer or Chief Financial Officer to the effect that they have been prepared in accordance with GAAP, except (i) for the absence of footnotes, and (ii) that they are subject to normal year-end adjustments; as well as the most recent capitalization table for Borrower, including the weighted average exercise price of employee stock options;

(c) as soon as practicable (and in any event within 90 days) after the end of each fiscal year, unqualified audited financial statements as of the end of such year (prepared on a consolidated and consolidating basis, if applicable), including balance sheet and related statements

of income and cash flows, and setting forth in comparative form the corresponding figures for the preceding fiscal year, certified by a firm of independent certified public accountants selected by Borrower and reasonably acceptable to Agent, accompanied by any management report from such accountants;

(d) as soon as practicable (and in any event within 30 days) after the end of each month, a Compliance Certificate in the form of Exhibit F;

(e) intentionally omitted;

(f) promptly after the sending or filing thereof, as the case may be, copies of any proxy statements, financial statements or reports that Borrower has made available to holders of its Common Stock and/or Preferred Stock and copies of any regular, periodic and special reports or registration statements that Borrower files with the Securities and Exchange Commission or any governmental authority that may be substituted therefor, or any national securities exchange;

(g) promptly following each meeting of Borrower's Board of Directors, copies of all notices, minutes, consents and other materials that Borrower provides to its directors in connection with meetings of its full Board of Directors; provided that, in all cases, Borrower may exclude: (A) any confidential information relating to executive compensation, (B) minutes and other materials prepared exclusively for executive sessions of the independent directors and committees of the Board of Directors, (C) information to the extent the Secured Obligations, any Loan Document, the Agent or the Lender is the subject of such information, (D) any information with respect to which Borrower has determined in good faith such exclusion or redaction is reasonably necessary to preserve attorney-client privilege with respect to any matter, or such exclusion or redaction is otherwise required to comply with applicable laws or regulations, (E) any information if there exists, with respect to the deliberations of the Borrower's Board of Directors, an actual or potential conflict of interest between Borrower and the Agent or Lender, as determined by Borrower in good faith, or (F) Borrower reasonably determines that the delivery of such materials to the Agent or Lender would be materially injurious to the Borrower.

(h) financial and business projections within 30 days after their approval by Borrower's Board of Directors, as well as budgets, operating plans and other financial information reasonably requested by Agent.

Borrower shall not (without the consent of Agent, such consent not to be unreasonably withheld or delayed) make any change in its (a) accounting policies or reporting practices, except as required by GAAP, or (b) fiscal years or fiscal quarters. The fiscal year of Borrower shall end on December 31.

Notwithstanding anything to the contrary in this Section 7.1, Borrower shall not be required to deliver any financial statements to the Agent under clauses (b), (c), or (f) above with respect to any period for which it has timely filed its Form 10-K or Form 10-Q, as the case may be, with the SEC; provided that such Form 10-K or Form 10-Q, as the case may be, is publicly available on the SEC's website (or a similar website) within the time periods permitted by this Section 7.1 and Borrower promptly notifies Agent in writing (which may be by electronic mail) of the posting of

any such documents. To the extent any documents required to be delivered pursuant to the terms hereof are included in materials otherwise filed with the SEC, Borrower may deliver such documents by e-mailing to Agent a link to the applicable filing posted on the SEC website currently located at www.sec.gov.

The executed Compliance Certificate may be sent via email to Agent at legal@herculestech.com. The information required to be delivered pursuant to clause (a) shall be sent via e-mail to financialstatements@herculestech.com with a copy to legal@herculestech.com provided, that if e-mail is not available or sending such Financial Statements via e-mail is not possible, they shall be sent to Agent at: legal@herculestech.com, attention Chief Credit Officer.

7.2 Management Rights. Borrower shall permit any representative that Agent or Lender authorizes, including its attorneys and accountants, to inspect the Collateral and examine and make copies and abstracts of the books of account and records of Borrower at reasonable times and upon reasonable notice during normal business hours; provided, however, that so long as no Event of Default has occurred and is continuing, such examinations shall be limited to no more often than twice per fiscal year. In addition, any such representative shall have the right to meet with management and officers of Borrower to discuss such books of account and records. In addition, Agent or Lender shall be entitled at reasonable times and intervals to consult with and advise the management and officers of Borrower concerning significant business issues affecting Borrower. Such consultations shall not unreasonably interfere with Borrower's business operations. The parties intend that the rights granted Agent and Lender shall constitute "management rights" within the meaning of 29 C.F.R. Section 2510.3-101(d)(3)(ii), but that any advice, recommendations or participation by Agent or Lender with respect to any business issues shall not be deemed to give Agent or Lender, nor be deemed an exercise by Agent or Lender of, control over Borrower's management or policies.

7.3 Further Assurances. Borrower shall from time to time execute, deliver and file, alone or with Agent, any financing statements, security agreements, collateral assignments, notices, control agreements, or other documents to perfect or give the highest priority to Agent's Lien on the Collateral. Borrower shall from time to time procure any instruments or documents as may be reasonably requested by Agent, and take all further action that may be necessary, or that Agent may reasonably request, to perfect and protect the Liens granted hereby and thereby. In addition, and for such purposes only, Borrower hereby authorizes Agent to execute and deliver on behalf of Borrower and to file such financing statements (including an indication that the financing statement covers "all assets or all personal property" of Borrower in accordance with Section 9-504 of the UCC), collateral assignments, notices, control agreements, security agreements and other documents without the signature of Borrower either in Agent's name or in the name of Agent as agent and attorney-in-fact for Borrower. Borrower shall protect and defend Borrower's title to the Collateral and Agent's Lien thereon against all Persons claiming any interest adverse to Borrower or Agent other than Permitted Liens.

7.4 Indebtedness. Borrower shall not create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness, or prepay any Indebtedness (other than Secured Obligations) or take any actions

which impose on Borrower an obligation to prepay any Indebtedness, except for (a) the conversion of Indebtedness into equity securities and the payment of cash in lieu of fractional shares in connection with such conversion, (b) purchase money Indebtedness pursuant to its then applicable payment schedule, (c) prepayment by any Subsidiary of (i) inter-company Indebtedness owed by such Subsidiary to Borrower, or (ii) if such Subsidiary is not a Borrower, intercompany Indebtedness owed by such Subsidiary to another Subsidiary that is not a Borrower or (d) as otherwise permitted hereunder or approved in writing by Agent.

7.5 Collateral. Borrower shall at all times keep the Collateral, the Intellectual Property and all other property and assets used in Borrower's business or in which Borrower now or hereafter holds any interest free and clear from any legal process or Liens whatsoever (except for Permitted Liens), and shall give Agent prompt written notice of any legal process affecting the Collateral, the Intellectual Property, such other property and assets, or any Liens thereon, provided, however, that the Collateral and such other property and assets may be subject to Permitted Liens except that there shall be no Liens whatsoever on Intellectual Property. Borrower shall not agree with any Person other than Agent or Lender not to encumber its property other than such negative pledges that relate solely to the asset or assets subject to a Permitted Lien or that relate solely to in-bound license agreements that by their terms expressly prohibit assignment of the related license(s) by Borrower. Borrower shall not enter into or suffer to exist or become effective any agreement that prohibits or limits the ability of any Borrower to create, incur, assume or suffer to exist any Lien upon any of its Intellectual Property, whether now owned or hereafter acquired, to secure its obligations under the Loan Documents to which it is a party other than (a) this Agreement and the other Loan Documents, (b) any agreements governing any purchase money Liens or capital lease obligations otherwise permitted hereby (in which case, any prohibition or limitation shall only be effective against the assets financed thereby) and (c) customary restrictions on the assignment of leases, licenses and other agreements. Borrower shall cause its Subsidiaries to protect and defend such Subsidiary's title to its assets from and against all Persons claiming any interest adverse to such Subsidiary, and Borrower shall cause its Subsidiaries at all times to keep such Subsidiary's property and assets free and clear from any legal process or Liens whatsoever (except for Permitted Liens, provided, however, that there shall be no Liens whatsoever on Intellectual Property), and shall give Agent prompt written notice of any legal process affecting such Subsidiary's assets.

7.6 Investments. Borrower shall not directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments.

7.7 Distributions. Borrower shall not, and shall not allow any Subsidiary to, (a) repurchase or redeem any class of stock or other equity interest other than (i) pursuant to employee, director or consultant stock purchase or repurchase plans or other similar agreements; provided, however, in each case the repurchase or redemption price does not exceed the original consideration paid for such stock or equity interest, and (ii) the conversion of any of its convertible equity securities into other securities pursuant to the terms of such convertible securities, or (b) declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest, except that a Subsidiary may pay dividends or make distributions to Borrower, or (c) lend money to any employees, officers or directors or guarantee the payment of any such loans granted

by a third party in excess of \$250,000 in the aggregate or (d) waive, release or forgive any Indebtedness owed by any employees, officers or directors in excess of \$250,000 in the aggregate.

7.8 Transfers. Except for Permitted Transfers, Borrower shall not, and shall not allow any Subsidiary to, voluntarily or involuntarily transfer, sell, lease, license, lend or in any other manner convey any equitable, beneficial or legal interest in any material portion of its assets.

7.9 Mergers or Acquisitions. Borrower shall not merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization (other than mergers or consolidations of (a) a Subsidiary which is not a Borrower into another Subsidiary or into Borrower or (b) a Borrower into another Borrower, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person except where (i) the cash consideration paid in respect of all such transactions does not in the aggregate exceed \$500,000 during any fiscal year, (ii) no Event of Default has occurred, is continuing or would exist after giving effect to any such transaction, (iii) no such transaction results in a Change in Control, and (iv) in each such transaction Borrower is the surviving entity.

7.10 Taxes. Borrower and its Subsidiaries shall pay when due all material taxes, fees or other charges of any nature whatsoever (together with any related interest or penalties) now or hereafter imposed or assessed against Borrower, Agent, Lender or the Collateral or upon Borrower's ownership, possession, use, operation or disposition thereof or upon Borrower's rents, receipts or earnings arising therefrom. Borrower shall file on or before the due date therefor all personal property tax returns in respect of the Collateral. Notwithstanding the foregoing, Borrower may contest, in good faith and by appropriate proceedings, taxes for which Borrower maintains adequate reserves therefor in accordance with GAAP.

7.11 Corporate Changes. Neither Borrower nor any Subsidiary shall change its corporate name, legal form or jurisdiction of formation without 20 days' prior written notice to Agent. Neither Borrower nor any Subsidiary shall suffer a Change in Control. Neither Borrower nor any Subsidiary shall relocate its chief executive office or its principal place of business unless: (i) it has provided prior written notice to Agent; and (ii) such relocation shall be within the continental United States. Neither Borrower nor any Qualified Subsidiary shall relocate any item of Collateral (other than (x) sales of Inventory in the ordinary course of business, (y) relocations of Equipment having an aggregate value of up to \$250,000 in any fiscal year, and (z) relocations of Collateral from a location described on Exhibit C to another location described on Exhibit C) unless (i) it has provided prompt written notice to Agent, (ii) such relocation is within the continental United States and, (iii) if such relocation is to a third party bailee, it has delivered a bailee agreement in form and substance reasonably acceptable to Agent.

7.12 Deposit Accounts. Neither Borrower nor any Qualified Subsidiary shall maintain any Deposit Accounts, or accounts holding Investment Property, except with respect to which Agent has an Account Control Agreement; provided, however, Agent confirms and agrees that Borrower will not be in violation of this Section 7.12 with respect to the Deposit Accounts and other accounts noted on Exhibit E so long as Borrower delivers fully-executed Account Control Agreements with respect thereto no later than the fifth Business Day following the Closing Date. Notwithstanding anything herein to the contrary, this Section 7.12 shall not apply to (a) any deposit account exclusively

used for payroll, payroll taxes, or other employee wage and benefit payments to or for the benefit of Borrower's or its Subsidiaries' employees, provided that the aggregate balance in such accounts does not exceed the amount necessary to make the immediately succeeding payroll, payroll tax or benefit payment (or such minimum amount as may be required by any requirement of law with respect to such accounts), as applicable; (b) any zero-balance disbursement account; (c) from the Closing Date through December 31, 2017, up to \$25 million in an escrow account to be maintained by Borrower with a reputable bank and solely to be used to pay Borrower's obligations pursuant to its lease of 2130 W. Holcombe Blvd., Houston, Texas 77030; and (d) any deposit account or securities account the average daily balance of which in the aggregate, together with the average daily balance of all such other deposit accounts and securities accounts excluded pursuant to this clause (d), shall not exceed \$250,000.

7.13 Qualified Subsidiaries. Borrower shall notify Agent of each Qualified Subsidiary formed or acquired subsequent to the Closing Date and, within 15 days of formation, shall cause any such Qualified Subsidiary to execute and deliver to Agent a Joinder Agreement.

7.14 Notification of Event of Default. Borrower shall notify Agent promptly of the occurrence of any Event of Default.

7.15 SBIC Matters. The applicable Lender has received a license from the U.S. Small Business Administration ("SBA") to extend loans as a small business investment company ("SBIC") pursuant to the Small Business Investment Act of 1958, as amended, and the associated regulations (collectively, the "SBIC Act"). Portions of the loan to Borrower will be made under the SBA license and the SBIC Act. Addendum 1 to this Agreement outlines various responsibilities of Agent, the applicable Lender and Borrower associated with an SBA loan, and such Addendum 1 is hereby incorporated in this Agreement.

7.16 Facility Charges. Borrower shall pay when due each of the Initial Facility Charge and the Second Facility Charge.

7.17 Post-Closing Conditions. Borrower shall use commercially reasonable efforts to deliver within 30 days following the Closing Date (i) a landlord consent and waiver for its location at 2130 W. Holcombe Blvd., Suite 800, Houston, Texas 77030 and (ii) a bailee waiver from Lonza Houston, Inc., each on terms reasonably acceptable to Agent.

SECTION 8. RESERVED

SECTION 9. EVENTS OF DEFAULT

The occurrence of any one or more of the following events shall be an "Event of Default":

9.1 Payments. Borrower fails to pay any amount due under this Agreement or any of the other Loan Documents on the applicable due date; provided, however, that an Event of Default shall not occur on account of a failure to pay due solely to an administrative or operational error of Lender or Borrower's bank if Borrower had the funds to make the payment

when due and makes the payment within three Business Days following Borrower's knowledge of such failure to pay; or

9.2 Covenants. Borrower breaches or defaults in the performance of any covenant or Secured Obligation under this Agreement, or any of the other Loan Documents or any other agreement among Borrower, Agent and Lender, and (a) with respect to a default under any covenant under this Agreement (other than under Sections 6, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15, 7.16 and 7.17) any other Loan Document or any other agreement among Borrower, Agent and Lender, such default continues for more than 10 days after the earlier of the date on which (i) Agent or Lender has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default or (b) with respect to a default under any of Sections 6, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15, 7.16 and 7.17, the occurrence of such default; or

9.3 Material Adverse Effect. A circumstance has occurred that would reasonably be expected to have a Material Adverse Effect; or

9.4 Representations. Any representation or warranty made by Borrower in any Loan Document shall have been false or misleading in any material respect when made or when deemed made; or

9.5 Insolvency. Borrower (A) (i) shall make an assignment for the benefit of creditors; or (ii) shall be unable to pay its debts as they become due, or be unable to pay or perform under the Loan Documents, or shall become insolvent; or (iii) shall file a voluntary petition in bankruptcy; or (iv) shall file any petition, answer, or document seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation pertinent to such circumstances; or (v) shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of Borrower or of all or any substantial part (i.e., 33-1/3% or more) of the assets or property of Borrower; or (vi) shall cease operations of its business as its business has normally been conducted, or terminate substantially all of its employees; or (vii) Borrower or its directors or majority shareholders shall take any action initiating any of the foregoing actions described in clauses (i) through (vi); or (B) either (i) 30 days shall have expired after the commencement of an involuntary action against Borrower seeking reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, without such action being dismissed or all orders or proceedings thereunder affecting the operations or the business of Borrower being stayed; or (ii) a stay of any such order or proceedings shall thereafter be set aside and the action setting it aside shall not be timely appealed; or (iii) Borrower shall file any answer admitting or not contesting the material allegations of a petition filed against Borrower in any such proceedings; or (iv) the court in which such proceedings are pending shall enter a decree or order granting the relief sought in any such proceedings; or (v) 30 days shall have expired after the appointment, without the consent or acquiescence of Borrower, of any trustee, receiver or liquidator of Borrower or of all or any substantial part of the properties of Borrower without such appointment being vacated; or

9.6 Attachments; Judgments. Any portion of Borrower's assets is attached or seized, or a levy is filed against any such assets, or a judgment or judgments is/are entered for the payment of money (not covered by independent third party insurance as to which liability has not been

rejected by such insurance carrier), individually or in the aggregate, of at least \$250,000, or Borrower is enjoined or in any way prevented by court order from conducting any part of its business; or

9.7 Other Obligations. The occurrence of any default under any agreement or obligation of Borrower involving any Indebtedness in excess of \$250,000.

9.8 Stop Trade. At any time, an SEC stop trade order or NASDAQ Global Market trading suspension of the Common Stock shall be in effect for five consecutive days or five days during a period of 10 consecutive days, excluding in all cases a suspension of all trading on a public market, provided that Borrower shall not have been able to cure such trading suspension within 30 days of the notice thereof or list the Common Stock on another public market within 60 days of such notice.

SECTION 10. REMEDIES

10.1 General. Upon and during the continuance of any one or more Events of Default, (i) Agent may, at its option, accelerate and demand payment of all or any part of the Secured Obligations together with a Prepayment Charge (but only if such acceleration and demand of payment is made after December 31, 2016) and declare them to be immediately due and payable (provided, that upon the occurrence of an Event of Default of the type described in Section 9.5, all of the Secured Obligations shall automatically be accelerated and made due and payable, in each case without any further notice or act), (ii) Agent may, at its option, sign and file in Borrower's name any and all collateral assignments, notices, control agreements, security agreements and other documents it deems necessary or appropriate to perfect or protect the repayment of the Secured Obligations, and in furtherance thereof, Borrower hereby grants Agent an irrevocable power of attorney coupled with an interest, and (iii) Agent may notify any of Borrower's account debtors to make payment directly to Agent, compromise the amount of any such account on Borrower's behalf and endorse Agent's name without recourse on any such payment for deposit directly to Agent's account. Agent may exercise all rights and remedies with respect to the Collateral under the Loan Documents or otherwise available to it under the UCC and other applicable law, including the right to release, hold, sell, lease, liquidate, collect, realize upon, or otherwise dispose of all or any part of the Collateral and the right to occupy, utilize, process and commingle the Collateral. All Agent's rights and remedies shall be cumulative and not exclusive. Notwithstanding anything contained herein to the contrary, Agent agrees not to deliver any notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Account Control Agreement or similar agreement providing control of any Collateral unless an Event of Default has occurred and is continuing.

10.2 Collection; Foreclosure. Upon the occurrence and during the continuance of any Event of Default, Agent may, at any time or from time to time, apply, collect, liquidate, sell in one or more sales, lease or otherwise dispose of, any or all of the Collateral, in its then condition or following any commercially reasonable preparation or processing, in such order as Agent may elect. Any such sale may be made either at public or private sale at its place of business or elsewhere. Borrower agrees that any such public or private sale may occur upon 10 calendar days' prior written notice to Borrower. Agent may require Borrower to assemble the Collateral and make it available to Agent at a place designated by Agent that is reasonably convenient to Agent and Borrower. The

proceeds of any sale, disposition or other realization upon all or any part of the Collateral shall be applied by Agent in the following order of priorities:

First, to Agent and Lender in an amount sufficient to pay in full Agent's and Lender's reasonable costs and professionals' and advisors' fees and expenses as described in Section 11.11;

Second, to Lender in an amount equal to the then unpaid amount of the Secured Obligations (including principal, interest, and the Default Rate interest), in such order and priority as Agent may choose in its sole discretion; and

Finally, after the full and final payment in Cash of all of the Secured Obligations (other than inchoate obligations and any other obligations which, by their terms, are to survive the termination of this Agreement), to any creditor holding a junior Lien on the Collateral, or to Borrower or its representatives or as a court of competent jurisdiction may direct.

Agent shall be deemed to have acted reasonably in the custody, preservation and disposition of any of the Collateral if it complies with the obligations of a secured party under the UCC.

10.3 No Waiver. Agent shall be under no obligation to marshal any of the Collateral for the benefit of Borrower or any other Person, and Borrower expressly waives all rights, if any, to require Agent to marshal any Collateral.

10.4 Cumulative Remedies. The rights, powers and remedies of Agent hereunder shall be in addition to all rights, powers and remedies given by statute or rule of law and are cumulative. The exercise of any one or more of the rights, powers and remedies provided herein shall not be construed as a waiver of or election of remedies with respect to any other rights, powers and remedies of Agent.

SECTION 11. MISCELLANEOUS

11.1 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under such law, such provision shall be ineffective only to the extent and duration of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

11.2 Notice. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication (including the delivery of Financial Statements) that is required, contemplated, or permitted under the Loan Documents or with respect to the subject matter hereof shall be in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by electronic mail or hand delivery or delivery by an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States mails, with proper first class postage prepaid, in each case addressed to the party to be notified as follows:

(a) If to Agent:

HERCULES CAPITAL, INC.
Legal Department
Attention: General Counsel
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: legal@herculestech.com
Telephone: 650-289-3060

(b) If to Lender:

HERCULES CAPITAL, INC.
HERCULES TECHNOLOGY III, L.P.
HERCULES TECHNOLOGY II, L.P.
Legal Department
Attention: General Counsel
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: legal@herculestech.com
Telephone: 650-289-3060

(c) If to Borrower:

BELLICUM PHARMACEUTICALS, INC.
Attention: Alan Musso, Chief Financial Officer
2130 W. Holcombe Blvd., Suite 800
Houston, TX 77030
email: amusso@bellicum.com
Telephone: 832-384-1116

or to such other address as each party may designate for itself by like notice.

11.3 Entire Agreement; Amendments.

(a) This Agreement and the other Loan Documents constitute the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and thereof, and supersede and replace in their entirety any prior proposals, term sheets, non-disclosure or confidentiality agreements, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof or thereof (including Agent's revised proposal letter dated February 22, 2016).

(b) Neither this Agreement, any other Loan Document, nor any terms hereof or thereof may be amended, supplemented or modified except in accordance with the provisions of this Section 11.3(b). The Required Lenders and Borrower party to the relevant Loan Document may, or, with the written consent of the Required Lenders, Agent and Borrower party to the relevant

Loan Document may, from time to time, (i) enter into written amendments, supplements or modifications hereto and to the other Loan Documents for the purpose of adding any provisions to this Agreement or the other Loan Documents or changing in any manner the rights of the Lenders or of Borrower hereunder or thereunder or (ii) waive, on such terms and conditions as the Required Lenders or Agent, as the case may be, may specify in such instrument, any of the requirements of this Agreement or the other Loan Documents or any default or Event of Default and its consequences; provided, however, that no such waiver and no such amendment, supplement or modification shall (A) forgive the principal amount or extend the final scheduled date of maturity of any Loan, extend the scheduled date of any amortization payment in respect of any Term Loan or reduce the stated rate of any interest or fee payable hereunder) or extend the scheduled date of payment thereof, in each case without the written consent of each Lender directly affected thereby; (B) eliminate or reduce the voting rights of any Lender under this Section 11.3(b) without the written consent of such Lender; (C) reduce any percentage specified in the definition of Required Lenders, consent to the assignment or transfer by Borrower of any of its rights and obligations under this Agreement and the other Loan Documents, release all or substantially all of the Collateral or release a Borrower from its obligations under the Loan Documents, in each case without the written consent of all Lenders; or (D) amend, modify or waive any provision of Section 11.17 without the written consent of Agent. Any such waiver and any such amendment, supplement or modification shall apply equally to each Lender and shall be binding upon Borrower, the Lender, Agent and all future holders of the Loans.

11.4 No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

11.5 No Waiver. The powers conferred upon Agent and Lender by this Agreement are solely to protect its rights hereunder and under the other Loan Documents and its interest in the Collateral and shall not impose any duty upon Agent or Lender to exercise any such powers. No omission or delay by Agent or Lender at any time to enforce any right or remedy reserved to it, or to require performance of any of the terms, covenants or provisions hereof by Borrower at any time designated, shall be a waiver of any such right or remedy to which Agent or Lender is entitled, nor shall it in any way affect the right of Agent or Lender to enforce such provisions thereafter.

11.6 Survival. All agreements, representations and warranties contained in this Agreement and the other Loan Documents or in any document delivered pursuant hereto or thereto shall be for the benefit of Agent and Lender and shall survive the execution and delivery of this Agreement and the expiration or other termination of this Agreement.

11.7 Successors and Assigns. The provisions of this Agreement and the other Loan Documents shall inure to the benefit of and be binding on Borrower and its permitted assigns (if any). Borrower shall not assign its obligations under this Agreement or any of the other Loan Documents without Agent's express prior written consent, and any such attempted assignment shall be void and of no effect. Agent and Lender may assign, transfer, or endorse its rights hereunder and

under the other Loan Documents without prior notice to Borrower, and all of such rights shall inure to the benefit of Agent's and Lender's successors and assigns; provided that as long as no Event of Default has occurred and is continuing, neither Agent nor any Lender may assign, transfer or endorse its rights hereunder or under the Loan Documents to any party that is a direct competitor of Borrower (as reasonably determined by Agent), it being acknowledged that in all cases, any transfer to an Affiliate of any Lender or Agent shall be allowed.

11.8 Governing Law. This Agreement and the other Loan Documents have been negotiated and delivered to Agent and Lender in the State of California, and shall have been accepted by Agent and Lender in the State of California. Payment to Agent and Lender by Borrower of the Secured Obligations is due in the State of California. This Agreement and the other Loan Documents shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

11.9 Consent to Jurisdiction and Venue. All judicial proceedings (to the extent that the reference requirement of Section 11.10 is not applicable) arising in or under or related to this Agreement or any of the other Loan Documents may be brought in any state or federal court located in the State of California. By execution and delivery of this Agreement, each party hereto generally and unconditionally: (a) consents to nonexclusive personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Agreement or the other Loan Documents. Service of process on any party hereto in any action arising out of or relating to this Agreement shall be effective if given in accordance with the requirements for notice set forth in Section 11.2, and shall be deemed effective and received as set forth in Section 11.2. Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

11.10 Mutual Waiver of Jury Trial / Judicial Reference.

(a) Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert Person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes be resolved by a judge applying such applicable laws. EACH OF BORROWER, AGENT AND LENDER SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY BORROWER AGAINST AGENT, LENDER OR THEIR RESPECTIVE ASSIGNEE OR BY AGENT, LENDER OR THEIR RESPECTIVE ASSIGNEE AGAINST BORROWER. This waiver extends to all such Claims, including Claims that involve Persons other than Agent, Borrower and Lender; Claims that arise out of or are in any way connected to the relationship among Borrower, Agent and Lender; and any Claims for damages, breach of contract, tort, specific performance, or any equitable or legal relief of any kind, arising out of this Agreement, any other Loan Document.

(b) If the waiver of jury trial set forth in Section 11.10(a) is ineffective or unenforceable, the parties agree that all Claims shall be resolved by reference to a private judge sitting without a jury, pursuant to Code of Civil Procedure Section 638, before a mutually acceptable referee or, if the parties cannot agree, a referee selected by the Presiding Judge of the Santa Clara County, California. Such proceeding shall be conducted in Santa Clara County, California, with California rules of evidence and discovery applicable to such proceeding.

(c) In the event Claims are to be resolved by judicial reference, either party may seek from a court identified in Section 11.9, any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by judicial reference.

11.11 Professional Fees. Borrower promises to pay Agent's and Lender's fees and expenses necessary to finalize the loan documentation, including but not limited to reasonable attorneys' fees, UCC searches, filing costs, and other miscellaneous expenses. In addition, Borrower promises to pay any and all reasonable attorneys' and other professionals' fees and expenses incurred by Agent and Lender after the Closing Date in connection with or related to: (a) the Loan; (b) the administration, collection, or enforcement of the Loan; (c) the amendment or modification of the Loan Documents; (d) any waiver, consent, release, or termination under the Loan Documents; (e) the protection, preservation, audit, field exam, sale, lease, liquidation, or disposition of Collateral or the exercise of remedies with respect to the Collateral; (f) any legal, litigation, administrative, arbitration, or out of court proceeding in connection with or related to Borrower or the Collateral, and any appeal or review thereof, in each case that constitutes a Liability for which Borrower is obligated to indemnify an Indemnified Person under Section 6.3; and (g) any bankruptcy, restructuring, reorganization, assignment for the benefit of creditors, workout, foreclosure, or other action related to Borrower, the Collateral, the Loan Documents, including representing Agent or Lender in any adversary proceeding or contested matter commenced or continued by or on behalf of Borrower's estate, and any appeal or review thereof.

11.12 Confidentiality. Agent and Lender acknowledge that certain items of Collateral and information provided to Agent and Lender by Borrower are confidential and proprietary information of Borrower, if and to the extent such information either (x) is marked as confidential by Borrower at the time of disclosure, or (y) should reasonably be understood to be confidential (the "Confidential Information"). Accordingly, Agent and Lender agree that any Confidential Information it may obtain shall not be disclosed to any other Person or entity in any manner whatsoever, in whole or in part, without the prior written consent of Borrower, except that Agent and Lender may disclose any such information: (a) to its own directors, officers, employees, accountants, counsel and other professional advisors and to its Affiliates if Agent or Lender in their sole discretion determines that any such party should have access to such information in connection with such party's responsibilities in connection with the Loan or this Agreement and, provided that such recipient of such Confidential Information either (i) agrees to be bound by the confidentiality provisions of this paragraph or (ii) is otherwise subject to confidentiality restrictions that reasonably protect against the disclosure of Confidential Information; (b) if such information is generally available to the public through no fault of Agent or Lender; (c) if required or appropriate in any report, statement or testimony submitted to any governmental authority having or claiming to have jurisdiction over

Agent or Lender; (d) if required or appropriate in response to any summons or subpoena or in connection with any litigation, to the extent permitted or deemed advisable by Agent's or Lender's counsel; (e) to comply with any legal requirement or law applicable to Agent or Lender; (f) to the extent reasonably necessary in connection with the exercise of any right or remedy under any Loan Document, including Agent's sale, lease, or other disposition of Collateral after default; (g) to any participant or assignee of Agent or Lender or any prospective participant or assignee; provided, that such participant or assignee or prospective participant or assignee agrees in writing to be bound by this Section prior to disclosure; or (h) otherwise with the prior consent of Borrower; provided, that any disclosure made in violation of this Agreement shall not affect the obligations of Borrower or any of its Affiliates or any guarantor under this Agreement or the other Loan Documents.

11.13 Assignment of Rights. Borrower acknowledges and understands that Agent or Lender may, subject to Section 11.7, sell and assign all or part of its interest hereunder and under the Loan Documents to any Person or entity (an "Assignee"). After such assignment the term "Agent" or "Lender" as used in the Loan Documents shall mean and include such Assignee, and such Assignee shall be vested with all rights, powers and remedies of Agent and Lender hereunder with respect to the interest so assigned; but with respect to any such interest not so transferred, Agent and Lender shall retain all rights, powers and remedies hereby given. No such assignment by Agent or Lender shall relieve Borrower of any of its obligations hereunder. Lender agrees that in the event of any transfer by it of the Note(s) (if any), it will endorse thereon a notation as to the portion of the principal of the Note(s), which shall have been paid at the time of such transfer and as to the date to which interest shall have been last paid thereon.

11.14 Revival of Secured Obligations. This Agreement and the Loan Documents shall remain in full force and effect and continue to be effective if any petition is filed by or against Borrower for liquidation or reorganization, if Borrower becomes insolvent or makes an assignment for the benefit of creditors, if a receiver or trustee is appointed for all or any significant part of Borrower's assets, or if any payment or transfer of Collateral is recovered from Agent or Lender. The Loan Documents and the Secured Obligations and Collateral security shall continue to be effective, or shall be revived or reinstated, as the case may be, if at any time payment and performance of the Secured Obligations or any transfer of Collateral to Agent, or any part thereof is rescinded, avoided or avoidable, reduced in amount, or must otherwise be restored or returned by, or is recovered from, Agent, Lender or by any obligee of the Secured Obligations, whether as a "voidable preference," "fraudulent conveyance," or otherwise, all as though such payment, performance, or transfer of Collateral had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, avoided, avoidable, restored, returned, or recovered, the Loan Documents and the Secured Obligations shall be deemed, without any further action or documentation, to have been revived and reinstated except to the extent of the full, final, and indefeasible payment to Agent or Lender in Cash.

11.15 Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

11.16 No Third Party Beneficiaries. No provisions of the Loan Documents are intended, nor will be interpreted, to provide or create any third-party beneficiary rights or any other rights of any kind in any Person other than Agent, Lender and Borrower unless specifically provided otherwise herein, and, except as otherwise so provided, all provisions of the Loan Documents will be personal and solely among Agent, the Lender and Borrower.

11.17 Agency.

(a) Lender hereby irrevocably appoints Hercules Capital, Inc. to act on its behalf as Agent hereunder and under the other Loan Documents and authorizes Agent to take such actions on its behalf and to exercise such powers as are delegated to Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto.

(b) Lender agrees to indemnify Agent in its capacity as such (to the extent not reimbursed by Borrower and without limiting the obligation of Borrower to do so), according to its respective Tranche I Term Loan Commitment and Tranche II Contingent Term Loan Commitment percentages (based upon the total outstanding Tranche I Term Loan Commitments and the Tranche II Contingent Term Loan Commitments) in effect on the date on which indemnification is sought under this Section 11.17, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind whatsoever that may at any time be imposed on, incurred by or asserted against Agent in any way relating to or arising out of, this Agreement, any of the other Loan Documents or any documents contemplated by or referred to herein or therein or the transactions contemplated hereby or thereby or any action taken or omitted by Agent under or in connection with any of the foregoing; The agreements in this Section shall survive the payment of the Loans and all other amounts payable hereunder.

(c) Agent in Its Individual Capacity. The Person serving as Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not Agent and the term "Lender" shall, unless otherwise expressly indicated or unless the context otherwise requires, include each such Person serving as Agent hereunder in its individual capacity.

(d) Exculpatory Provisions. Agent shall have no duties or obligations except those expressly set forth herein and in the other Loan Documents. Without limiting the generality of the foregoing, Agent shall not:

(i) be subject to any fiduciary or other implied duties, regardless of whether any default or any Event of Default has occurred and is continuing;

(ii) have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that Agent is required to exercise as directed in writing by the Lender, provided that Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose Agent to liability or that is contrary to any Loan Document or applicable law; and

(iii) except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and Agent shall not be liable for the failure to disclose, any information relating to Borrower or any of its Affiliates that is communicated to or obtained by any Person serving as Agent or any of its Affiliates in any capacity.

(e) Agent shall not be liable for any action taken or not taken by it (i) with the consent or at the request of the Lender or as Agent shall believe in good faith shall be necessary, under the circumstances or (ii) in the absence of its own gross negligence or willful misconduct.

(f) Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any default or Event of Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or (v) the satisfaction of any condition set forth in Section 4 or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to Agent.

(g) Reliance by Agent. Agent may rely, and shall be fully protected in acting, or refraining to act, upon, any resolution, statement, certificate, instrument, opinion, report, notice, request, consent, order, bond or other paper or document that it has no reason to believe to be other than genuine and to have been signed or presented by the proper party or parties or, in the case of cables, telecopies and telexes, to have been sent by the proper party or parties. In the absence of its gross negligence or willful misconduct, Agent may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to Agent and conforming to the requirements of the Loan Agreement or any of the other Loan Documents. Agent may consult with counsel, and any opinion or legal advice of such counsel shall be full and complete authorization and protection in respect of any action taken, not taken or suffered by Agent hereunder or under any Loan Documents in accordance therewith. Agent shall have the right at any time to seek instructions concerning the administration of the Collateral from any court of competent jurisdiction. Agent shall not be under any obligation to exercise any of the rights or powers granted to Agent by this Agreement, the Loan Agreement and the other Loan Documents at the request or direction of Lenders unless Agent shall have been provided by Lender with adequate security and indemnity against the costs, expenses and liabilities that may be incurred by it in compliance with such request or direction.

11.18 Publicity. None of the parties hereto nor any of its respective member businesses and Affiliates shall, without the other parties' prior written consent (which shall not be unreasonably withheld or delayed), publicize or use (a) the other party's name (including a brief description of the relationship among the parties hereto), logo or hyperlink to such other parties' web site, separately or together, in written and oral presentations, advertising, promotional and marketing materials, client lists, public relations materials or on its web site (together, the "Publicity Materials"); (b) the names of officers of such other parties in the Publicity Materials; and (c) such other parties' name, trademarks, servicemarks in any news or press release concerning such party; provided however,

notwithstanding anything to the contrary herein, no such consent shall be required (i) to the extent necessary to comply with the requests of any regulators, legal requirements or laws applicable to such party or pursuant to any listing agreement with any national securities exchange (so long as such party provides prior notice to the other party hereto to the extent reasonably practicable) and (ii) to comply with Section 11.12.

(SIGNATURES TO FOLLOW)

IN WITNESS WHEREOF, Borrower, Agent and Lender have duly executed and delivered this Loan and Security Agreement as of the day and year first above written.

BORROWER:

BELlicum PHARMACEUTICALS, INC.

Signature: /s/ Thomas J. Farrell

Name: Thomas J. Farrell

Title: President and Chief Executive Officer

Accepted in Palo Alto, California:

AGENT:

HERCULES CAPITAL, INC.

Signature: /s/ Ben Bang

Print Name: Ben Bang

Title: Associate General Counsel

LENDER:

HERCULES CAPITAL, INC.

Signature: /s/ Ben Bang__

Print Name: Ben Bang__

Title: Associate General Counsel

HERCULES TECHNOLOGY III, L.P.,
a Delaware limited partnership

By: Hercules Technology SBIC Management, LLC, its General Partner

By: Hercules Capital, Inc., its Manager

Signature: /s/ Ben Bang__

Print Name: Ben Bang__

Title: Associate General Counsel

HERCULES TECHNOLOGY II, L.P.,
a Delaware limited partnership

By: Hercules Technology SBIC Management, LLC, its General Partner

By: Hercules Capital, Inc., its Manager

Signature: /s/ Ben Bang__

Print Name: Ben Bang__

Title: Associate General Counsel

Table of Addenda, Exhibits and Schedules

Addendum 1: SBA Provisions

Exhibit A: Advance Request
Attachment to Advance Request

Exhibit B: Term Note

Exhibit C: Name, Locations, and Other Information for Borrower

Exhibit D: Borrower's Patents, Trademarks, Copyrights and Licenses

Exhibit E: Borrower's Deposit Accounts and Investment Accounts

Exhibit F: Compliance Certificate

Exhibit G: Joinder Agreement

Exhibit H: ACH Debit Authorization Agreement

Schedule 1 Subsidiaries

Schedule 1.1 Tranche I Term Loan Commitment

Schedule 1.2 Tranche II Contingent Term Loan Commitment

Schedule 1A Existing Permitted Indebtedness

Schedule 1B Existing Permitted Investments

Schedule 1C Existing Permitted Liens

Schedule 5.3 Consents, Etc.

Schedule 5.8 Tax Matters

Schedule 5.9 Intellectual Property Claims

Schedule 5.10 Intellectual Property

Schedule 5.11 Borrower Products

Schedule 5.14 Subsidiaries

ADDENDUM 1 to LOAN AND SECURITY AGREEMENT

(a) *Borrower's Business.* For purposes of this Addendum 1, Borrower shall be deemed to include its "affiliates" as defined in Title 13 Code of Federal Regulations Section 121.103. Borrower represents and warrants to Agent and Lender as of the Closing Date and covenants to Agent and Lender for a period of one year after the Closing Date with respect to subsections 2, 3, 4, 5, 6 and 7 below, as follows:

1. *Size Status.* Borrower's primary NAICS code is 325414 and has less than 80 employees in the aggregate;
2. *No Relender.* Borrower's primary business activity does not involve, directly or indirectly, providing funds to others, purchasing debt obligations, factoring, or long-term leasing of equipment with no provision for maintenance or repair;
3. *No Passive Business.* Borrower is engaged in a regular and continuous business operation (excluding the mere receipt of payments such as dividends, rents, lease payments, or royalties). Borrower's employees are carrying on the majority of day-to-day operations. Borrower will not pass through substantially all of the proceeds of the Loan to another entity;
4. *No Real Estate Business.* Borrower is not classified under Major Group 65 (Real Estate) or Industry No. 1531 (Operative Builders) of the SIC Manual. The proceeds of the Loan will not be used to acquire or refinance real property unless Borrower (x) is acquiring an existing property and will use at least 51% of the usable square footage for its business purposes; (y) is building or renovating a building and will use at least 67% of the usable square footage for its business purposes; or (z) occupies the subject property and uses at least 67% of the usable square footage for its business purposes.
5. *No Project Finance.* Borrower's assets are not intended to be reduced or consumed, generally without replacement, as the life of its business progresses, and the nature of Borrower's business does not require that a stream of cash payments be made to the business's financing sources, on a basis associated with the continuing sale of assets (e.g., real estate development projects and oil and gas wells). The primary purpose of the Loan is not to fund production of a single item or defined limited number of items, generally over a defined production period, where such production will constitute the majority of the activities of Borrower (e.g., motion pictures and electric generating plants).
6. *No Farm Land Purchases.* Borrower will not use the proceeds of the Loan to acquire farm land which is or is intended to be used for agricultural or forestry purposes, such as the production of food, fiber, or wood, or is so taxed or zoned.
7. *No Foreign Investment.* The proceeds of the Loan will not be used substantially for a foreign operation. At the time of the Loan, Borrower will not have more than 49%

of its employees or tangible assets located outside the United States. The representation in this subsection (7) is made only as of the date hereof and shall not continue for one year as contemplated in the first sentence of this Section 1.

(b) *Small Business Administration Documentation.* Agent and Lender acknowledge that Borrower completed, executed and delivered to Agent SBA Forms 480, 652 and 1031 (Parts A and B) together with a business plan showing Borrower's financial projections (including balance sheets and income and cash flows statements) for the period described therein and a written statement (whether included in the purchase agreement or pursuant to a separate statement) from Agent regarding its intended use of proceeds from the sale of securities to Lender (the "Use of Proceeds Statement"). Borrower represents and warrants to Agent and Lender that the information regarding Borrower and its affiliates set forth in the SBA Form 480, Form 652 and Form 1031 and the Use of Proceeds Statement delivered as of the Closing Date is accurate and complete.

(c) *Inspection.* The following covenants contained in this Section (c) are intended to supplement and not to restrict the related provisions of the Loan Documents. Subject to the preceding sentence, Borrower will permit, for so long as Lender holds any debt or equity securities of Borrower, Agent, Lender or their representative, at Agent's or Lender's expense, and examiners of the SBA to visit and inspect the properties and assets of Borrower, to examine its books of account and records, and to discuss Borrower's affairs, finances and accounts with Borrower's officers, senior management and accountants, all at such reasonable times as may be requested by Agent or Lender or the SBA.

(d) *Annual Assessment.* Promptly after the end of each calendar year (but in any event prior to February 28 of each year) and at such other times as may be reasonably requested by Agent or Lender, Borrower will deliver to Agent a written assessment of the economic impact of Lender's investment in Borrower, specifying the full-time equivalent jobs created or retained in connection with the investment, the impact of the investment on the businesses of Borrower in terms of expanded revenue and taxes, other economic benefits resulting from the investment (such as technology development or commercialization, minority business development, or expansion of exports) and such other information as may be required regarding Borrower in connection with the filing of Lender's SBA Form 468. Lender will assist Borrower with preparing such assessment. In addition to any other rights granted hereunder, Borrower will grant Agent and Lender and the SBA access to Borrower's books and records for the purpose of verifying the use of such proceeds. Borrower also will furnish or cause to be furnished to Agent and Lender such other information regarding the business, affairs and condition of Borrower as Agent or Lender may from time to time reasonably request.

(e) *Use of Proceeds.* Borrower will use the proceeds from the Loan only for sound business purposes in accordance with the applicable portions of the SBIC Act. Borrower will deliver to Agent from time to time promptly following Agent's request, a written report, certified as correct by Borrower's Chief Financial Officer, verifying the purposes and amounts for which proceeds from the Loan have been disbursed. Borrower will supply to Agent such additional information and documents as Agent reasonably requests with respect to its use of proceeds and will permit Agent and Lender and the SBA to have access to any and all Borrower records and information and

personnel as Agent deems necessary to verify how such proceeds have been or are being used, and to assure that the proceeds have been used for the purposes specified above.

(f) *Activities and Proceeds.* Neither Borrower nor any of its affiliates (if any) will engage in any activities or use directly or indirectly the proceeds from the Loan for any purpose for which a small business investment company is prohibited from providing funds by the SBIC Act, including 13 C.F.R. §107.720. Without obtaining the prior written approval of Agent, Borrower will not change within 1 year of the date hereof, Borrower's current business activity to a business activity which a licensee under the SBIC Act is prohibited from providing funds by the SBIC Act.

(g) [Reserved].

(h) *Compliance and Resolution.* Borrower agrees that a failure to comply with Borrower's obligations under this Addendum, or any other set of facts or circumstances where it has been asserted by any governmental regulatory agency (or Agent or Lender believes that there is a substantial risk of such assertion) that Agent, Lender and their affiliates are not entitled to hold, or exercise any significant right with respect to, any securities issued to Lender by Borrower, will constitute a breach of the obligations of Borrower under the financing agreements among Borrower, Agent and Lender. In the event of (i) a failure to comply with Borrower's obligations under this Addendum; or (ii) an assertion by any governmental regulatory agency (or Agent or Lender believes that there is a substantial risk of such assertion) of a failure to comply with Borrower's obligations under this Addendum, then (x) Agent, Lender and Borrower will meet and resolve any such issue in good faith to the satisfaction of Borrower, Agent, Lender, and any governmental regulatory agency, and (y) upon request of Lender or Agent, Borrower will cooperate and assist with any assignment of the financing agreements among Hercules Technology III, L.P., Hercules Technology II, L.P. and Hercules Capital, Inc.

EXHIBIT A
ADVANCE REQUEST

To: Agent: Date: [●], 2016

Hercules Capital, Inc. (the "Agent")
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: legal@herculestech.com
Attn:

[Advance request to be provided to each Lender]

Bellicum Pharmaceuticals, Inc. ("Borrower") hereby requests from [Hercules Capital, Inc.]/[Hercules Technology III, L.P.]/[Hercules Technology II, L.P.] ("Lender") an Advance in the amount of \$[●] on [●], 201[●] (the "Advance Date") pursuant to the Loan and Security Agreement among Borrower, Agent and Lender (the "Agreement"). Capitalized words and other terms used but not otherwise defined herein are used with the same meanings as defined in the Agreement.

Please:

(a) Issue a check payable to Borrower _____

or

(b) Wire Funds to Borrower's account _____

Bank: _____

Address: _____

ABA Number: _____

Account Number: _____

Account Name: _____

Contact Person: _____

Phone Number: _____

To Verify Wire Info: _____

Email address: _____

Borrower represents that the conditions precedent to the Advance set forth in the Agreement are satisfied and shall be satisfied upon the making of such Advance, including but not limited to: (i) that no event that has had or could reasonably be expected to have a Material Adverse Effect has

occurred and is continuing; (ii) that the representations and warranties set forth in the Agreement are and shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date; (iii) that Borrower is in compliance with all the terms and provisions set forth in each Loan Document on its part to be observed or performed; and (iv) that as of the Advance Date, no fact or condition exists that would (or would, with the passage of time, the giving of notice, or both) constitute an Event of Default under the Loan Documents. Borrower understands and acknowledges that Agent has the right to review the financial information supporting this representation and, based upon such review in its discretion, Lender may decline to fund the requested Advance.

Borrower hereby represents that Borrower's corporate status and locations have not changed since the date of the Agreement or, if the Attachment to this Advance Request is completed, are as set forth in the Attachment to this Advance Request.

Borrower agrees to notify Agent promptly before the funding of the Loan if any of the matters which have been represented above shall not be true and correct on the Borrowing Date and if Agent has received no such notice before the Advance Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct as of the Advance Date.

Executed as of [●], 201[●].

BORROWER: BELLICUM PHARMACEUTICALS, INC.

SIGNATURE: _____

TITLE: _____

PRINT NAME: _____

ATTACHMENT TO ADVANCE REQUEST

Dated: _____

Borrower hereby represents and warrants to Agent that Borrower's current name and organizational status is as follows:

Name: Bellicum Pharmaceuticals, Inc.

Type of organization: Corporation

State of organization: Delaware

Organization file number: 3829024

Borrower hereby represents and warrants to Agent that the street address, city, state and postal code of its current location are as follows: 2130 W. Holcombe Blvd., Ste. 800, Houston, Texas, 77030.

EXHIBIT B

SECURED TERM PROMISSORY NOTE

[\$●],000,000 Advanced Date: [●], 20[●]

Maturity Date: [●], 20[●]

FOR VALUE RECEIVED, BELLICUM PHARMACEUTICALS, INC., a Delaware corporation, for itself and each of its Qualified Subsidiaries (“Borrower”) hereby promises to pay to [Hercules Capital, Inc., a Maryland corporation]/[Hercules Technology III, L.P., a Delaware limited partnership]/[Hercules Technology II, L.P., a Delaware limited partnership] or the holder of this Note (the “Lender”) at 400 Hamilton Avenue, Suite 310, Palo Alto, CA 94301 or such other place of payment as the holder of this Secured Term Promissory Note (this “Promissory Note”) may specify from time to time in writing, in lawful money of the United States of America, the principal amount of \$[●],000,000 or such other principal amount as Lender has advanced to Borrower, together with interest at a rate as set forth in Section 2.1(c) of the Loan Agreement based upon a year consisting of 360 days, with interest computed daily based on the actual number of days in each month.

This Promissory Note is the Note referred to in, and is executed and delivered in connection with, that certain Loan and Security Agreement dated March 10, 2016, by and among Borrower, Hercules Capital, Inc., a Maryland corporation (the “Agent”) and the several banks and other financial institutions or entities from time to time party thereto as lender (as the same may from time to time be amended, modified or supplemented in accordance with its terms, the “Loan Agreement”), and is entitled to the benefit and security of the Loan Agreement and the other Loan Documents (as defined in the Loan Agreement), to which reference is made for a statement of all of the terms and conditions thereof. All payments shall be made in accordance with the Loan Agreement. All terms defined in the Loan Agreement shall have the same definitions when used herein, unless otherwise defined herein. An Event of Default under the Loan Agreement shall constitute a default under this Promissory Note.

Borrower waives presentment and demand for payment, notice of dishonor, protest and notice of protest under the UCC or any applicable law. Borrower agrees to make all payments under this Promissory Note without setoff, recoupment or deduction and regardless of any counterclaim or defense. This Promissory Note has been negotiated and delivered to Lender and is payable in the State of California. This Promissory Note shall be governed by and construed and enforced in accordance with, the laws of the State of California, excluding any conflicts of law rules or principles that would cause the application of the laws of any other jurisdiction.

BORROWER FOR ITSELF AND ON BEHALF OF ITS QUALIFIED SUBSIDIARIES:

BELLICUM PHARMACEUTICALS, INC.

By:

Title:

EXHIBIT C

NAME, LOCATIONS, AND OTHER INFORMATION FOR BORROWER

1. Borrower represents and warrants to Agent that Borrower's current name and organizational status as of the Closing Date is as follows:

Name: Bellicum Pharmaceuticals, Inc.

Type of organization: Corporation

State of organization: Delaware

Organization file number: 3829024

2. Borrower represents and warrants to Agent that for five (5) years prior to the Closing Date, Borrower did not do business under any other name or organization or form except the following:

Name:

Used during dates of:

Type of Organization:

State of organization:

Organization file Number:

Borrower's fiscal year ends on December 31

Borrower's federal employer tax identification number is: 20-1450200

3. Borrower represents and warrants to Agent that its chief executive office is located at 2130 W. Holcombe Blvd., Ste. 800, Houston, Texas, 77030.

EXHIBIT D

BORROWER'S PATENTS, TRADEMARKS, COPYRIGHTS AND LICENSES

Patents:

See Attachment A.

Registered Trademarks:

Description	Registration/ Serial Number	Registration/ Application Date
GOCAR-T	86/218,763	03/12/14
GOCART	86/218,761	03/12/14
GOTCR	86/841,518	12/07/15
CIDECAR	86/072,938	09/24/13
TAKE CONTROL OF LIFE	85/924,086	05/06/13
CASPACIDE	4,425,891	10/29/13
BELLICUM	4,415,124	10/08/13
DECIDE	4,396,491	09/03/13

Registered Copyrights:

None.

Licenses:

- Amended and Restated License Agreement by and between the Company and ARIAD Pharmaceuticals, Inc., dated March 7, 2011 (the Restated License Agreement).
- This Notice of Expansion of Licensed Field to Obtain Additional Exclusive Rights, delivered pursuant to Section 2.1.2(a) of the Amended and Restated License Agreement.
- Omnibus Amendment Agreement by and between Company and ARIAD Pharmaceuticals, Inc., dated October 3, 2014.
- Exclusive License Agreement by and between the Company and Baylor College of Medicine, dated March 20, 2008.

- Exclusive License Agreement by and between the Company and Baylor College of Medicine, dated June 27, 2010.
- Cancer Research Grant Contract by and between the Company and the Cancer Prevention and Research Institute of Texas, dated July 27, 2011.
- Exclusive License Agreement by and between the Company and Baylor College of Medicine, effective November 1, 2014.
- License Agreement by and between the Company and Academisch Ziekenhuis Leiden, also acting under the name Leiden University Medical Centre, effective as of April 20, 2015.
- License Agreement by and between the Company and BioVec Pharma, Inc., dated as of June 4, 2015.
- Exclusive License Agreement by and between the Company and Agensys, Inc., effective as of December 10, 2015.

ATTACHMENT A TO EXHIBIT D

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-1001-CT	MODIFIED DENDRITIC CELLS HAVING ENHANCED SURVIVAL AND IMMUNOGENICITY AND RELATED COMPOSITIONS AND METHODS	Sep 19, 2012	13622501	Jul 16, 2013	8486693	Issued
BEL-1001-PC	MODIFIED DENDRITIC CELLS HAVING ENHANCED SURVIVAL AND IMMUNOGENICITY AND RELATED COMPOSITIONS AND METHODS	May 23, 2007	PCTUS2007069586			Completed
BEL-1001-PV	MODIFIED DENDRITIC CELLS HAVING ENHANCED SURVIVAL AND IMMUNOGENICITY AND RELATED COMPOSITIONS AND METHODS	May 23, 2006	60803025			Completed
BEL-1001-US	MODIFIED DENDRITIC CELLS HAVING ENHANCED SURVIVAL AND IMMUNOGENICITY AND RELATED COMPOSITIONS AND METHODS	Jun 4, 2009	12301021			Abandoned in favor of BEL-1001-CT
BEL-2001-CA	INDUCED ACTIVATION IN DENDRITIC CELLS	Feb 18, 2004	2516320	May 26, 2015	2516320	Issued
BEL-2001-CT	INDUCED ACTIVATION IN DENDRITIC CELLS	Jun 30, 2008	12165360	Jul 8, 2014	8771671	Issued
BEL-2001-CT2	INDUCED ACTIVATION IN DENDRITIC CELLS	Mar 5, 2013	13786339	Apr 7, 2015	8999949	Issued
BEL-2001-CT3	INDUCED ACTIVATION IN DENDRITIC CELLS	Mar 10, 2015	14643989			Pending

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2001-EP	INDUCED ACTIVATION IN DENDRITIC CELLS	Feb 18, 2004	47123286	Jul 8, 2015	1641927	Issued
BEL-2001-EP2	INDUCED ACTIVATION IN DENDRITIC CELLS	Feb 18, 2004	121794069			Abandoned
BEL-2001-EP3	INDUCED ACTIVATION IN DENDRITIC CELLS	Feb 18, 2004	151572138			Pending
BEL-2001-UT	INDUCED ACTIVATION IN DENDRITIC CELLS	Feb 18, 2004	10781384	Jul 29, 2008	7404950	Issued
BEL-2002-AU	GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS	Oct 19, 2007	2007310946	Sep 18, 2014	2007310946	Issued
BEL-2002-AU2	GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS	Oct 19, 2007	2014202528			Pending
BEL-2002-CA	GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS	Oct 19, 2007	2666667			Pending
BEL-2002-CT	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS AND ADAPTORS THEREOF	Feb 26, 2014	14191167			Pending
BEL-2002-EP	GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS	Oct 19, 2007	78444668	Jul 29, 2015	2076272	Issued

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2002-EP2	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS AND ADAPTORS THEREOF	Oct 19, 2007	111937629			Pending
BEL-2002-EP3	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS AND ADAPTORS THEREOF	Oct 19, 2007	111937686			Pending
BEL-2002-HK	GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS	Jan 8, 2010	101001407			Pending
BEL-2002-HK3	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS AND ADAPTORS THEREOF	Dec 19, 2012	121131239			Pending
BEL-2002-PC	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS AND ADAPTORS THEREOF	Oct 19, 2007	PCTUS2007081963			Completed
BEL-2002-PV	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND A TOLL-LIKE RECEPTOR	Oct 19, 2006	60862211			Completed

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2002-US	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTORS AND ADAPTORS THEREOF	Oct 19, 2007	12445939	Apr 8, 2014	8691210	Issued
BEL-2003-PV2	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE VIA INDUCIBLE PATTERN RECOGNITION RECEPTORS AND ADAPTORS THEREOF	Mar 15, 2007	60895088		-	Completed as BEL-2002-PC
BEL-2004-AU	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	2009292996	Aug 6, 2015	2009292996	Issued
BEL-2004-CA	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	2738031			Pending
BEL-2004-CT	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Feb 8, 2013	13763591			Allowed
BEL-2004-CT2	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Mar 5, 2013	13786351			Pending

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2004-EP	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	98153554			Pending
BEL-2004-EP2	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009				Not yet pending. Associate instructed to file once BEL-2004-EP issues
BEL-2004-HK	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Dec 9, 2011	111133283			Pending
BEL-2004-JP	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	2011528050			Pending
BEL-2004-JP2	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	2014120212			Pending
BEL-2004-JP3	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	201580739			Pending

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2004-PC	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	PCTUS2009057738			Completed
BEL-2004-PV	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 22, 2008	61099163			Completed
BEL-2004-PV2	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Feb 18, 2009	61153562			Completed
BEL-2004-PV3	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	May 27, 2009	61181572			Completed
BEL-2004-UT	METHODS AND COMPOSITIONS FOR GENERATING AN IMMUNE RESPONSE BY INDUCING CD40 AND PATTERN RECOGNITION RECEPTOR ADAPTERS	Sep 21, 2009	12563991			Abandoned in favor of BEL-2004-CT
BEL-2005-AU	METHOD FOR TREATING SOLID TUMORS	Apr 14, 2011	2011239569	Nov 6, 2014	2011239569	Issued
BEL-2005-AU2	METHOD FOR TREATING SOLID TUMORS	Apr 14, 2011	2014253529			Pending
BEL-2005-CA	METHOD FOR TREATING SOLID TUMORS	Apr 14, 2011	2795947			Pending
BEL-2005-DV	METHOD FOR TREATING SOLID TUMORS	Mar 6, 2013	13786652			Pending

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2005-EP	METHOD FOR TREATING SOLID TUMORS	Apr 14, 2011	117696195			Pending
BEL-2005-HK	METHOD FOR TREATING SOLID TUMORS	Apr 14, 2011	131096080			Pending
BEL-2005-JP	METHOD FOR TREATING SOLID TUMORS	Apr 14, 2011	2013505156			Pending
BEL-2005-PC	METHOD FOR TREATING SOLID TUMORS	Apr 14, 2011	PCTUS2011032572			Completed
BEL-2005-PV	METHOD FOR TREATING SOLID TUMORS	Apr 16, 2010	61325127			Completed
BEL-2005-PV2	METHOD FOR TREATING SOLID TUMORS	Jun 4, 2010	61351760			Completed
BEL-2005-PV3	METHOD FOR TREATING SOLID TUMORS	Feb 14, 2011	61442582			Completed
BEL-2005-UT	METHODS FOR TREATING PROSTATE CANCER	Apr 14, 2011	13087329			Pending
BEL-2006-CT	METHODS FOR INDUCING SELECTIVE APOPTOSIS	Jun 18, 2015	14743384			Pending
BEL-2006-DV	METHODS FOR INDUCING SELECTIVE APOPTOSIS	Mar 6, 2013	13786672			Pending
BEL-2006-PC	METHODS FOR INDUCING SELECTIVE APOPTOSIS	May 20, 2011	PCTUS2011037381			Expired
BEL-2006-PV	METHOD FOR INDUCING SELECTIVE APOPTOSIS	May 21, 2010	61347154			Completed
BEL-2006-UT	METHODS FOR INDUCING SELECTIVE APOPTOSIS	May 20, 2011	13112739	Jul 28, 2015	9089520	Issued
BEL-2007-PV	METHOD FOR TREATING SOLID TUMORS	Jul 8, 2011	61505884			Expired
BEL-2008-PV	METHOD FOR TREATING SOLID TUMORS	Oct 19, 2011	61549084			Expired
BEL-2009-AU	MODIFIED CASPASE POLYPEPTIDES AND USES THEREOF	Mar 7, 2014	2014249417			Pending
BEL-2009-CA	MODIFIED CASPASE POLYPEPTIDES AND USES THEREOF	Mar 7, 2014	2903216			Pending

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2009-EP	MODIFIED CASPASE POLYPEPTIDES AND USES THEREOF	Mar 7, 2014	147783781			Pending
BEL-2009-JP	MODIFIED CASPASE POLYPEPTIDES AND USES THEREOF	Mar 7, 2014				Pending
BEL-2009-PC	MODIFIED CASPASE POLYPEPTIDES AND USES THEREOF	Mar 7, 2014	PCTUS2014022004			Completed
BEL-2009-UT	MODIFIED CASPASE POLYPEPTIDES AND USES THEREOF	Mar 10, 2013	13792135			Pending
BEL-2010-AU	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	2014236726			Pending
BEL-2010-CA	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	2905352			Pending
BEL-2010-CN	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	2014800284393			Pending
BEL-2010-EP	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	147703995			Pending
BEL-2010-JP	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014				Pending
BEL-2010-KR	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	1020157028844			Pending
BEL-2010-PC	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	PCTUS2014026734			Completed
BEL-2010-PV	METHOD FOR CONTROLLING T CELL PROLIFERATION	Mar 14, 2013	61783445			Completed
BEL-2010-SG	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	11201506974X			Pending
BEL-2010-UT	METHODS FOR CONTROLLING T CELL PROLIFERATION	Mar 13, 2014	14210034			Pending

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2011-AU	METHODS FOR INDUCING PARTIAL APOPTOSIS USING CASPASE POLYPEPTIDES	Jun 4, 2014	2014274916			Pending
BEL-2011-CA	METHODS FOR INDUCING PARTIAL APOPTOSIS USING CASPASE POLYPEPTIDES	Jun 4, 2014				Pending
BEL-2011-EP	METHODS FOR INDUCING PARTIAL APOPTOSIS USING CASPASE POLYPEPTIDES	Jun 4, 2014	148074057			Pending
BEL-2011-JP	METHODS FOR INDUCING PARTIAL APOPTOSIS USING CASPASE POLYPEPTIDES	Jun 4, 2014				Pending
BEL-2011-PC	METHODS FOR INDUCING PARTIAL APOPTOSIS USING CASPASE POLYPEPTIDES	Jun 4, 2014	PCTUS2014040964			Completed
BEL-2011-PV	METHODS FOR INDUCING PARTIAL APOPTOSIS USING MODIFIED CASPASE POLYPEPTIDES	Jun 5, 2013	61831428			Completed
BEL-2011-PV2	METHODS FOR INDUCING PARTIAL APOPTOSIS USING MODIFIED CASPASE POLYPEPTIDES	Mar 7, 2014	61949847			Completed
BEL-2011-UT	METHODS FOR INDUCING PARTIAL APOPTOSIS USING CASPASE POLYPEPTIDES	Jun 4, 2014	14296404			Pending

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2013-PC	METHODS FOR ACTIVATING T CELLS USING AN INDUCIBLE CHIMERIC POLYPEPTIDE	Feb 13, 2015	PCTUS2015015829			Pending
BEL-2013-PV	METHODS FOR ACTIVATING T CELLS USING AN INDUCIBLE CHIMERIC POLYPEPTIDE	Feb 14, 2014	61940347			Completed
BEL-2013-PV2	METHODS FOR ACTIVATING T CELLS USING AN INDUCIBLE CHIMERIC POLYPEPTIDE	Mar 13, 2014	61952839			Completed
BEL-2013-PV3	METHODS FOR ACTIVATING T CELLS USING AN INDUCIBLE CHIMERIC POLYPEPTIDE	Sep 9, 2014	62047875			Completed
BEL-2013-UT	METHODS FOR ACTIVATING T CELLS USING AN INDUCIBLE CHIMERIC POLYPEPTIDE	Feb 13, 2015	14622018			Pending
BEL-2015-PC	CASPASE POLYPEPTIDES HAVING MODIFIED ACTIVITY AND USES THEREOF	Mar 6, 2015	PCTUS1519186			Pending
BEL-2015-PV	CASPASE POLYPEPTIDES HAVING MODIFIED ACTIVITY AND USES THEREOF	Mar 7, 2014	61949787			Completed
BEL-2015-PV2	CASPASE POLYPEPTIDES HAVING MODIFIED ACTIVITY AND USES THEREOF	Jun 4, 2014	62007902			Completed
BEL-2015-PV3	CASPASE POLYPEPTIDES HAVING MODIFIED ACTIVITY AND USES THEREOF	Sep 9, 2014	62047870			Completed

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2015-UT	CASPASE POLYPEPTIDES HAVING MODIFIED ACTIVITY AND USES THEREOF	Mar 6, 2015	14640553			Pending
BEL-2016-PC	COSTIMULATION OF CHIMERIC ANTIGEN RECEPTORS BY MYD88 AND CD40 POLYPEPTIDES	Sep 1, 2015	PCTUS2015047957			Pending
BEL-2016-PV	COSTIMULATION OF CHIMERIC ANTIGEN RECEPTORS BY MYD88 AND CD40 POLYPEPTIDES	Sep 2, 2014	62044885			Completed
BEL-2016-PV2	COSTIMULATION OF CHIMERIC ANTIGEN RECEPTORS BY MYD88 AND CD40 POLYPEPTIDES	Feb 13, 2015	62115735			Completed
BEL-2016-PV3	COSTIMULATION OF CHIMERIC ANTIGEN RECEPTORS BY MYD88 AND CD40 POLYPEPTIDES	Apr 6, 2015	62143503			Completed
BEL-2016-UT	COSTIMULATION OF CHIMERIC ANTIGEN RECEPTORS BY MYD88 AND CD40 POLYPEPTIDES	Sep 1, 2015	14842710			Pending
BEL-2018-PC	T CELL RECEPTORS DIRECTED AGAINST BOB1 AND USES THEREOF	Nov 2, 2015	PCTUS2015058675			Pending
BEL-2018-PV	T CELL RECEPTORS DIRECTED AGAINST BOB1 AND USES THEREOF	Nov 3, 2014	62074534			Completed
BEL-2018-PV2	T CELL RECEPTORS DIRECTED AGAINST BOB1 AND USES THEREOF	Feb 13, 2015	62115737			Completed

FILE #	TITLE	FILING DATE	SERIAL NUMBER	ISSUE DATE	PATENT NUMBER	STATUS
BEL-2018-UT	T CELL RECEPTORS DIRECTED AGAINST BOB1 AND USES THEREOF	Nov 2, 2015	14930572			Pending
BEL-2019-PV	T-CELL RECEPTORS DIRECTED AGAINST THE PREFERENTIALLY EXPRESSED ANTIGEN OF MELANOMA AND USES THEREOF	Mar 10, 2015	62130884			Pending
BEL-2021-PC	METHODS FOR CONTROLLED ELIMINATION OF THERAPEUTIC CELLS	Dec 14, 2015	PCTUS2015065629			Pending
BEL-2021-PV	METHODS FOR CONTROLLED ELIMINATION OF THERAPEUTIC CELLS	Dec 15, 2014	62092149			Completed
BEL-2021-UT	METHODS FOR CONTROLLED ELIMINATION OF THERAPEUTIC CELLS	Dec 14, 2015	14968737			Pending
BEL-2022-PC	METHODS FOR CONTROLLED ACTIVATION OR ELIMINATION OF THERAPEUTIC CELLS	Dec 14, 2015	PCTUS2015065646			Pending
BEL-2022-UT	METHODS FOR CONTROLLED ACTIVATION OR ELIMINATION OF THERAPEUTIC CELLS	Dec 14, 2015	14968853			Pending
BEL-2025-PV	DUAL CONTROLS FOR THERAPEUTIC CELL ACTIVATION OR ELIMINATION	Dec 14, 2015	62267277			Pending

EXHIBIT E

BORROWER'S DEPOSIT ACCOUNTS AND INVESTMENT ACCOUNTS

BB&T accounts are as follows:

Account Number	Account Type	Approximate Current Balance	Service Provided
1440000412574**	Checking	\$5,000,000	Operating Acct
1440001387387	Zero Balance Account	N/A	Sweep
1440000576224**	Money Market Depository Account	\$47,693,375	Cash Management
1689180244**	Custody Account with BB&T in respect of securities account managed by Sterling Capital Management	\$90,250,000	Custody Account

Comerica Account No: 1881365744

** Borrower shall deliver Account Control Agreements with respect to each of these accounts no later than the fifth Business Day following the Closing Date.

EXHIBIT F
COMPLIANCE CERTIFICATE

Hercules Capital, Inc. (as “Agent”)
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Reference is made to that certain Loan and Security Agreement dated [●], 2016 and the Loan Documents (as defined therein) entered into in connection with such Loan and Security Agreement all as may be amended from time to time (hereinafter referred to collectively as the “Loan Agreement”) by and among Hercules Capital, Inc. (the “Agent”), the several banks and other financial institutions or entities from time to time party thereto (collectively, the “Lender”) and Hercules Capital, Inc., as Agent for the Lender (the “Agent”) and Bellicum Pharmaceuticals, Inc. (the “Company”) as Borrower. All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

The undersigned is an Officer of the Company, knowledgeable of all Company financial matters, and is authorized to provide certification of information regarding the Company; hereby certifies, in such capacity, that in accordance with the terms and conditions of the Loan Agreement, the Company is in compliance for the period ending [●] of all covenants, conditions and terms of the Loan Agreement hereby reaffirms that all representations and warranties contained therein are true and correct in all material respects on and as of the date of this Compliance Certificate with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, after giving effect in all cases to any standard(s) of materiality contained in the Loan Agreement as to such representations and warranties. Attached are the required documents supporting the above certification. The undersigned further certifies that are prepared in accordance with GAAP (except for the absence of footnotes with respect to unaudited financial statements and subject to normal year-end adjustments) and are consistent from one period to the next except as explained below.

REPORTING REQUIREMENT	REQUIRED	CHECK IF ATTACHED
Interim Financial Statements	Monthly within 30 days	
Audited Financial Statements	Quarterly within 40 days	
	FYE within 90 days	

Very Truly Yours,

Bellicum Pharmaceuticals, Inc.

By: _____

Name: _____

Its: _____

EXHIBIT G

FORM OF JOINDER AGREEMENT

This Joinder Agreement (the “Joinder Agreement”) is made and dated as of [●], 2016, and is entered into by and between [●], a [●] corporation (“Subsidiary”), and HERCULES CAPITAL, INC., a Maryland corporation (as “Agent”).

RECITALS

A. Subsidiary’s Affiliate, Bellicum Pharmaceuticals, Inc. (“Company”) has entered into that certain Loan and Security Agreement dated March 10, 2016, with the several banks and other financial institutions or entities from time to time party thereto as lender (collectively, the “Lender”) and Agent, as such agreement may be amended (the “Loan Agreement”), together with the other agreements executed and delivered in connection therewith;

B. Subsidiary acknowledges and agrees that it will benefit both directly and indirectly from Company’s execution of the Loan Agreement and the other agreements executed and delivered in connection therewith;

AGREEMENT

NOW THEREFORE, Subsidiary and Agent agree as follows:

1. The recitals set forth above are incorporated into and made part of this Joinder Agreement. Capitalized terms not defined herein shall have the meaning provided in the Loan Agreement.
2. By signing this Joinder Agreement, Subsidiary shall be bound by the terms and conditions of the Loan Agreement the same as if it were Borrower (as defined in the Loan Agreement) under the Loan Agreement, mutatis mutandis, provided however, that (a) with respect to (i) Section 5.1 of the Loan Agreement, Subsidiary represents that it is an entity duly organized, legally existing and in good standing under the laws of [●], (b) neither Agent nor Lender shall have any duties, responsibilities or obligations to Subsidiary arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith, (c) if Subsidiary is covered by Company’s insurance, Subsidiary shall not be required to maintain separate insurance or comply with the provisions of Sections 6.1 and 6.2 of the Loan Agreement, and (d) as long as Company satisfies the requirements of Section 7.1 of the Loan Agreement, Subsidiary shall not have to provide Agent separate Financial Statements. To the extent that Agent or Lender has any duties, responsibilities or obligations arising under or related to the Loan Agreement or the other agreements executed and delivered in connection therewith, those duties, responsibilities or obligations shall flow only to Company and not to Subsidiary or any other Person or entity. By way of example (and not an exclusive list): (i) Agent’s providing notice to Company in accordance with the Loan Agreement or as otherwise agreed among Company, Agent and Lender shall be deemed provided to Subsidiary; (ii) a Lender’s providing an Advance to Company shall be deemed

an Advance to Subsidiary; and (iii) Subsidiary shall have no right to request an Advance or make any other demand on Lender.

3. Subsidiary agrees not to certificate its equity securities without Agent's prior written consent, which consent may be conditioned on the delivery of such equity securities to Agent in order to perfect Agent's security interest in such equity securities.
4. Subsidiary acknowledges that it benefits, both directly and indirectly, from the Loan Agreement, and hereby waives, for itself and on behalf of any and all successors in interest (including without limitation any assignee for the benefit of creditors, receiver, bankruptcy trustee or itself as debtor-in-possession under any bankruptcy proceeding) to the fullest extent provided by law, any and all claims, rights or defenses to the enforcement of this Joinder Agreement on the basis that (a) it failed to receive adequate consideration for the execution and delivery of this Joinder Agreement or (b) its obligations under this Joinder Agreement are avoidable as a fraudulent conveyance.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

[SIGNATURE PAGE TO JOINDER AGREEMENT]

SUBSIDIARY:

_____.

By:

Name:

Title:

Address:

Telephone: _____

email: _____

AGENT:

HERCULES CAPITAL, INC.

By: _____

Name: _____

Title: _____

Address:

400 Hamilton Ave., Suite 310

Palo Alto, CA 94301

email: legal@herculestech.com

Telephone: 650-289-3060

EXHIBIT H

ACH DEBIT AUTHORIZATION AGREEMENT

Hercules Capital, Inc., as Agent
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Re: Loan and Security Agreement dated March 10, 2016 (the "Agreement") by and among Bellicum Pharmaceuticals, Inc. ("Borrower") and Hercules Capital, Inc., as Agent (the "Company") and the lenders party thereto (collectively, the "Lender")

In connection with the above referenced Agreement, Borrower hereby authorizes the Company to initiate debit entries for (i) the periodic payments due under the Agreement and (ii) out-of-pocket legal fees and costs incurred by Agent or Lender pursuant to Section 11.11 of the Agreement to Borrower's account indicated below. The Borrower authorizes the depository institution named below to debit to such account.

[IF FILED PUBLICLY, ACCOUNT INFO REDACTED FOR SECURITY PURPOSES]

DEPOSITORY NAME BB&T	BRANCH
CITY	STATE AND ZIP CODE
TRANSIT/ABA NUMBER	ACCOUNT NUMBER 1440000412574

This authority will remain in full force and effect so long as any amounts are due under the Agreement.

(Borrower)(Please Print)

By: _____

Date: _____

SCHEDULE 1.1**TRANCHE I TERM LOAN COMMITMENT**

<u>Lender</u>	<u>Closing Date Tranche I Term Loan Advance</u>	<u>Additional Tranche I Term Loan Advance</u>
Hercules Technology III, L.P.	\$10,000,000	--
Hercules Technology II, L.P.	\$5,000,000	--
Hercules Capital, Inc.	--	\$5,000,000
TOTAL COMMITMENTS	\$15,000,000	\$5,000,000

SCHEDULE 1.2**TRANCHE II CONTINGENT TERM LOAN COMMITMENT**

<u>Lender</u>	<u>Tranche II Term Loan Advance</u>
Hercules Capital, Inc.	\$10,000,000
TOTAL COMMITMENTS	\$10,000,000

SCHEDULE 1A

EXISTING PERMITTED INDEBTEDNESS

Copier Lease dated June 26, 2015 with TLC Office Systems

Telephone Lease dated June 22, 2015 with TLC Office Systems

SCHEDULE 1B

EXISTING PERMITTED INVESTMENTS

See Attachment A.

SCHEDULE 1C

EXISTING PERMITTED LIENS

None.

SCHEDULE 5.3

CONSENTS, ETC.

- Lease Agreement by and between Company and Sheridan Hills Developments L.P., dated June 1, 2012.
- First Amendment to Lease Agreement by and between Company and Sheridan Hills Developments L.P., dated September 13, 2013.
- Second Amendment to Lease Agreement by and between Company and Sheridan Hills Developments L.P., dated June 20, 2014.
- Third Amendment to Lease Agreement by and between Company and Sheridan Hills Developments L.P., dated July 21, 2014.
- Fourth Amendment to Lease Agreement by and between Company and Sheridan Hills Developments L.P., dated November 12, 2014.
- Lease Agreement by and between the Company and Sheridan Hills Developments L.P., dated as of May 6, 2015.

SCHEDULE 5.8

TAX MATTERS

None.

SCHEDULE 5.9

INTELLECTUAL PROPERTY MATTERS

None.

SCHEDULE 5.10

INTELLECTUAL PROPERTY

None.

SCHEDULE 5.11

BORROWER PRODUCTS

None.

SCHEDULE 5.14

SUBSIDIARIES

None.

**CERTIFICATION PURSUANT TO
RULE 13a-14(a) and 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED, AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Thomas J. Farrell, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bellicum Pharmaceuticals, 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 subsidiaries, 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;
 - 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 an annual 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: May 9, 2016

By: /s/ Thomas J. Farrell

Thomas J. Farrell

President and Chief Executive Officer

**CERTIFICATION PURSUANT TO
RULE 13a-14(a) and 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED, AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Alan A. Musso, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bellicum Pharmaceuticals, 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 subsidiaries, 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;
 - 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 an annual 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 controls 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: May 9, 2016

By: /s/ Alan A. Musso

Alan A. Musso

Chief Financial Officer and Treasurer

(Principal Financial and Accounting Officer)

CERTIFICATIONS PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (the "Report") of Bellicum Pharmaceuticals, Inc. (the "Registrant"), as filed with the Securities and Exchange Commission on the date hereof, the undersigned, in their capacities as officers of the Registrant, do each hereby certify, that, to the best of such officer's knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

/s/ Thomas J. Farrell

Thomas J. Farrell

President and Chief Executive Officer

(Principal Executive Officer)

May 9, 2016

/s/ Alan A. Musso

Alan A. Musso

Chief Financial Officer and Treasurer

(Principal Financial and Accounting Officer)

May 9, 2016