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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 September 30, 2020

OR

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

For the transition period from ____ to ____

Commission File Number: 001-36783

BELLICUM PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**20-1450200**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

2710 Reed Road, Ste. 160
Houston, TX 77051
(832) 384-1100
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	**BLCM**	**The Nasdaq Capital Market**

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

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

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

As of October 30, 2020, there were 5,059,779 outstanding shares of Bellicum's common stock, par value, $0.01 per share.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Bellicum Pharmaceuticals, Inc.
Condensed Consolidated Balance Sheets
(in thousands, except par value and share data)

	September 30, 2020 (Unaudited)	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 53,125	$ 91,028
Restricted cash, current	—	2,788
Accounts receivable, interest and other receivables	125	303
Prepaid expenses and other current assets	1,243	884
Assets held for sale	—	16,851
Total current assets	54,493	111,854
Operating lease right-of-use assets	1,296	1,042
Property and equipment, net	2,861	2,529
Restricted cash, non-current	1,501	—
Other assets	342	825
Total assets	$ 60,493	$ 116,250
LIABILITIES, PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 1,463	$ 2,643
Accrued expenses and other current liabilities	6,677	9,770
Warrant derivative liability	23,683	52,184
Private placement option liability	26,339	12,094
Current portion of long-term debt	9,585	11,000
Current portion of lease liabilities	781	454
Liabilities held for sale	—	6,273
Total current liabilities	68,528	94,418
Long-term debt, net of deferred issuance costs	17,682	25,717
Long-term lease liabilities	1,005	864
Total liabilities	87,215	120,999
Commitments and contingencies		
Preferred stock: $0.01 par value; 10,000,000 shares authorized		
Series 1 redeemable convertible preferred stock, $0.01 par value, 1,517,500 shares authorized at September 30, 2020 and December 31, 2019, 534,000 shares issued and outstanding at September 30, 2020; 538,000 shares issued and outstanding at December 31, 2019	21,308	21,468
Stockholders' deficit:		
Common stock, $0.01 par value; 80,000,000 and 40,000,000 shares authorized at September 30, 2020 and December 31, 2019, respectively, 5,127,525 shares issued and 5,059,779 shares outstanding at September 30, 2020; 5,076,593 shares issued and 5,008,846 shares outstanding at December 31, 2019	51	507
Treasury stock: 67,746 shares held at September 30, 2020 and December 31, 2019	(5,056)	(5,056)
Additional paid-in capital	516,858	511,684
Accumulated other comprehensive loss	(353)	(327)
Accumulated deficit	(559,530)	(533,025)
Total stockholders' deficit	(48,030)	(26,217)
Total liabilities, preferred stock and stockholders' deficit	$ 60,493	$ 116,250

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

Bellicum Pharmaceuticals, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share amounts)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenues				
Grants	$ —	$ 103	$ —	$ 2,010
Total revenues	—	103	—	2,010
Operating expenses				
Research and development	8,140	14,331	30,346	51,211
General and administrative	4,163	9,209	12,095	24,263
Total operating expenses	12,303	23,540	42,441	75,474
Gain on dispositions, net	—	—	(3,761)	—
Loss from operations	(12,303)	(23,437)	(38,680)	(73,464)
Other income (expense):				
Interest income	10	323	392	1,044
Interest expense	(725)	(1,079)	(2,473)	(3,237)
Change in fair value of warrant and private placement option liabilities	12,131	(4,850)	14,256	(4,850)
Other expense	—	(2,989)	—	(2,989)
Total other income (expense)	11,416	(8,595)	12,175	(10,032)
Net loss	$ (887)	$ (32,032)	$ (26,505)	$ (83,496)
Net loss per common share attributable to common shareholders, basic and diluted	$ (0.18)	$ (6.79)	$ (5.25)	$ (18.21)
Weighted-average shares outstanding, basic and diluted	5,059,779	4,720,895	5,050,603	4,584,592
Net loss	$ (887)	$ (32,032)	$ (26,505)	$ (83,496)
Other comprehensive income (loss):				
Unrealized (loss) gain on available-for-sale securities, net of tax	—	(8)	—	48
Foreign currency translation adjustment	36	(23)	(26)	(41)
Comprehensive loss	$ (851)	$ (32,063)	$ (26,531)	$ (83,489)

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

Bellicum Pharmaceuticals, Inc.
Condensed Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' (Deficit) Equity
(amounts in thousands, except share data)

Three and Nine Months Ended September 30, 2020

	Series 1 Preferred		Common Stock		Treasury Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance, December 31, 2019	538,000	$ 21,468	5,076,593	$ 507	(67,746)	$ (5,056)	$ 511,684	$ (533,025)	$ (327)	$ (26,217)
1-for-10 Reverse Stock Split	—	—	—	(457)	—	—	457	—	—	—
Share-based compensation	—	—	—	—	—	—	1,323	—	—	1,323
Issuance of common stock upon vesting of restricted stock units	—	—	1,045	—	—	—	—	—	—	—
Conversion of redeemable convertible preferred stock into common stock	(4,000)	(160)	40,000	1	—	—	159	—	—	160
Comprehensive income	—	—	—	—	—	—	—	17,576	(13)	17,563
Balance, March 31, 2020	534,000	$ 21,308	5,117,638	$ 51	(67,746)	$ (5,056)	$ 513,623	$ (515,449)	$ (340)	$ (7,171)
Share-based compensation	—	—	—	—	—	—	1,564	—	—	1,564
Issuance of common stock - Employee Stock Purchase Plan	—	—	9,526	—	—	—	65	—	—	65
Issuance of common stock upon vesting of restricted stock units	—	—	361	—	—	—	—	—	—	—
Comprehensive loss	—	—	—	—	—	—	—	(43,194)	(49)	(43,243)
Balance, June 30, 2020	534,000	$ 21,308	5,127,525	$ 51	(67,746)	$ (5,056)	$ 515,252	$ (558,643)	$ (389)	$ (48,785)
Share-based compensation	—	—	—	—	—	—	1,606	—	—	1,606
Comprehensive loss	—	—	—	—	—	—	—	(887)	36	(851)
Balance, September 30, 2020	534,000	$ 21,308	5,127,525	$ 51	(67,746)	$ (5,056)	$ 516,858	$ (559,530)	$ (353)	$ (48,030)

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

Bellicum Pharmaceuticals, Inc.
Condensed Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' (Deficit) Equity
(amounts in thousands, except share data)

Three and Nine Months Ended September 30, 2019

	Series 1 Preferred		Common Stock		Treasury Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance, December 31, 2018	—	$ —	4,424,205	$ 442	(67,746)	$ (5,056)	$ 493,784	$ (420,548)	$ (144)	$ 68,478
Share-based compensation	—	—	—	—	—	—	2,136	—	—	2,136
Exercise of stock options	—	—	2,765	—	—	—	70	—	—	70
Issuance of common stock upon vesting of restricted stock units	—	—	2,271	—	—	—	—	—	—	—
Issuance of common stock in open market transactions, net of issuance costs	—	—	135,065	14	—	—	4,611	—	—	4,625
Comprehensive loss	—	—	—	—	—	—	—	(24,528)	79	(24,449)
Balance, March 31, 2019	—	$ —	4,564,306	$ 456	(67,746)	$ (5,056)	$ 500,601	$ (445,076)	$ (65)	$ 50,860
Share-based compensation	—	—	—	—	—	—	1,996	—	—	1,996
Exercise of stock options	—	—	221	—	—	—	6	—	—	6
Issuance of common stock - Employee Stock Purchase Plan	—	—	4,000	1	—	—	70	—	—	71
Issuance of common stock upon vesting of restricted stock units	—	—	585	—	—	—	—	—	—	—
Issuance of common stock in open market transactions, net of issuance costs	—	—	124,050	12	—	—	4,340	—	—	4,352
Comprehensive loss	—	—	—	—	—	—	—	(26,936)	(41)	(26,977)
Balance, June 30, 2019	—	$ —	4,693,162	$ 469	(67,746)	$ (5,056)	$ 507,013	$ (472,012)	$ (106)	$ 30,308
Share-based compensation	—	—	—	—	—	—	1,648	—	—	1,648
Issuance of common stock upon vesting of restricted stock units	—	—	840	—	—	—	—	—	—	—
Issuance of redeemable convertible preferred stock in public offering, net	575,000	22,944	—	—	—	—	—	—	—	—
Conversion of redeemable convertible preferred stock into common stock	(33,500)	(1,336)	335,000	34	—	—	1,302	—	—	1,336
Comprehensive loss	—	—	—	—	—	—	—	(32,032)	(31)	(32,063)
Balance, September 30, 2019	541,500	$ 21,608	5,029,002	$ 503	(67,746)	$ (5,056)	$ 509,963	$ (504,044)	$ (137)	$ 1,229

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

Bellicum Pharmaceuticals, Inc.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2020	2019
Cash flows from operating activities:		
Net loss	$ (26,505)	$ (83,496)
Adjustments to reconcile net loss to net cash used in operating activities:		
Share-based compensation	4,493	5,762
Depreciation and amortization expense	1,229	5,479
Change in fair value of warrant and private placement option liabilities	(14,256)	4,850
(Gain) loss on dispositions, net	(3,761)	4
Amortization of discount on investment securities, net	—	(29)
Amortization of right-of-use assets	297	996
Accretion of lease liability	371	590
Amortization of deferred issuance costs	550	662
Expense of issuance costs on warrants and private placement option	—	3,047
Changes in operating assets and liabilities:		
Accounts receivable, interest and other receivables	178	581
Prepaid expenses and other assets	103	(1,524)
Accounts payable	(1,345)	(2,474)
Accrued liabilities and other	(4,629)	2,727
Deferred revenue	—	(2,010)
Net cash used in operating activities	(43,275)	(64,835)
Cash flows from investing activities:		
Proceeds from sale of investment securities	—	45,229
Proceeds from sale of property and equipment, net	14,909	—
Purchases of property and equipment	(807)	(554)
Net cash provided by investing activities	14,102	44,675
Cash flows from financing activities:		
Payment on debt	(10,000)	—
Proceeds from issuance of common stock in a public offering, net	—	8,977
Proceeds from issuance of redeemable convertible preferred stock in a public offering, net	—	22,944
Proceeds from issuance of warrants in a public offering, net	—	30,995
Proceeds received from private placement option, net	—	11,254
Proceeds from issuance of stock from employee stock purchase plan	65	71
Proceeds from exercise of stock options	—	76
Payment on financing lease obligations	(56)	(30)
Net cash (used in) provided by financing activities	(9,991)	74,287
Effect of exchange rate changes on cash	(26)	(41)
Net change in cash, cash equivalents, and restricted cash	(39,190)	54,086
Cash, cash equivalents and restricted cash at beginning of period	93,816	48,668
Cash, cash equivalents and restricted cash at end of period	$ 54,626	$ 102,754
Supplemental cash flow information:		
Cash paid during the period for interest	$ 1,973	$ 2,611
Non-cash investing and financing activities:		
Purchases of property and equipment in accounts payables and accrued liabilities	$ 859	$ —
Leasehold improvements paid by landlord	$ 113	$ —
Conversion of redeemable preferred stock into common stock	$ 160	$ 1,336
Reclassification of property and equipment, net to assets held for sale	$ 199	$ —
Accrued issuance costs for public offering	$ —	$ 210
Financing leases incurred for equipment	$ —	$ 167

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

Bellicum Pharmaceuticals, Inc.

Notes to Condensed Consolidated Financial Statements (Unaudited)

NOTE 1 - ORGANIZATION, BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

Bellicum Pharmaceuticals, Inc. ("Bellicum") 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. Bellicum is devoting substantially all of its present efforts to developing next-generation product candidates in areas of cellular immunotherapy, including CAR-T therapy.

Bellicum has two wholly-owned subsidiaries, Bellicum Pharma Limited, a private limited company organized under the laws of the United Kingdom, and Bellicum Pharma GmbH, a private limited liability company organized under German law. Both were formed for the purpose of developing product candidates in Europe. Bellicum, Bellicum Pharma Limited and Bellicum Pharma GmbH are collectively referred to herein as the "Company". All intercompany balances and transactions among the consolidated entities have been eliminated in consolidation.

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker. The Company has determined that it has one operating and reporting segment as it allocates resources and assesses financial performance on a consolidated basis. The Company's chief operating decision maker is its Chief Executive Officer who manages operations and reviews the financial information as a single operating segment for purposes of allocating resources and evaluating its financial performance.

Reverse Stock Split

On February 5, 2020, the Company filed a Certificate of Amendment of the Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware to (i) effect a reverse stock split of all issued and outstanding shares of the Company's common stock at a ratio of 1-for-10 and (ii) reduce the number of authorized shares of the Company's common stock from 200,000,000 to 40,000,000. On June 15, 2020, the Company filed with the Secretary of State of the State of Delaware a Second Certificate of Amendment to the Company's Amended and Restated Certificate of Incorporation to increase the authorized number of shares of the Company's common stock from 40,000,000 shares to 80,000,000 shares.

The accompanying condensed consolidated financial statements and notes to the condensed consolidated financial statements gives retroactive effect to the reverse stock split for all periods presented.

Basis of Presentation

The accompanying unaudited condensed financial statements have been prepared in conformity with the authoritative U.S. generally accepted accounting principles ("GAAP") for interim financial information and pursuant to Form 10-Q and Article 10 of Regulation S-X of the Securities and Exchange Commission (SEC). Accordingly, the accompanying unaudited condensed consolidated financial statements do not include all of the information and notes required by GAAP for complete financial statements. The unaudited interim financial statements reflect all adjustments, which, in the opinion of management, are necessary for a fair statement of the results for the periods presented. All such adjustments are of a normal and recurring nature. The operating results presented in these unaudited condensed consolidated financial statements are not necessarily indicative of the results that may be expected for any future periods. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the notes thereto in the Company's Annual Report on Form 10-K ("Annual Report") for the fiscal year ended December 31, 2019, as filed with the SEC on March 12, 2020.

The accompanying interim condensed financial statements have been prepared on a basis that assumes that the Company will continue as a going concern, and do not include any adjustments that may result from the outcome of this uncertainty. This basis of accounting contemplates the recovery of the Company's assets and the satisfaction of the Company's liabilities and commitments in the normal course of business and does not include any adjustments to reflect the possible future effects of the recoverability and classification of recorded asset amounts or amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern. The Company has recorded losses from operations since its inception and if the Company does not successfully obtain regulatory approval and commercialize any of its product candidates, the Company will not be able to achieve profitability. As of September 30, 2020, and December 31, 2019, the Company had an accumulated deficit of $559.5 million and $533.0 million, respectively.

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.

The Company believes that its current capital resources, which consist of cash and cash equivalents are sufficient to fund operations through at least the next twelve months from the date the accompanying interim financial statements are issued based on the expected cash burn rate. The Company may be required to raise additional capital to fund future operations through the sale of additional equity, incurrence of additional debt allowed under existing debt arrangements, the entry into licensing or collaboration agreements with partners, grants or other sources of financing. Sufficient funds may not be available to the Company at all or on attractive terms when needed from equity or debt financings. If the Company is unable to obtain additional funding from these or other sources when needed, or to the extent needed, it may be necessary to significantly reduce its controllable and variable expenditures and current rate of spending through reductions in staff and delaying, scaling back, or suspending certain research and development, sales and marketing programs and other operational goals.

Reclassifications

Certain reclassifications have been made to prior year financial statements to conform to the current year presentation.

Use of Estimates

The preparation of the interim condensed consolidated 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.

Significant Accounting Policies

There have been no significant changes to the accounting policies during the nine months ended September 30, 2020 as compared to the significant accounting policies described in Note 1 of the “Notes to Consolidated Financial Statements” in the Company’s audited financial statements included in its Annual Report for the fiscal year ended December 31, 2019.

Revenue Recognition

Cancer Research Grant Contract

On August 9, 2017, the Company entered into a Cancer Research Grant Contract (the “CPRIT Agreement”) with the Cancer Prevention Research Institute of Texas (“CPRIT”), pursuant to which CPRIT awarded a grant of approximately $16.9 million to the Company to fund development of rivo-cel for hematologic cancer (the “CPRIT Award”). The CPRIT Award is contingent upon funds being available during the term of the CPRIT Agreement and subject to CPRIT’s ability to perform its obligations under the CPRIT Agreement.

During 2017, the Company received $4.2 million in advance funding from CPRIT, which was recorded as deferred revenue. During the three and nine month periods ended September 30, 2020, the Company did not incur expenses or recognize revenue for work performed under the CPRIT grant. During the three and nine month periods ended September 30, 2019, the Company incurred expenses and recognized revenue of $0.1 million and $2.0 million, respectively, for work performed under the CPRIT grant.

The CPRIT Agreement was due to expire on February 29, 2020, but was terminated early by the Company on January 31, 2020. Upon termination of the CPRIT Agreement, the Company reclassified the remaining unexpended award proceeds of $0.8 million from deferred revenue to accrued liabilities. During the nine months ended September 30, 2020, the Company returned the remaining unexpended award proceeds to CPRIT and released the accrued liability.

Cash, Cash Equivalents and Restricted Cash

The Company considers all short-term, highly liquid investments with maturity of three months or less from the date of purchase and that can be liquidated without prior notice or penalty, to be cash equivalents.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the balance sheets that sum to the total of the same such amounts shown in the statements of cash flows.

(in thousands)	September 30, 2020	December 31, 2019
Cash and cash equivalents	$ 53,125	$ 91,028
Restricted cash, current	—	2,788
Restricted cash, non-current	1,501	—
Total cash, cash equivalents and restricted cash shown in the statements of cash flows	$ 54,626	$ 93,816

In addition to the restricted cash held and released by CPRIT, there was $1.1 million of restricted cash as of December 31, 2019 in escrow to cover specific construction of manufacturing improvement costs related to the facility lease. The release of the funds was subject to the authorized completion of certain aspects of the manufacturing improvements. The funds were released during the nine months ended September 30, 2020.

In connection with the closing of the Asset Purchase Agreement with M.D. Anderson on April 14, 2020, $1.5 million of the cash proceeds received are subject to certain escrow provisions and recorded as restricted cash, non-current. The funds are required to be held for a period of up to 18 months subsequent to the April 14, 2020 closing date.

Dispositions and Derecognition of Liabilities

Disposition of Assets and Liabilities Held for Sale

In 2019, the Company completed the buildout of manufacturing space at its leased headquarters in Houston, Texas and began in-house clinical supply manufacturing. The facility included capacity far in excess of the Company's anticipated current and near-term manufacturing needs and management decided to seek a partner for the facility with the goal of reducing the Company's costs while maintaining dedicated cell therapy manufacturing capacity to support the Company's product candidates.

The disposal of the assets and liabilities of such facility was completed on April 14, 2020, at a purchase price of $15.0 million. The disposal group consisted of property and equipment, net of $12.0 million, right-of-use assets of $4.8 million, current portion of lease liabilities of $1.4 million and long-term lease liabilities of $4.6 million. During the nine month period ended September 30, 2020, the Company recognized a net gain of $3.8 million in connection with the disposal, which is presented within Gain on dispositions, net within the accompanying condensed consolidated statements of operations and comprehensive loss. The primary reason for the disposal was to reduce the Company's fixed operating expenses by transitioning from an in-house clinical supply manufacturer to a third party manufacturer.

Derecognition of Liabilities

On September 15, 2020, the Company suspended the Miltenyi supply agreement that had previously obligated the Company to remit a payment that was recorded within accrued expenses and other current liabilities of the accompanying condensed consolidated balance sheets. During the three and nine month periods ended September 30, 2020, the Company recognized a gain of $1.1 million in connection with the derecognition of this liability, which is presented within research and development within the accompanying condensed consolidated statements of operations and comprehensive loss.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other liabilities consist of the following:

(in thousands)	September 30, 2020	December 31, 2019
Accrued payroll	$ 2,237	$ 2,032
Accrued patient treatment costs	951	1,162
Accrued manufacturing costs	408	2,230
Accrued professional services	584	654
Accrued construction costs	694	—
Accrued obligations under material supply agreements	—	1,121
Accrued other	1,803	2,571
Total accrued expenses and other current liabilities	$ 6,677	$ 9,770

Warrant Derivatives

Freestanding warrants are classified as liabilities in the accompanying consolidated balance sheets as they are exercisable for multiple underlying instruments that are potentially redeemable. The Company accounts for these warrants at fair value on the date of issuance and are subject to re-measurement to fair value at each balance sheet date. Any change in fair value is recognized as a component of other income (expense) on the accompanying consolidated statements of operations and comprehensive loss. The Company will continue to adjust the liability for changes in fair value until the earlier of the exercise or expiration of the warrants or a change in control, as defined. The warrants are freely exercisable at any time from the issuance date until the expiration date, provided exercise does not cause a warrant holder to exceed a pre-determined beneficial ownership limit.

The Company estimates the fair value of these liabilities using the Black-Scholes valuation technique, which utilizes assumptions including (i) the fair value of the underlying stock at the valuation measurement date, (ii) volatility of the price of the underlying stock, (iii) the expected term, and (iv) risk-free interest rates.

Private Placement Option

The Company has entered into a security purchase agreement that contains a call option on preferred shares that are callable outside the control of the Company. The Company recorded the option as a liability and measured the fair value of the option at the time of issuance. The Company will re-measure the option to fair value at each balance sheet date and record changes in fair value in other income (expense) in the accompanying condensed consolidated statement of operations and comprehensive loss at each reporting period. Offering expenses arising from the issuance of the private placement option were expensed as incurred.

The Company estimates the fair value of these liabilities using a binomial lattice model, which utilizes assumptions including (i) the fair value of the underlying stock at the valuation measurement date, (ii) volatility of the price of the underlying stock, (iii) the expected term, and (iv) risk-free interest rates.

Preferred Stock

Preferred shares issued by the Company that are subject to mandatory redemption are classified as liability instruments in the accompanying condensed consolidated balance sheets and are measured at fair value at the date of issuance. Conditionally redeemable preferred shares (including preferred shares that feature redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company's control) are classified within mezzanine equity in the accompanying condensed consolidated balance sheets. At all other times, preferred shares are classified within stockholders' (deficit) equity.

Operating Leases

At the inception of a contractual arrangement, the Company determines whether the contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of the identified asset in exchange for consideration over a period of time. If both criteria are met, upon lease commencement, the Company records a lease liability which represents the Company's obligation to make lease payments arising from the lease, and a corresponding right-of-use ("ROU") asset which represents the Company's right to use an underlying asset during the lease term.

Operating leases are recognized as ROU assets and operating lease liabilities on the balance sheet based on the present value of the future minimum lease payments over the lease term at commencement date calculated using the Company's incremental borrowing rate applicable to the underlying asset unless the implicit rate is readily determinable. Any lease incentives received are deferred and recorded as a reduction of the ROU asset and amortized over the term of the lease. Rent expense, comprised of amortization of the ROU asset and the implicit interest accreted on the operating lease liability, is recognized on a straight-line basis over the lease term. The Company determines the lease term as the non-cancellable period of the lease and may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise such options. Leases with a term of 12 months or less are not recognized on the balance sheets.

Fair Value of Financial Instruments

Fair value is defined as the exchange price that would be received for an asset or an exit price paid to transfer a liability in an orderly transaction between market participants in a principal market on the measurement date.

Accounting standards include disclosure requirements around fair values used for certain financial instruments and establish a fair value hierarchy. The three-tier hierarchy defines a three-tiered valuation hierarchy for disclosures that prioritizes valuation inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market, as described further in Note 2.

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 categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The Company believes the recorded values of its financial instruments, including cash and cash equivalents, accounts payable, accrued liabilities, and debt approximate their fair values due to the short-term nature of these instruments.

Financial Instruments and Credit Risks

Financial instruments that potentially subject the Company to credit risk include cash and cash equivalents and accounts receivable. Cash is deposited in demand accounts in federally insured domestic institutions to minimize risk. Insurance is provided through the Federal Deposit Insurance Corporation and Security Investor Protection Corporation. Although the balances in these accounts exceed the federally insured limit from time to time, the Company has not incurred losses related to these deposits.

Equity Issuance Costs

Equity issuance costs represent costs paid to third parties in order to obtain equity financing. The costs related to preferred and common stock have been offset against the proceeds of the equity issuances.

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 earnings per share is based on the treasury stock method and includes the effect from potential issuance of ordinary shares, such as shares issuable pursuant to the conversion of preferred stock to common stock, exercise of warrants to purchase common stock, exercise of stock options, and vesting of restricted stock units.

The following outstanding shares of common stock equivalents were excluded from the computations of diluted net loss per share of common stock attributable to common stockholders for the periods presented as the effect of including such securities would be anti-dilutive.

	September 30, 2020	September 30, 2019
Common Stock Equivalents:	Number of Shares	
Redeemable convertible series 1 preferred stock	5,340,000	5,415,000
Warrants to purchase common stock	5,750,000	5,750,000
Private placement option	9,675,000	9,675,000
Options to purchase common stock	1,142,470	701,020
Unvested shares of restricted stock units	182,227	16,609
Total common stock equivalents	22,089,697	21,557,629

New Accounting Requirements and Disclosures

Fair Value Measurement

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, *which* modifies fair value disclosures and removes some disclosure requirements for both public and private companies. In addition, public companies are subject to some new disclosure requirements which requires to disclose the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. ASU No. 2018-13 is effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company adopted the standard effective January 1, 2020 with no material effect on its financial statements.

Financial Instruments – Credit Losses

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which requires the measurement of all expected credit losses for financial assets including trade receivables held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. ASU No. 2016-13 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company adopted the standard effective January 1, 2020 with no material effect on its financial statements. Subsequent to the issuance of ASU 2016-13, the FASB issued ASU 2018-19, *Codification Improvements to Topic 326, Financial Instruments - Credit Losses*. This ASU does not change the core principle of the guidance in ASU 2016-13, instead these amendments are intended to clarify and improve operability of certain topics included within the credit losses guidance. The FASB also subsequently issued ASU No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Derivatives and Hedging (Topic 815), and Financial Instruments (Topic 842)*, which did not change the core principle of the guidance in ASU 2016-13 but clarified that expected recoveries of amounts previously written off and expected to be written off should be included in the valuation account and should not exceed amounts previously written off and expected to be written off. The guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019 for public business entities, excluding smaller reporting companies. Early adoption is permitted. As a smaller reporting company, the guidance will be effective for the Company during the first quarter of 2023. The Company is in the process of assessing the impact adoption will have on its consolidated financial statements.

Income Taxes

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes (Topic 740)*. The guidance eliminates certain exceptions for recognizing deferred taxes for investments, performing intraperiod allocation and calculating income taxes in interim periods. This guidance also includes guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. ASU 2019-12 is effective for annual and interim periods in fiscal years beginning after December 15, 2020. Early adoption is permitted. The Company is currently evaluating the impact this change will have on its consolidated financial statements.

Investments

In January 2020, the FASB issued Accounting Standards Update No. 2020-01, *Investments—Equity Securities (Topic 321), Investments—Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)—Clarifying the Interactions between Topic 321, Topic 323, and Topic 815 (a consensus of the Emerging Issues Task Force)*, which clarifies the interaction of the accounting for equity securities, investments accounted for under the equity method, and certain forward contracts and purchased options. This update is effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years, and early adoption is permitted. The Company is in the process of determining the impact the adoption will have on its consolidated financial statements as well as whether to early adopt the new guidance.

NOTE 2 - FAIR VALUE MEASUREMENTS AND INVESTMENT SECURITIES

Investment Securities

The following table presents 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:

	Fair Value at September 30, 2020			Fair Value at December 31, 2019		
(in thousands)	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Cash equivalents:						
Money market funds and treasury bills	$ 48,259	$ —	$ —	$ 77,170	$ —	$ —
Total cash equivalents	$ 48,259	$ —	$ —	$ 77,170	$ —	$ —

As of September 30, 2020, the $1.5 million of restricted cash, non-current, on the Company's balance sheet is held in a money market fund.

Money market funds, U.S. Treasury, U.S. government agency-backed securities, 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.

Warrant Derivative Liability and Private Placement Option Liability

The Company's financial liabilities recorded at fair value on a recurring basis include the fair values of the warrant derivative liability and the private placement option liability. As of September 30, 2020, the fair values of the warrant derivative liability and the private placement option liability are classified as current liabilities in the accompanying condensed consolidated balance sheets. These liabilities will be shown as current liabilities on the balance sheet when it is deemed more probable than not by management to be exercised within one year.

The fair value of the warrants has been estimated with the following weighted-average assumptions:

	September 30, 2020	December 31, 2019
Risk-free interest rate	0.33%	1.83%
Volatility of underlying stock price	90.00%	78.67%
Expected term (years)	5.89	6.64

The fair value of the private placement option has been estimated with the following weighted-average assumptions:

	September 30, 2020
Risk-free interest rate	0.55%
Volatility of underlying stock price	90.00%
Expected term (years)	7.00

The following table provides the warrant derivative and private placement option reported at fair value and measured on a recurring basis:

	Fair Value at September 30, 2020			Fair Value at December 31, 2019		
(in thousands)	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Warrant derivative liability	$ —	$ —	$ 23,683	$ —	$ —	$ 52,184
Private placement option liability	—	—	26,339	—	—	12,094
Total fair value	$ —	$ —	$ 50,022	$ —	$ —	$ 64,278

The ending balance of the Level 3 financial instruments presented above represents management's best estimate of valuation and may not be substantiated by comparison to independent markets and, in many cases, could not be realized in immediate settlement of the instruments.

NOTE 3 - LEASES

The Company determines whether an arrangement is a lease at its inception. Operating leases relate primarily to office and laboratory space with remaining lease terms of approximately two to three years. If operating leases include options to extend the lease term, management will consider the options in determining the lease term used to establish the Company's ROU assets and lease liabilities.

The Company entered into a lease agreement for office and laboratory space in Houston, Texas commencing in July 2020 and expiring in 2023. The Company recorded ROU assets of $0.5 million and a corresponding lease liability of $0.6 million upon lease commencement. The Company received a construction allowance of $0.1 million which was capitalized as leasehold improvements during the three and nine months ended September 30, 2020.

As most of the Company's leases do not provide an implicit rate, the Company's incremental borrowing rate based on the information available at lease commencement date was used to determine the present value of lease payments.

Components of lease cost are as follows:

(in thousands)	Three Months Ended September 30, 2020	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Finance lease cost:				
Amortization of leased asset	$ 18	$ 18	$ 54	$ 42
Interest on lease liabilities	5	7	17	17
Operating lease cost	169	594	668	1,587
Short-term lease cost	235	—	476	47
Total lease cost	$ 427	$ 619	$ 1,215	$ 1,693

	September 30, 2020
Weighted-average remaining lease term:	
Operating leases	2.43 years
Finance leases	1.66 years
Weighted-average discount rate:	
Operating leases	11.55 %
Finance leases	13.18 %

Supplemental cash flow information and non-cash activity related to the Company's operating leases are as follows:

(in thousands)	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Operating cash flow information:		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 827	$ 1,741
Operating cash flows from finance leases	17	17
Financing cash flows from finance leases	56	30
Non-cash activity:		
Right-of-use assets obtained in exchange for lease obligations	$ 597	$ 2,263

Maturities of lease liabilities by year for leases are as follows:

(in thousands)	Operating Leases	Financing Leases
2020	$ 279	$ 24
2021	757	90
2022	571	39
2023	286	—
2024 and beyond	—	—
Total lease payments	1,893	153
Less: Imputed interest	(244)	(16)
Present value of lease liabilities	$ 1,649	$ 137

NOTE 4 - DEBT

On December 21, 2017 (the “Oxford Closing Date”), the Company entered into a loan and security agreement with Oxford Finance LLC, as the collateral agent and a lender ("Oxford"), and the lenders listed on Schedule 1.1 thereto or otherwise party thereto from time to time (the "Lenders"), pursuant to which the Company borrowed $35.0 million in a single term loan (the “Oxford Loan”) on the Oxford Closing Date. On the Oxford Closing Date, the Company used approximately $32.9 million of the proceeds from the Oxford Loan to repay its indebtedness to a previous lender.

On December 24, 2019, the Company entered into a First Amendment to Loan and Security Agreement (the “First Amendment”) with Oxford, in connection with the Asset Sale with M.D. Anderson. On March 31, 2020, the Company entered into a Second Amendment to Loan and Security Agreement (the "Second Amendment") with Oxford Finance LLC, in connection with the Asset Sale. The loan and security agreement with Oxford, as amended by the First and Second Amendment, is referred to as the "Oxford Loan Agreement."

The Company’s obligations under the Oxford Loan Agreement are secured by a first priority security interest in substantially all of the Company’s current and future assets, including its intellectual property. The Company has also agreed not to encumber its intellectual property assets, except as permitted by the Oxford Loan Agreement. The Oxford Loan matures on December 1, 2022 (the “Oxford Maturity Date”) and was originally interest-only through January 31, 2020, followed by 35 equal monthly payments of principal and unpaid accrued interest. The Oxford Loan bears interest at a floating per annum rate equal to (i) 7.25% plus (ii) the greater of (a) the 30-day U.S. Dollar LIBOR rate reported in The Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue and (b) 1.25%.

The Company will be required to make a final payment of 8.70% of the principal amount of the Oxford Loan borrowed (the “Oxford Final Payment Fee”), payable on the earlier of (i) the Oxford Maturity Date, (ii) the acceleration of the Oxford Loan, or (iii) the prepayment of the Oxford Loan. The Company may prepay all, but not less than all, of the borrowed amounts, provided that the Company will be obligated to pay a prepayment fee equal to (i) 3.00% of the outstanding principal balance if prepaid on or before the first anniversary of the Closing Date, (ii) 2.00% of the outstanding principal balance, if prepaid after the first anniversary and before the second anniversary of the Closing Date, and (iii) 1.00% of the outstanding principal balance prepaid thereafter and prior to the Maturity Date (each, a “Prepayment Fee”). While any amounts are outstanding under the Oxford Loan Agreement, the Company is subject to a number of affirmative and restrictive covenants, including covenants regarding delivery of financial statements, payment of taxes, maintenance of insurance, dispositions of property, business combinations or acquisitions, incurrence of additional indebtedness and transactions with affiliates, among other customary covenants. The Company is also restricted from paying dividends or making other distributions or payments of its capital stock, subject to limited exceptions. Upon the occurrence of certain events, including but not limited to the Company’s failure to satisfy its payment obligations under the Oxford Loan Agreement, the breach of certain of its other covenants under the Oxford Loan Agreement, or the occurrence of a material adverse change, the collateral agent will have the right, among other remedies, to declare all principal and interest immediately due and payable, and the lender will have the right to receive the Oxford Final Payment Fee and, if the payment of principal and interest is due prior to the Oxford Maturity Date, a Prepayment Fee.

Pursuant to the Second Amendment, the Loan Agreement was amended to, among other things: (i) provide for Oxford's and the Lenders’ consent to the Company’s consummation of the Asset Sale with M.D. Anderson, provided such sale occurs on or prior to June 30, 2020; (ii) if such Asset Sale occurs on or prior to June 30, 2020, extend the interest-only period through as late as July 31, 2021; (iii) if Asset Sale closes on or prior to June 30, 2020, provide for a partial repayment to the Lenders of a significant percentage of the proceeds of the asset sale that varies in accordance with the timing of closing and the associated amortization schedule, a portion of which will be applied as partial payment of the Final Payment Percentage (as defined in the Loan Agreement); and (iv) grant the Lenders and Oxford a security interest in the Company’s intellectual property as of the date of the Second Amendment, in each case as set forth in the Second Amendment. The sale of certain assets subject to the Second Amendment closed on April 14, 2020. Pursuant to the Second Amendment, the closing of the Asset Sale to M.D. Anderson triggered the Company’s obligation to provide partial repayment to the Lenders of $7.0 million, of which $0.6 million was applied as partial payment of the Oxford Final Payment Fee. The interest-only period was extended through December 31, 2020.

The Company paid expenses related to the Oxford Loan Agreement of $0.1 million, which, along with the final facility charge of $3.0 million, have been recorded as deferred issuance costs, which offset long-term debt on the Company's condensed consolidated balance sheet. The deferred issuance costs are being amortized over the term of the loan as interest expense using the effective interest method. Interest expense of amortized deferred issuance costs included $0.2 million and $0.2 million during the three months ended September 30, 2020 and 2019, respectively, and $0.6 million and $0.7 million during the nine months ended September 30, 2020 and 2019, respectively. The interest rate on amounts borrowed under the Oxford Loan Agreement was 10.98% at September 30, 2020.

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 5 - AUGUST 2019 PUBLIC OFFERING AND PRIVATE PLACEMENT

August 2019 Public Offering

On August 16, 2019, the Company entered into an underwriting agreement (the “Underwriting Agreement”) with Jefferies LLC and Wells Fargo Securities, LLC, as representatives of the several underwriters named therein (the “Underwriters”), relating to an underwritten public offering (the “Offering”) of 575,000 shares of the Series 1 Redeemable Convertible Non-Voting Preferred Stock of the Company (the “Series 1 Preferred Stock”) and warrants (the “Public Warrants”) to purchase up to 5,750,000 shares of its common stock. Each share of Series 1 Preferred Stock was sold together with a warrant to purchase 10 shares of common stock at a combined price to the public of $100.00. Under certain circumstances, each warrant to purchase 10 shares of common stock will be exercisable, at the irrevocable election of the holder, for one share of Series 1 Preferred Stock. The offering closed on August 21, 2019, and the net proceeds to the Company from the Offering was approximately $53.8 million after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company, and excluding any proceeds that the Company may receive upon exercise of the Public Warrants.

All of the Public Warrants sold in the Offering have an exercise price of $13.00 per share of common stock or, in certain circumstances, for $130.00 per share of Series 1 Preferred Stock, subject to proportional adjustments in the event of stock splits or combinations or similar events. The Public Warrants were immediately exercisable upon issuance, provided that the holder is prohibited, subject to certain exceptions, from exercising a warrant for shares of common stock to the extent that immediately prior to or after giving effect to such exercise, the holder, together with its affiliates and other attribution parties, would own more than 9.99% of the total number of shares of common stock then issued and outstanding, which percentage may be changed at the holder’s election to a lower percentage at any time or to a higher percentage not to exceed 19.99% upon 61 days’ notice to the Company. The Public Warrants will expire on August 21, 2026, unless exercised prior to that date.

Private Placement

On August 16, 2019, the Company entered into a Securities Purchase Agreement (the “Securities Purchase Agreement”) with certain institutional investors named therein (the “Purchasers”), pursuant to which the Company agreed to issue in a private placement (i) 350,000 shares of its Series 2 Redeemable Convertible Non-Voting Preferred Stock (the “Series 2 Preferred Stock”), at a purchase price of $100.00 per share, and related warrants (the “Private Warrants”) to purchase up to 2,800,000 shares of common stock at an exercise price of $10.00 per share, and (ii) 250,000 shares of its Series 3 Redeemable Convertible Non-Voting Preferred Stock (the “Series 3 Preferred Stock” and, together with the Series 1 Preferred Stock and Series 2 Preferred Stock, the “Preferred Stock”), at a purchase price of $140.00 per share, and related warrants (also, “Private Warrants”) to purchase up to 875,000 shares of common stock at an exercise price of $14.00 per share. The purchase and sale of the securities issuable under the private placement agreement may occur in two or more separate closings, each to be conducted at the Purchasers’ discretion within five days’ notice to the Company. The purchase and sale was subject to the Company’s obtaining stockholder approval for additional authorized shares of Common Stock or a reverse stock split (the “Required Stockholder Approval”), which occurred in the first quarter of 2020. The right of the Purchasers to purchase such securities will expire two and a half years after the Required Stockholder Approval, on July 15, 2022, with respect to the Series 2 Preferred Stock, and three years after such stockholder approval, on January 15, 2023, with respect to the Series 3 Preferred Stock, if not exercised prior to that date.

The Company received $11.2 million in option proceeds, net of offering costs, upon the execution of the Securities Purchase Agreement. Total offering costs incurred by the Company related to the Public Warrants, Private Warrants and options amounted to $3.0 million.

The following table reflects the fair value roll forward reconciliation of the warrant derivative and private placement option liabilities for the period ended September 30, 2020:

(in thousands)	Warrant Derivative Liability	Private Placement Option Liability	Total
Balance, December 31, 2019	$ 52,184	$ 12,094	$ 64,278
Change in fair value	(28,501)	14,245	(14,256)
Balance, September 30, 2020	$ 23,683	$ 26,339	$ 50,022

NOTE 6 - REDEEMABLE CONVERTIBLE PREFERRED STOCK

In August 2019, the Company sold Series 1 preferred stock pursuant to the Offering. The Company has 10,000,000 authorized shares of preferred stock with a par value of $0.01, of which the Company has designated 1,517,500 shares as Series 1 redeemable convertible non-voting preferred stock, 350,000 shares as Series 2 redeemable convertible non-voting preferred stock and 250,000 shares as Series 3 redeemable convertible non-voting preferred stock. There were 534,000 shares of Series 1 preferred stock issued and outstanding as of September 30, 2020. There were no shares of Series 2 or 3 preferred stock issued and outstanding as of September 30, 2020.

As of September 30, 2020, the Company classified the Series 1 preferred stock within mezzanine equity, as the Series 1 preferred stock is redeemable at the option of the holders upon passage of time, which is outside of the Company's control to prevent.

The Series 1 preferred stock is not currently redeemable and is only redeemable upon a fundamental change at a redemption price. The Company does not believe a fundamental change is considered probable until it occurs. Subsequent adjustment of the amount presented within mezzanine equity to its redemption amount is unnecessary if it is not probable that the instrument will become redeemable. As (i) the Series 1 preferred stock is only redeemable upon a fundamental change, the occurrence of which is not probable, and (ii) the occurrence of Transition Date (defined below) is probable, the Company did not accrete the Series 1 preferred stock to its redemption amount.

Optional Conversion

Each share of Preferred Stock is initially convertible into 10 shares of Common Stock. The conversion price at which Preferred Stock may be converted into shares of common stock, is subject to adjustment in connection with certain specified events.

Redemption

Until the applicable Transition Date (defined below), at any time on or after the date that is the fifth (5th) anniversary of the initial issue date of the applicable series of preferred stock, all or any portion of the preferred stock is redeemable at the option of the holder at a redemption price of $100.00 per share (for Series 1 and Series 2 preferred stock) and $140.00 per share (for Series 3 preferred stock). The "Transition Date" means:

- With respect to the Series 1 preferred stock, the first date following August 21, 2021, on which each of the Conditions (as defined below) is met (the "Series 1 Transition Date");
- With respect to the Series 2 preferred stock, the first date following the six-month anniversary of the Series 1 Transition Date on which each of the Conditions is met (the "Series 2 Transition Date"); and
- With respect to the Series 3 preferred stock, the first date following the six-month anniversary of the Series 2 Transition Date on which each of the Conditions is met.

The "Conditions" mean: (1) the closing price of the Company's common stock has been equal to or exceeded $25.00 per share for 180 calendar days (for determining if the Conditions are met for the Series 1 preferred stock and Series 2 preferred stock) and $35.00 per share (for the Series 3 preferred stock) for 180 calendar days; (2) the 50-day average trading volume of the Company's common stock on the Nasdaq stock market is greater than 50,000 shares; and (3) a Phase 3 or Phase 2 pivotal clinical trial for one of the Company's CAR T product candidates has been initiated, meaning that at least one clinical trial site has been activated.

Dividends

Shares of Preferred Stock will be entitled to receive dividends equal to (on an as-if-converted-to-common stock basis), and in the same form and manner as, dividends actually paid on shares of common stock.

Liquidation

Until the applicable Transition Date, in the event of a liquidation, dissolution, winding up or deemed liquidation, holders of the Preferred Stock will receive a payment equal to the applicable per share purchase price of their Preferred Stock before any proceeds are distributed to the holders of Common Stock. The liquidation preferences, protective voting provisions and redemption rights of the Preferred Stock will terminate upon the occurrence of certain events.

Voting

Shares of Preferred Stock will generally have no voting rights, except to the extent expressly provided in the Company's certificate of incorporation or as otherwise required by law.

NOTE 7 - STOCKHOLDERS' EQUITY AND SHARE-BASED COMPENSATION PLANS

Stockholders' Equity

On October 5, 2018, the Company entered into an Open Market Sale Agreement (the "Sale Agreement") with Jefferies LLC ("Jefferies"), as sales agent, pursuant to which the Company may offer and sell, from time to time, through Jefferies, shares of the Company's common stock having an aggregate offering price of up to $60.0 million. The shares will be offered and sold pursuant to the Company's prospective supplement to its shelf registration statement on Form S-3 (the "Prospective Supplement"). During the year ended December 31, 2019, the Company received $9.0 million in net proceeds from the sale of 259,115 shares of its common stock in the open market. On August 16, 2019, in connection with the Offering, the Company delivered written notice to Jefferies that the Company was suspending and terminating the Prospectus Supplement related to the shares of its common stock issuable pursuant to the Sale Agreement. The Company will not make any sales of its securities pursuant to the Sales Agreement, unless and until a new prospectus supplement is filed. Other than the termination of the Prospectus Supplement, the Sale Agreement remains in full force and effect.

Share-Based Compensation Plans

The Company has five share-based compensation plans, including the 2019 Equity Incentive Plan (the "2019 Plan"), which was adopted in June 2019. Each plan authorizes the granting of shares of common stock and options to purchase common stock to employees and directors of the Company, as well as non-employee consultants, and allows the holder of the option to purchase common stock at a stated exercise price. The only plan under which the Company may currently grant equity awards is the 2019 Equity Incentive Plan although there remain outstanding awards under the other four plans. Options vest according to the terms of the grant, which may be immediately or based on the passage of time, generally over four years, and have a term of up to 10 years. Unexercised stock options terminate on the expiration date of the grant. The Company recognizes the share-based compensation expense over the requisite service period of the individual grantees, which generally equals the vesting period.

2019 Equity Incentive Plan

The 2019 Plan, is designed to secure and retain the services of the Company's employees and directors. The 2019 Plan is successor to and continuation of the 2014 Equity Incentive Plan, as amended, the ("2014 Plan"), and no additional awards may be issued from the 2014 Plan. Subject to adjustment for certain changes in the Company's capitalization, the aggregate number of shares of common stock that may be issued under the 2019 Plan (the "Share Reserve") will not exceed the sum of (i) 250,000 new shares, plus (ii) an additional 600,000 shares that were approved at the Company's Special Meeting of Stockholders in January 2020, plus (iii) an additional 500,000 shares that were approved at the Company's Annual Meeting of Stockholders in June 2020, and plus (iv) the Prior Plans' Returning Shares, as defined in the 2019 Plan documents, in an amount not to exceed 600,540 shares, including any stock award granted under the 2014 Plan, 2011 Stock Option Plan, as amended, or 2006 Stock Option Plan, as amended, that were outstanding as of the date the 2019 Plan was approved by the Company's stockholders, as such shares become available from time to time.

The following shares of common stock (the "2019 Plan Returning Shares") will also become available again for issuance under the 2019 Plan: (i) any shares subject to a stock award granted under the 2019 Plan that are not issued because such stock award expires or otherwise terminates without all of the shares covered by such stock award having been issued; (ii) any shares subject to a stock award granted under the 2019 Plan that are not issued because such stock award is settled in cash; and (iii) any shares issued pursuant to a stock award granted under the 2019 Plan that are forfeited back to or repurchased by the Company because of a failure to vest.

The 2019 Plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, and other stock awards.

The following table summarizes the stock option activity for all stock plans during the nine months ended September 30, 2020:

	Options and Inducement Awards
Outstanding at December 31, 2019	567,842
Granted	676,595
Exercised	—
Forfeited	(101,967)
Outstanding at September 30, 2020	1,142,470
Exercisable at September 30, 2020	350,622

The following table summarizes the stock award activity for all stock plans during the nine months ended September 30, 2020:

	Restricted Stock Awards and Units
Outstanding at December 31, 2019	6,359
Granted	207,547
Vested	(2,309)
Forfeited	(29,370)
Outstanding at September 30, 2020	182,227

2014 Employee Stock Purchase Plan

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 the Company's 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 55,000 shares of the Company’s common stock to participating employees and allows eligible employees to purchase shares of common stock at a 15% discount from the lesser of the grant date or purchase date fair market value. During the nine-month periods ended September 30, 2020 and 2019 there were 9,526 and 4,000 shares purchased by the ESPP, respectively.

A summary of activity within the ESPP follows:

	Nine Months Ended September 30,	
(in thousands)	2020	2019
Deductions from employees	$ 116	$ 113
Share-based compensation expense recognized	70	75
Remaining share-based compensation expense	113	116

As of September 30, 2020, there were 23,937 shares available for issuance under the ESPP.

Share-Based Compensation Expense

The fair value of option grants is determined using the Black-Scholes option-pricing model and has been estimated with the following weighted-average assumptions:

	Nine Months Ended September 30,	
	2020	2019
Risk-free interest rate	1.18 %	2.24 %
Volatility	81.78 %	72.10 %
Expected life (years)	6.03	6.04
Expected dividend yield	—	—

Share-based compensation expense by classification for the three and nine months ended September 30, 2020 and 2019 are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2020	2019	2020	2019
Research and development	$ 668	$ 761	$ 1,877	$ 2,784
General and administrative	938	873	2,616	2,978
Total	$ 1,606	$ 1,634	$ 4,493	$ 5,762

At September 30, 2020, total compensation cost not yet recognized was $8.1 million and the weighted-average period over which this amount is expected to be recognized is 2.2 years.

NOTE 8 - COMMITMENTS AND CONTINGENCIES

Co-Development and Co-Commercialization Agreement - Adaptimmune Therapeutics plc

On December 16, 2016, the Company entered into a Co-Development and Co-Commercialization Agreement with and Adaptimmune Therapeutics plc ("Adaptimmune") in order to facilitate a staged collaboration to evaluate, develop and commercialize next generation T cell therapies. Under the Agreement, the parties agreed to evaluate the Company's GoTCR technology (inducible MyD88/CD40 co-stimulation, or "iMC") with Adaptimmune's affinity-optimized SPEAR® T cells for the potential to create enhanced TCR product candidates. Depending on results of the preclinical proof-of-concept phase, the parties expect to progress to a two-target co-development and co-commercialization phase. To the extent necessary, and in furtherance of the parties' proof-of-concept and co-development efforts, the parties granted each other a royalty-free, non-transferable, non-exclusive license covering their respective technologies for purposes of facilitating such proof-of-concept and co-development efforts. In addition, as to covered therapies developed under the agreement, the parties granted each other a reciprocal exclusive license for the commercialization of such therapies. With respect to any joint commercialization of a covered therapy, the parties agreed to negotiate in good faith the commercially reasonable terms of a co-commercialization agreement. The parties also agreed that any such agreement shall provide for, among other things, equal sharing of the costs of any such joint commercialization and the calculation of profit shares as set forth in the Agreement. The Agreement will expire on a country-by-country basis once the parties cease commercialization of the T cell therapies covered by the Agreement, unless earlier terminated by either party for material breach, non-performance or cessation of development, bankruptcy/insolvency, or failure to progress to co-development phase.

License Agreement - 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 nonrefundable license fee of $100,000 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.

License Agreement - Agensys, Inc.

On December 10, 2015, the Company and Agensys, Inc. ("Agensys"), entered into a license agreement (the "Agensys Agreement"), pursuant to which (i) Agensys granted the Company, within the field of cell and gene therapy of diseases in humans, an exclusive, worldwide license and sublicense to its patent rights directed to prostate stem cell antigen 1 ("PSCA") and related antibodies, and (ii) the Company granted Agensys a non-exclusive, fully paid license to the Company's patents directed to inventions that were made by the Company in the course of developing the Company's licensed products, solely for use with Agensys therapeutic products containing a soluble antibody that binds to PSCA or, to the extent not based upon the Company's other proprietary technology, to non-therapeutic applications of antibodies not used within the field. As consideration for the rights granted to the Company under the Agreement, the Company agreed to pay to Agensys a non-refundable upfront fee of $3.0 million, which was included in license fee expense. The Company is also required to make aggregate milestone payments to Agensys of up to (i) $5.0 million upon the first achievement of certain specified clinical milestones for its licensed products, (ii) $50.0 million upon the achievement of certain specified clinical milestones for each licensed product, and (iii) $75.0 million upon the achievement of certain sales milestones for each licensed product. The Agreement additionally provides that the Company will pay to Agensys a royalty that ranges from the mid to high single digits based on the level of annual net sales of licensed products by the Company, its affiliates or permitted sublicensees. The royalty payments are subject to reduction under specified circumstances. These milestone and royalty payments will be expensed as incurred. Under the Agreement, Agensys also was granted the option to obtain an exclusive license, on a product-by-product basis, from the Company to commercialize in Japan each licensed product developed under the Agensys Agreement that has completed a phase 2 clinical trial. As to each such licensed product, if Agensys or its affiliate, Astellas Pharma, Inc., exercises the option, the Agensys Agreement provides that the Company will be paid an option exercise fee of $5.0 million. In addition, the Agensys Agreement provides that the Company will be paid a royalty that ranges from the mid to high single digits based on the level of annual net sales in Japan of each such licensed product. If the option is exercised, the aggregate milestone payments payable by the Company to Agensys, described above with respect to each licensed product, would be reduced by up to an aggregate of $65.0 million upon the achievement of certain specified clinical and sales milestones. The Agensys Agreement will terminate upon the expiration of the last royalty term for the products covered by the Agensys Agreement, which is the earlier of (i) the date of expiration or abandonment of the last valid claim within the licensed patent rights covering any licensed products under the Agreement, (ii) the expiration of regulatory exclusivity as to a licensed product, and (iii) 10 years after the first commercial sale of a licensed product. Either party may terminate the Agensys Agreement upon a material breach by the other party that remains uncured following 60 days after the date of written notice of such breach (or 30 days if such material breach is related to failure to make payment of amounts due under the Agensys Agreement) or upon certain insolvency events. In addition, Agensys may terminate the Agensys Agreement immediately upon written notice to the Company if the Company or any of its affiliates or permitted sublicensees commences an interference proceeding or challenges the validity or enforceability of any of Agensys' patent rights.

License Agreement - BioVec

On June 10, 2015, the Company and BioVec Pharma, Inc. ("BioVec") entered into a license agreement (the "BioVec Agreement") pursuant to which BioVec agreed to supply the Company with certain proprietary cell lines and granted to the Company a non-exclusive, worldwide license to certain of its patent rights and related know-how related to such proprietary cell lines. As consideration for the products supplied and rights granted to the Company under the BioVec Agreement, the Company agreed to pay to BioVec an upfront fee of $100,000 within ten business days of the effective date of the BioVec Agreement and a fee of $300,000 within ten business days of its receipt of the first release of GMP lot of the products licensed under the BioVec Agreement. In addition, the Company agreed to pay to BioVec an annual fee of $150,000, commencing 30 days following the first filing of an Investigational New Drug Application (an IND filing), or its foreign equivalent, for a product covered by the license; with such annual fees being creditable against any royalties payable by the Company to BioVec under the BioVec Agreement. The Company also is required to make a $250,000 milestone payment to BioVec for each of the first three licensed products to enter into a clinical phase trial and one-time milestone payments of $2.0 million upon receipt of a registration granted by the Federal Drug Administration or European Medicines Agency on each of the Company's first three licensed products. The BioVec Agreement additionally provides that the Company will pay to BioVec a royalty in the low single digits on net sales of products covered by the BioVec Agreement. The Company may also grant sublicensees under the licensed patent rights and know-how to third parties for limited purposes related to the use, sale and other exploitation of the products licensed under the BioVec Agreement. The BioVec Agreement will continue until terminated. The BioVec Agreement may be terminated by the Company, in its sole discretion, at any time upon 90 days written notice to BioVec. Either party may terminate the BioVec Agreement in the event of a breach by the other party of any material provision of the BioVec Agreement that remains uncured on the date that is 60 days after written notice of such failure or upon certain insolvency events that remain uncured following the date that is 30 days after the date of written notice to a party regarding such insolvency event.

Litigation

Securities Litigation

On May 29, 2020, the U.S. District Court for the Southern District of Texas, Houston Division granted the Company's motion to dismiss with prejudice in the purported class action complaint filed on February 6, 2018 against the Company and certain of its current and former employees, captioned Nipun Kakkar v. Bellicum Pharmaceuticals, Inc., Rick Fair and Alan Musso. As previously reported, the complaint alleged that the Company and members of its management violated federal securities laws by making allegedly false and misleading statements. The court's written order dismissed the case in its entirety with prejudice, resulting in a termination of all claims. The deadline for the plaintiffs to appeal has expired.

On July 19, 2018, a purported shareholder derivative complaint captioned Seung Paik v. Richard A. Fair, et al. was filed against the Company's directors and certain of the Company's officers in the U.S. District Court for the Southern District of Texas, Houston Division. The lawsuit is based on the same facts as the Kakkar class action and purports to seek damages on behalf of the Company against the individual defendants for breach of fiduciary duty, waste, unjust enrichment and violations of Section 14(a) of the Exchange Act. The complaint alleges that the defendants caused or allowed the Company to disseminate misstatements regarding the clinical trials for rivo-cel and to make false or misleading statements in the proxy materials for the Company's 2017 annual meeting of stockholders. On July 8, 2019, another purported shareholder derivative complaint captioned Scott Ludovissy and Ann Gordon Trammell v. Richard A. Fair, et al. was filed against the same defendants in the same court. On November 1, 2019, an additional purported shareholder derivative complaint captioned Mildred Taylor and Jessica Amor v. Richard A. Fair, et al. was filed against certain of the Company's officers and directors in the District of Delaware. The lawsuit purports to seek monetary damages. The Taylor complaint includes substantially similar factual allegations as the other matters described above and seeks to hold the defendants liable for allegedly causing the Company to make material misstatements. The Paik, Ludovissy, and Taylor derivative causes of action have been stayed until reinstated on motion of the parties.

Other Litigation

On May 29, 2019, Bellicum was served with a second amended complaint indicating that the Company had been added as an additional defendant in an ongoing civil tort lawsuit, captioned Kelly v. Children's Hospital of Los Angeles et al., filed in the Los Angeles County Superior Court, Case No. BC681477. On July 10, 2019, a third amended complaint was filed, which alleges claims for wrongful death, negligence, breach of fiduciary duty, fraud, medical battery on decedent, medical battery on individual plaintiffs, products liability - failure to warn, breach of express warranty and products liability design or manufacturing defect. Plaintiffs are seeking unspecified monetary damages including punitive damages. In response to the third amended complaint, Bellicum filed a demurrer and a motion to strike portions of the third amended complaint, the hearings for which have been continued indefinitely due to the COVID-19 pandemic.

The Company intends to vigorously defend itself in these proceedings. An adverse finding could materially affect our business and results of operations.

NOTE 9 - SUBSEQUENT EVENTS

Equity Offering

In November 2020, the Company closed an underwritten offering of 1,040,000 shares of its common stock, pre-funded warrants to purchase 3,109,378 shares of its common stock, and accompanying common warrants to purchase up to an aggregate of 4,149,378 shares of its common stock. Each share of common stock and pre-funded warrant to purchase one share of common stock was sold together with a common warrant to purchase one share of common stock. The public offering price of each share of common stock and accompanying common warrant was $6.025 and $6.024 for each pre-funded warrant. The pre-funded warrants are immediately exercisable at a price of $0.001 per share of common stock. The common warrants are immediately exercisable at an exercise price of $6.50 per share of common stock and will expire five years from the date of issuance. The shares of common stock and pre-funded warrants, and the accompanying common warrants, were issued separately and were immediately separable upon issuance. The gross proceeds to the Company were approximately $25.0 million before deducting underwriting discounts and commissions and other offering expenses.

Restructuring

In October 2020, the Board of Directors of the Company approved a restructuring plan that will focus the business efforts on its clinical GoCAR-T® product candidates. The company plans to pause development of its BCMA GoCAR-NK program and will initiate a reduction in force.

The Company has a severance plan for affected employees. The reduction in force includes 54 employees by the end of 2020, which represented approximately 79% of its workforce as of October 29, 2020, the date affected employees were notified. The Company incurred a severance-related charge totaling approximately $2.5 million that will be recorded in the fourth quarter of 2020. The Company may also incur other charges or cash expenditures not currently contemplated due to events that may occur as a result of, or associated with, the restructuring plans.

Oxford Loan Agreement

In October 2020, the Company entered into an agreement for the early settlement of all debt obligations under the Oxford Loan Agreement. The Company remitted payment of $27.4 million, which included full repayment of the outstanding principal balance, the Oxford Final Payment Fee, and accrued interest.

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, 2019, filed with the SEC on March 12, 2020, or our Annual Report, as well as our unaudited consolidated 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 II, Item 1A, "Risk Factors" in this Quarterly Report on Form 10-Q, 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, controllable cellular immunotherapies. We are designing new treatments for various forms of cancer, including both hematological cancers and solid tumors. We are advancing CAR-T cell therapies, which are an innovative approach in which a patient's or donor's T cells are genetically modified to carry chimeric antigen receptors, or CARs. We are using our proprietary Chemical Induction of Dimerization, or CID, technology platform to engineer our product candidates with switch technologies that are designed to control components of the immune system in real time. By incorporating our CID platform, our product candidates may offer better efficacy and safety outcomes than are seen with current cellular immunotherapies.

Cell behavior is 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, instead of by natural upstream signals. We genetically introduce these molecular switches into immune cells and deliver the cells to the patient in the manner of conventional cellular immunotherapy. We have developed two such switches: an "activation switch," designed to stimulate activation, proliferation and persistence of the CAR-T cells and provide other immunomodulatory benefits, and a "safety switch," designed to initiate programmed cell death, or apoptosis, of the CAR-T cells. Each of our product candidates incorporates one or both switches, for enhanced, real time control of efficacy and safety:

- The inducible MyD88/CD40 (iMC) activation switch that is incorporated into our GoCAR-T product candidates is designed to enhance CAR-T therapies by augmenting multiple mechanisms of action, including: 1) boosting effector cell proliferation; 2) enhancing functional persistence by resisting exhaustion and inhibitory signals found in the tumor microenvironment; and 3) stimulating the cancer patient's own immune system to intensify tumor killing. Unlike other CAR-T therapies that can behave unpredictably due to their autonomous activity, GoCAR-T antitumor effects are controlled through scheduled administration of rimiducid. In the event of severe side effects, GoCAR activity can be attenuated by extending the interval between rimiducid doses or suspending further rimiducid administration.

- Our CaspaCIDe™ safety switch (also known as inducible Caspase-9, or iC9) is designed to be inactive unless the patient experiences a serious side effect (e.g., CRS, neurologic toxicities or off-tumor / on-target toxicities). In that event, rimiducid or temsirolimus (depending on the design of the product candidate) is administered to induce Caspase-9 and eliminate the cells, with the goal of attenuating the therapy and resolving the serious side effect.

- Some of our product candidates are “dual-switch” GoCAR-Ts that are designed to provide a user-controlled system for managing proliferation, persistence and safety of tumor antigen-specific CAR-T cells by incorporating both our iMC and CaspaCIDe switches.

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 most advanced programs are described below.

- **BPX-601** is an autologous GoCAR-T product candidate containing our proprietary iMC activation switch, designed to treat solid tumors expressing prostate stem cell antigen, or PSCA. We believe iMC enhances T cell proliferation and persistence, enhances host immune activity, and modulates the tumor microenvironment to improve the potential to treat solid tumors compared to traditional CAR-T therapies. A Phase 1/2 clinical trial, called BP-012, in patients with metastatic castration-resistant prostate cancer and metastatic pancreatic cancer expressing PSCA is ongoing.

- **BPX-603** is an autologous dual-switch GoCAR-T product candidate containing both the iMC activation and CaspaCIDe safety switches. BPX-603 is our first dual-switch GoCAR-T product candidate and is designed to target solid tumors that express the human epidermal growth factor receptor 2 antigen, or HER2. We received clearance by the U.S. Food and Drug Administration (FDA) of our investigational new drug application (IND) for BPX-603 and expect to initiate a Phase 1/2 clinical trial later this year.

- **Rivo-cel (rivogenlecleucel, formerly known as BPX-501)**, is an allogeneic T cell product candidate containing our proprietary CaspaCIDe safety switch that is intended to improve outcomes when administered after hematopoietic stem cell transplantation in the treatment of hematologic malignancies and inherited blood disorders. We are pursuing a strategic partner for rivo-cel to assume future development and commercialization responsibilities. Concurrently, we have reduced and expect to continue to reduce our rivo-cel related activities.

We have developed efficient and scalable processes to manufacture genetically modified T cells of high quality, which are currently being used to generate products for our clinical trials. We are leveraging this know how in combination with our proprietary cellular control technologies, resources, capabilities and expertise for the manufacture of CAR-T product candidates to create and develop first and best-in-class product candidates.

Impact of COVID-19

In December 2019, a novel strain of coronavirus, which causes COVID-19, was identified. Due to the rapid and global spread of the virus, on March 11, 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. To slow the proliferation of COVID-19, governments have implemented extraordinary measures, which include the mandatory closure of businesses, restrictions on travel and gatherings, and quarantine and physical distancing requirements.

We have implemented measures designed to protect the health and safety of our workforce, including a mandatory work-from-home policy for employees who can perform their jobs offsite. We are taking a number of additional precautionary measures to protect employees who must perform their jobs on-site. We believe that the measures we are implementing are appropriate and are helping to reduce transmission of COVID-19, and we will continue to monitor and comply with guidance from governmental authorities and adjust our activities as appropriate.

We are continuing to closely monitor the impact of the COVID-19 pandemic on our business.

Results of Operations

The following table sets forth a summary of our statement of operations for the periods indicated:

	Three Months Ended September 30,			Nine Months Ended September 30,		
(in thousands)	2020	2019	Change	2020	2019	Change
Revenues	$ —	$ 103	$ (103)	$ —	$ 2,010	$ (2,010)
Operating expenses:						
Research and development	8,140	14,331	(6,191)	30,346	51,211	(20,865)
General and administrative	4,163	9,209	(5,046)	12,095	24,263	(12,168)
Total operating expenses	12,303	23,540	(11,237)	42,441	75,474	(33,033)
Gain on dispositions, net	—	—	—	(3,761)	—	(3,761)
Loss from operations	(12,303)	(23,437)	11,134	(38,680)	(73,464)	34,784
Other income (expense):						
Interest income	10	323	(313)	392	1,044	(652)
Interest expense	(725)	(1,079)	354	(2,473)	(3,237)	764
Change in fair value of warrant and private placement option liabilities	12,131	(4,850)	16,981	14,256	(4,850)	19,106
Other expense	—	(2,989)	2,989	—	(2,989)	2,989
Total other income (expense)	11,416	(8,595)	20,011	12,175	(10,032)	22,207
Net loss	$ (887)	$ (32,032)	$ 31,145	$ (26,505)	$ (83,496)	$ 56,991

Revenues

The decrease in revenues for the three and nine months ended September 30, 2020, compared to the same periods last year, was due to a $0.1 million and $2.0 million decrease in grant revenues, respectively, due to the termination of the CPRIT grant on January 31, 2020.

Research and Development Expenses (R&D)

The decrease in R&D expenses for the three months ended September 30, 2020, compared to the same period last year, was primarily due to reduced expenses related to reduced rivo-cel related activities, the sale of the manufacturing facility, and the reduction in force that was implemented during the second half of 2019, partially offset by an increase in expenses related to our GoCAR program. This resulted in a $1.5 million reduction in salaries, benefits, travel, and share-based compensation related charges and a $3.6 million reduction from general R&D expenses primarily due to lower clinical trial activities. Additionally, depreciation expense decreased $1.1 million due to the manufacturing facility and related laboratories and office space meeting the accounting standards criteria for assets held for sale, which was then disposed of in April 2020.

The decrease in R&D expenses for the nine months ended September 30, 2020, compared to the same period last year, was primarily due to reduced expenses related to reduced rivo-cel related activities, the sale of the manufacturing facility, and the reduction in force that was implemented during the second half of 2019, partially offset by an increase in expenses related to our GoCAR program. This resulted in a $7.9 million reduction in salaries, benefits, travel, and share-based compensation related charges and a $9.7 million reduction from general R&D expenses primarily due to lower clinical trial activities. Additionally, depreciation expense decreased $3.3 million due to the manufacturing facility and related laboratories and office space meeting the accounting standards criteria for assets held for sale, which was then disposed of in April 2020.

General and Administrative Expenses (G&A)

The decrease in G&A expenses for the three months ended September 30, 2020, compared to the same period last year, was primarily due to the reduction in rivo-cel related commercialization activities that reduced charges by $4.8 million as well as the effects of the aforementioned reduction in force that reduced employee-related charges by $0.3 million.

The decrease in G&A expenses for the nine months ended September 30, 2020, compared to the same period last year, was primarily due to the reduction in rivo-cel related commercialization activities that reduced charges by $11.1 million as well as the effects of the aforementioned reduction in force that reduced employee-related charges by $1.1 million.

Gain on dispositions, net

The increase in gain on dispositions, net, for the nine months ended September 30, 2020, compared to the same period last year, was primarily due to the disposal of the clinical supply manufacturing facility to M.D. Anderson.

Other Income (Expense)

Other income (expense) primarily consists of interest expense, partially offset by interest income, and changes in fair values of our warrant liability and the private placement option, which are remeasured at each reporting period. Due to the nature of the inputs in the model used to assess the fair value of the warrant liability and private placement option, the Company may experience significant fluctuations at each reporting period. These fluctuations may be due to a variety of factors, including changes in our stock price and changes in stock price volatility over the remaining term of the warrants and options.

The increase in other income for the three months ended September 30, 2020, compared to the same period last year, was primarily due to a $12.1 million gain recognized from the change in fair value of our warrant and private placement option liabilities. The gain recognized during the three months ended September 30, 2020 was driven primarily by a decrease in our stock price over the period.

The increase in other income for the nine months ended September 30, 2020, compared to the same period last year, was primarily due to a $14.3 million gain recognized from the change in fair value of our warrant and private placement option liabilities. The gain recognized during the nine months ended September 30, 2020 was driven primarily by a decrease in our stock price over the period.

Liquidity and Capital Resources

Sources of Liquidity

As of September 30, 2020, we had cash, cash equivalents, and restricted cash of $54.6 million and net cash used in operations of approximately $43.3 million for the nine months ended September 30, 2020.

Our cash resources are primarily consumed by operating activities and we expect negative cash flows from operations to continue, for at least the next 12 months. 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. Based on our current research and development plans and our timing expectations related to the progress of our programs, we believe that our cash and cash equivalents will be sufficient to fund our operating expenses and capital expenditure requirements through at least the next twelve months from the date the accompanying interim financial statements are issued.

We plan to continue to attempt to obtain future financing and/or engage in strategic transactions, but we cannot predict, with certainty, the outcome of our actions to generate liquidity, including the availability of additional equity or debt financing, or whether such actions would generate the expected liquidity as currently planned. As a result of the COVID-19 pandemic and actions taken to slow its spread, the global credit and financial markets have experienced extreme volatility, including diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. If equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult to obtain, more costly and/or more dilutive.

On August 16, 2019, we entered into an underwritten public offering of 575,000 shares of our Series 1 Preferred Stock and warrants to purchase up to 5,750,000 shares of our common stock. Each share of Series 1 Preferred Stock was sold together with a warrant to purchase 10 shares of common stock at a combined price to the public of $100.00. The net proceeds to us were approximately $53.9 million, net of issuance costs, and excluding any proceeds that we may receive upon exercise of the warrants.

On August 16, 2019, we entered into a securities purchase agreement to which we agreed to issue in a private placement (i) 350,000 shares of our Series 2 Preferred Stock, at a purchase price of $100.00 per share, and related warrants to purchase up to 2,800,000 shares of our common stock at an exercise price of $10.00 per share, and (ii) 250,000 shares of our Series 3 Preferred Stock, at a purchase price of $140.00 per share, and related warrants to purchase up to 875,000 shares of our common stock at an exercise price of $14.00 per share. The purchase and sale of the securities issuable under this agreement may occur in two or more separate closings, within five days' notice to us. The Company received $11.2 million, net, in proceeds from the issuance of the private placement option.

On January 17, 2020, the Company entered into an Asset Purchase Agreement with The University of Texas M.D. Anderson Cancer Center, as amended by the First Amendment to Asset Purchase Agreement dated February 21, 2020, in connection with the sale of certain assets of the Company. Pursuant to the Asset Purchase Agreement, the Company agreed to sell to M.D. Anderson certain assets and liabilities relating to the Company's manufacturing facility and related laboratories and office space located at 2130 W. Holcombe Blvd., Houston, Texas 77030. On April 14, 2020, the Company completed the Asset Sale. Upon closing of the Asset Sale, M.D. Anderson paid the Company an amount equal to $15.0 million, subject to certain escrow provisions and a reduction for prepayment of rent under an associated sublease agreement.

C***ash Flows***

Operating Activities

Net cash used in operating activities during the nine months ended September 30, 2020 was $43.3 million compared to $64.8 million for the same period last year. The changes in cash flow from operating activities during the nine months ended September 30, 2020 were due to $26.5 million of net losses, a non-cash gain of $3.8 million recognized on the disposition of assets and liabilities, a non-cash gain of $14.3 million recognized from the change in the derivative warrant and private placement option fair value liability and a $5.7 million decrease from changes in operating assets and liabilities. This was partially offset by $4.5 million of share-based compensation, $1.2 million of depreciation expense, $0.7 million ROU amortization and lease liability accretion, and $0.6 million of deferred financing cost amortization.

Investing Activities

Net cash provided by investing activities during the nine months ended September 30, 2020 was $14.1 million compared to $44.7 million for the same period last year. The changes in cash flow from investing activities during the nine months ended September 30, 2020 was due to $14.9 million net proceeds received from the sale of property and equipment, partially offset by $0.8 million for the purchases of property and equipment. Cash provided by investing activities for the same period last year was due to $45.2 million of proceeds from the sale of investment securities, partially offset by $0.6 million for the purchases of property and equipment.

Financing Activities

Net cash used in financing activities during the nine months ended September 30, 2020 was $10.0 million due to principal debt repayments compared to net cash provided by financing activities of $74.3 million for the same period last year primarily due to $53.9 million net proceeds from the issuance of redeemable convertible preferred stock and warrants, $11.3 million net proceeds from the private placement option, $9.0 million net proceeds from the sale of common stock, and $0.1 million in proceeds from stock option exercises and the sale of common stock under the employee stock purchase plan.

Critical Accounting Policies and Estimates

There have been no material changes to the Company's critical accounting policies and use of estimates from those disclosed in the Company's Form 10-K for the year ended December 31, 2019. For a discussion of our critical accounting policies and use of estimates, refer to Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies and Significant Estimates in Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2019.

Recent Accounting Pronouncements

The Company is subject to several recently issued accounting pronouncements. Note 1 – Organization, Basis of Presentation, and Summary of Significant Accounting Policies – New Accounting Requirements and Disclosures which is contained in Part I, Item 1 of this Quarterly Report on Form 10-Q, describes these new accounting pronouncements and is incorporated herein by reference.

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

There have been no material changes to the information provided under Item 7A. "Quantitative and Qualitative Disclosures About Market Risk" which is included and described in the Form 10-K for the year ended December 31, 2019.

Item 4. Controls and Procedures

Management's Evaluation of our Disclosure Controls and Procedures

Our management, with the participation of our Principal Executive Officer, our Principal Financial Officer and our Principal Accounting Officer, evaluated the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) or 15d-15(e) under the Exchange Act, as of September 30, 2020. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) or 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, Principal Financial and Principal Accounting 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 September 30, 2020, our Principal Executive Officer, Principal Financial Officer and Principal Accounting 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

The information set forth under the "Litigation" subheading in Note 8 - Commitments and Contingencies of Notes to Consolidated Financial Statements in Part I, Item I of this Quarterly Report on Form 10-Q is incorporated herein by reference.

Item 1A. Risk Factors

Our business and results of operations are subject to a number of risks and uncertainties. You should carefully consider the following risk factors, as well as the other information in this report, and in our other public filings. The occurrence of any of the following risks could harm our business, financial condition, results of operations and/or growth prospects or cause our actual results to differ materially from those contained in forward-looking statements we have made in this report and those we may make from time to time. You should consider all of the risk factors described when evaluating our business. We have marked with an asterisk (*) those risk factors that reflect additional risk factors since the issuance of our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission on March 12, 2020, or our Annual Report.

Risks Related to Our Business and Industry

We have incurred net losses from operations in every year since our inception and anticipate that we will continue to incur additional net losses in the future.

We are a clinical stage biopharmaceutical company, have no products approved for commercial sale and have incurred significant losses since our inception in 2004. To date, we have financed our operations primarily through equity and debt financings. As of September 30, 2020, we had an accumulated deficit of $559.5 million. We expect to continue to incur significant losses from operations for the foreseeable future, and we expect these accumulated losses to increase as we continue our research and development of, and seek regulatory approvals for, our product candidates.

In addition, if we obtain regulatory approval of and seek to commercialize any of our product candidates, we will likely incur significant sales, marketing and manufacturing expenses and may continue to incur substantial research and development expenses for additional post-marketing approval development requirements related to such product.

We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We will require significant funding to complete the development and commercialization of our product candidates. If we fail to obtain additional financing, we may have to delay, reduce or eliminate our development programs or commercialization efforts.

Our operations have consumed substantial amounts of cash since our inception. We expect to continue to spend substantial amounts to continue the preclinical and clinical development of our product candidates and other research and development programs.

As of September 30, 2020, we had cash, cash equivalents and restricted cash of approximately $54.6 million. We maintain our cash and cash equivalents with high quality, accredited financial institutions. These amounts at times may exceed federally insured limits. Cash, cash equivalents and restricted cash are expected to be sufficient to fund our operating expenses and capital expenditure requirements through one year from the financial statement issuance date.

We will need to finance future cash needs through public or private equity offerings, debt financings, strategic partnerships and alliances or licensing arrangements. We cannot be certain that additional funding will be available on acceptable terms, or at all. In addition, the COVID-19 pandemic continues to rapidly evolve and has already resulted in a significant disruption of global financial markets. Our ability to raise additional capital may be adversely impacted by potential worsening global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the U.S. and worldwide resulting from the pandemic. If the disruption persists and deepens, we could experience an inability to access additional capital, which could in the future negatively affect our capacity to fund research and development programs, including discovery research, preclinical and clinical development activities. In addition, the securities purchase agreement for our August 2019 private placement transaction requires us to obtain investor consent prior to taking a range of corporate financing actions, including issuing equity securities that are senior or pari passu to the Series 3 preferred stock and incurring new debt in excess of $1,000,000. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we will need to significantly delay, scale back or discontinue the development or commercialization of our product candidates. We also could be required to:

- seek collaborators for one or more of our current or future product candidates on terms that are less favorable than might otherwise be available;
- relinquish or license on unfavorable terms our rights to technologies or product candidates that we otherwise would seek to develop or commercialize ourselves; or
- seek a third party to acquire us or our assets.

If we are unable to raise additional funds on a timely basis, we may be required to reduce expenses through the delay, reduction or curtailment of our development programs, or implement further reduction of costs for facilities and administration. For example, on October 28, 2020, we announced that we implemented a restructuring plan, which includes, among other things, a 79% reduction in staff, from 68 to 14 full-time employees, by the end of 2020 and discontinuation of discovery research and new product development. We expect to incur severance expenses of $2.5 million in connection with our reduction in force. Furthermore, on October 30, 2020, we also paid down in full our loan agreement with Oxford Finance, LLC, using cash on hand, in the amount of $27.4 million in principal plus applicable fees and accrued interest. Moreover, if we do not obtain such additional funds, there could be substantial doubt about our ability to continue as a going concern and increased risk of insolvency, which could result in a total loss of investment to our stockholders and other security holders.

The FDA and other regulatory authorities may disagree with our regulatory plans and we may fail to obtain regulatory approval of our product candidates.

Our business and future success depends, in part, on our ability to obtain regulatory authority assent to conduct human clinical trials, obtain regulatory approval to launch a product based on evidence of clinical safety and efficacy and then successfully commercialize our clinical product candidates. All of our product candidates will require additional clinical and non-clinical development, regulatory review and approval in multiple jurisdictions, substantial investment, and access to sufficient commercial manufacturing capacity and significant marketing efforts before we can expect to generate any revenue from product sales.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- The FDA or comparable regulatory authority or an Institutional Review Board or comparable ethics oversight body may decline to clear the applicable Investigational New Drug Application (IND) or equivalent regulatory submission necessary to conduct human clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that our product candidates have the necessary safety, purity, and potency for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that our product candidates' clinical and other benefits outweigh their safety risks;
- we may encounter serious and unexpected adverse events during clinical trials that render our products unsafe for use in humans;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;

- the data collected from clinical trials of our product candidates may not be sufficient to the satisfaction of the FDA or comparable foreign regulatory authorities to support the submission of a BLA or other comparable submission in foreign jurisdictions or to obtain regulatory approval in Europe, the U.S. or elsewhere;
- the FDA or comparable foreign regulatory authorities may fail to approve our manufacturing processes and/or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of uncertainty. We have never generated any revenue from product sales and may never be profitable.

We have devoted substantially all of our financial resources and efforts to developing our proprietary CID technology platform, identifying potential product candidates and conducting preclinical studies and clinical trials. We are in the early stages of developing our product candidates, and we have not completed development of any products. Our ability to generate revenue and achieve profitability depends in large part on our ability, alone or with partners, to successfully complete the development of, obtain the necessary regulatory approvals for, and commercialize, product candidates. We do not anticipate generating revenues from sales of products for the foreseeable future. Our ability to generate future revenues from product sales depends heavily on our success in:

- completing requisite clinical trials through all phases of clinical development of our current product candidates;
- seeking and obtaining marketing approvals for product candidates that successfully complete clinical trials, if any;
- launching and commercializing product candidates for which we obtain marketing approval, if any, with a partner or, if launched independently, successfully establishing a sales force, marketing and distribution infrastructure;
- identifying and developing new product candidates;
- progressing our pre-clinical programs into human clinical trials;
- establishing and maintaining supply and manufacturing relationships with third parties;
- developing new molecular switches based on our proprietary CID technology platform;
- maintaining, protecting, expanding and enforcing our intellectual property; and
- attracting, hiring and retaining qualified personnel.

Because of the numerous risks and uncertainties associated with biologic product development, we are unable to predict the likelihood or timing for when we may receive regulatory approval of any of our current or future product candidates or when we will be able to achieve or maintain profitability, if ever. If we do not receive regulatory approvals, our business, prospects, financial condition and results of operations will be adversely affected. Even if we obtain the regulatory approvals to market and sell one or more of our product candidates, we may never generate significant revenues from any commercial sales for several reasons, including because the market for our products may be smaller than we anticipate, or products may not be adopted by physicians and payors or because our products may not be as efficacious or safe as other treatment options. If we fail to successfully commercialize one or more products, we may be unable to generate sufficient revenues to sustain and grow our business and our business, prospects, financial condition and results of operations will be adversely affected. In addition, our expenses could increase beyond expectations if we are required by the FDA, or foreign regulatory agencies, to perform studies and clinical trials in addition to those that we currently anticipate for our product candidates, or if there are any delays in our or our partners completing clinical trials or the development of any of our product candidates. Further, if one or more of the product candidates that we independently develop is approved for commercial sale, we expect to incur significant costs associated with commercializing any such product candidates. Finally, even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis.

Our CID technology is novel and largely unproven.

Our proprietary CID technology platform is novel and there are no approved products or third-party product candidates in late-stage clinical trials based on this technology. Additionally, the safety and efficacy profile of rimiducid has not been subject to large scale clinical testing. If rimiducid is found to have a poor safety profile in clinical trials, or if our technology is not effective, we may be required to redesign all of our product candidates, which would require significant time and expense. In addition, our CID platform technology may not be applicable or effective in the development of additional cellular immunotherapies beyond our current programs which would adversely affect our business and prospects.

Cell therapies are novel and present significant challenges.

CAR-T and other cell therapy product candidates represent a relatively new field of cellular immunotherapy. Advancing this novel and personalized therapy creates significant challenges for us, including:

- obtaining regulatory approval, as the FDA and other regulatory authorities have limited experience with commercial development of cell therapies for cancer;
- sourcing clinical and, if approved, commercial supplies for the materials used to manufacture and process our product candidates;
- developing a consistent and reliable process, while limiting contamination risks, for engineering and manufacturing T cells and other immune cell types *ex vivo* and infusing the engineered cells into the patient;
- educating medical personnel regarding the potential safety benefits, as well as the challenges, of incorporating our product candidates into their treatment regimens;
- establishing sales and marketing capabilities upon obtaining any regulatory approval to gain market acceptance of a novel therapy; and
- the availability of coverage and adequate reimbursement from third-party payors for our novel and personalized therapy.

Our inability to successfully develop CAR T and other cell therapies or develop processes related to the manufacture or commercialization of these therapies would adversely affect our business, results of operations and prospects.

Our clinical trials may fail to adequately demonstrate the safety and efficacy of any of our product candidates, which would prevent or delay regulatory approval and commercialization.

Clinical testing is expensive, takes many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process and our product candidates are subject to the risks of failure inherent in biologic drug development. Success in early clinical trials does not mean that later clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety or efficacy despite having progressed through initial clinical testing, even at statistically significant levels. We will be required to demonstrate through clinical trials that our product candidates are safe and effective for use in the target indication before we can obtain regulatory approvals for commercial sale. Companies frequently suffer significant setbacks in late-stage clinical trials, even after earlier clinical trials have shown promising results and most product candidates that commence clinical trials are never approved as products. We expect there may be greater variability in results for cellular immunotherapy products processed and administered on a patient-by-patient basis like some of our CID technology-based development and product candidates than for “off-the-shelf” products, like many drugs.

If any of our product candidates fail to demonstrate sufficient safety or efficacy, we would experience potentially significant delays in, or be required to abandon our development of the product candidate, which would have a material and adverse impact on our business, prospects, financial condition and results of operations.

Many of our current product candidates are in pre-clinical or early stage clinical trials, and we may experience unfavorable results in the future.

A Phase 1 clinical trial is ongoing for BPX-601 for the treatment of pancreatic cancer and prostate cancer. We are preparing to initiate a clinical trial for BPX-603 in HER2-positive solid tumors. We may not be able to commence clinical trials in the time frames we expect. As these product candidates are in early stages of development, we face significant uncertainty regarding how effective and safe they will be in human patients and the results from preclinical studies, such as in vitro and in vivo studies, of BPX-601 and BPX-603 may not be indicative of the results of clinical trials of these product candidates. For example, in October 2020, we announced that the first four patients treated with BPX-601 followed by repeat rimiducid dosing showed evidence of rimiducid-mediated CAR-T cell activation but clinically meaningful efficacy as measured by RECIST criteria was not observed. Preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval for their products.

Even if clinical trials are successfully completed, the FDA or foreign regulatory authorities may not interpret the results as we do, and more clinical trials could be required before we submit our product candidates for approval. To the extent that the results of our clinical trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, approval of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional clinical trials in support of potential approval of our product candidates.

We may not be successful in our efforts to use and expand our CID platform to build a pipeline of product candidates and develop marketable products.

We believe that our CID platform, which serves as the foundation of our CaspaCIDe and GoCAR technologies, can be further leveraged to discover other novel technologies, therapeutic applications and market opportunities. For example, we are developing new molecular switches and dual-switch systems to provide greater control over cellular immunotherapy. We are at an early stage of development and our platform has not yet, and may never lead to, approved or marketable products. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including for reasons related to their harmful side effects, limited efficacy or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not successfully develop and commercialize product candidates based upon our technological approach, we may not be able to obtain product or partnership revenues in future periods, which would adversely affect our business, prospects, financial condition and results of operations.

We rely and will continue to rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.

We depend and will continue to depend upon independent investigators and collaborators, such as universities, medical institutions, and strategic partners to conduct our preclinical and clinical trials under agreements with us. Negotiations of budgets and contracts with study sites may result in delays to our development timelines and increased costs. We will rely heavily on these third parties over the course of our clinical trials, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with good clinical practices, or GCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites. If we or any of these third parties fail to comply with applicable GCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities could require us to perform additional clinical trials before approving our marketing applications. It is possible that, upon inspection, such regulatory authorities could determine that any of our clinical trials fail to comply with the GCP regulations. In addition, our clinical trials must be conducted with biologic product produced under current good manufacturing practices, or cGMPs, and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our clinical trials are and will not be our employees and, except for remedies available to us under our agreements with these third parties, we cannot control whether they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

Switching or adding third parties to conduct our clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines.

Also, we are conducting clinical trials in Europe and may plan additional testing of our technology and product candidates in other foreign jurisdictions. We currently have limited staffing and capabilities in foreign countries and may not be able to effectively resolve potential disputes with our independent investigators and collaborators.

Our business could be adversely affected by the effects of health epidemics, including the recent COVID-19 outbreak, in regions where we or third parties on which we rely have distribution centers, concentrations of suppliers and sales and marketing teams or other business operations. The COVID-19 pandemic could materially affect our operations globally, including at our corporate headquarters in Houston, Texas and our offices in South San Francisco, California, which are currently subject to the statewide "stay-at-home" orders issued by the Governor of the State of Texas and the Governor of the State of California, respectively, as well as the business or operations of our research partners, customers and other third parties with whom we conduct business.*

Our business could be adversely affected by health epidemics in regions in which we have operations or conduct research activities or clinical trials. Such health epidemics could also affect the business or operations of contract manufacturers, raw material suppliers, clinical trial sites, and other third parties with whom we conduct business.

For example, in December 2019, a novel strain of coronavirus, SARS-CoV-2, causing a disease referred to as COVID-19, was reported to have surfaced in Wuhan, China. Since then, COVID-19 has spread to multiple countries, including the United States and several European countries. In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic, and the U.S. government imposed restrictions on travel between the United States, Europe and certain other countries. Further, the President of the United States declared the COVID-19 pandemic a national emergency, invoking powers under the Stafford Act, the legislation that directs federal emergency disaster response.

In response to public health directives and orders, we have implemented work-from-home policies for certain employees and temporarily modified our research operations to comply with applicable social distancing recommendations. The effects of government stay-at-home orders and our related adjustments in our business is likely to negatively impact productivity, disrupt our business and delay our timelines, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course.

Severe and/or long-term disruptions in our operations will negatively impact our business, operating results and financial condition. Specifically, we anticipate that the stress of COVID-19 on healthcare systems around the globe may negatively impact our ability to conduct clinical trials in the near term due primarily to the lack of resources at clinical trial sites and the resulting inability to enroll patients in the trials. If patients drop out of our trials, miss scheduled doses or follow-up visits, be unable to undergo specific study procedures such as biopsies, or otherwise fail to follow trial protocols, or if our trials are otherwise disrupted due to COVID-19 or actions taken to slow its spread, the integrity of data from our trials may be compromised or not accepted by the FDA or other regulatory authorities, which would represent a significant setback for the applicable program. To date, we have experienced COVID-19-related impacts on screening and enrollment which may impact the speed of enrollment and the timing of data presentations from our ongoing studies. More significant disruptions may occur if the pandemic worsens in the geographies in which our study sites or manufacturing facilities are located. In addition, quarantines, stay-at-home, executive and similar government orders, or the perception that such orders, shutdowns or other restrictions on the conduct of business operations could occur, impact personnel at third-party manufacturing facilities in the United States and other countries, or the availability or cost of materials, which would disrupt our supply chain. In fact, in April 2020 M.D. Anderson informed the Company of its decision to temporarily halt all research activity in order to reduce the spread and impact of COVID-19 on their institution and their patients and this includes temporarily suspending activity in the manufacturing facility in which the product candidates for our clinical development programs are manufactured. M.D. Anderson subsequently restarted manufacturing but if the pandemic worsens and they again suspend research activities, we may be unable to enroll patients in our ongoing and planned clinical trials until manufacturing resumes at the facility.

The spread of COVID-19, which has caused a broad impact globally, may materially affect us economically. While the potential economic impact brought by, and the duration of, COVID-19 may be difficult to assess or predict, it has significantly disrupted global financial markets, and may limit our ability to access capital, which could in the future negatively affect our liquidity. A recession or market correction resulting from the spread of COVID-19 could materially affect our business and the value of our common stock.

In addition, the outbreak has severely restricted the level of economic activity in affected areas and may adversely impact demand for, and sales of, our products and services, particularly in Europe and Asia. Further, restrictions on our ability to travel, stay-at-home orders and other similar restrictions on our business have limited our ability to support our global and domestic operations, including providing installation and training and customer service, resulting in disruptions in our sales and marketing efforts and negative impacts on our commercial strategy.

The ultimate impact of the COVID-19 outbreak or a similar health epidemic is highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our business, our clinical trials, healthcare systems or the global economy as a whole. However, the effects could have a material impact on our operations, and we will continue to monitor the COVID-19 situation closely. In addition, to the extent the ongoing COVID-19 outbreak adversely affects our business, financial condition, results of operations and growth prospects, it may also have the effect of heightening many of the other risks and uncertainties described elsewhere in this “Risk Factors” section.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial’s primary endpoints;
- the proximity of patients to study sites;
- the design of the clinical trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- our ability to obtain and maintain patient consents;
- the impact of the COVID-19 pandemic;
- the risk that patients enrolled in clinical trials will drop out of the clinical trials before completion; and
- competing clinical trials and approved therapies available for patients.

In particular, some of our clinical trials will look to enroll patients with characteristics, which are found in a very small population, for example, patients with rare cancers with specific attributes that are targeted with our product candidates. Our clinical trials will compete with other companies' clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our clinical trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials in these clinical trial sites. Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy and antibody therapy, rather than enroll patients in any of our future clinical trials. Patients may also be unwilling to participate in our clinical trials because of negative publicity from adverse events in the biotechnology or gene therapy industries.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these clinical trials and adversely affect our ability to advance the development of our product candidates.

Any adverse developments that occur during any clinical trials conducted by academic investigators, our collaborators or other entities conducting clinical trials under independent INDs may affect our ability to obtain regulatory approval or commercialize our product candidates.

Rimiducid and CaspaCIDe-containing cell therapy constructs are being used by third parties in clinical trials for which we are collaborating or in clinical trials which are completely independent of our development programs. We have little to no control over the conduct of those clinical trials. If serious adverse events occur during these or any other clinical trials using our product candidates, the FDA and other regulatory authorities may delay, limit or deny approval of our product candidate or require us to conduct additional clinical trials as a condition to marketing approval, which would increase our costs. If we receive regulatory approval for any product candidate and a new and serious safety issue is identified in clinical trials conducted by third parties, the applicable regulatory authorities may withdraw their approval of the product or otherwise restrict our ability to market and sell our product. In addition, treating physicians may be less willing to administer our product due to concerns over such adverse events, which would limit our ability to commercialize our product.

Adverse side effects or other safety risks associated with our product candidates could delay or preclude approval, cause us to suspend or discontinue clinical trials, abandon product candidates, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Adoptive cell therapy with autologous T cells is associated with a range of potentially severe immune-mediated adverse effects. In third party clinical trials involving CAR-T cells, the most prominent acute toxicities included symptoms thought to be associated with the release of cytokines, such as fever, low blood pressure and kidney dysfunction. Some patients also experienced toxicity of the central nervous system, such as confusion, cranial nerve dysfunction and speech impairment. Adverse side effects attributed to CAR-T cells were severe and life-threatening in some patients. The life-threatening events were related to kidney dysfunction and toxicities of the central nervous system. Severe and life-threatening toxicities occurred primarily in the first two weeks after cell infusion and generally resolved within three weeks. In the past, several patients have also died in clinical trials by others involving CAR-T cells.

Undesirable side effects observed in our clinical trials, whether or not they are caused by our product candidates, could result in the delay, suspension or termination of clinical trials by us, the FDA or other regulatory authorities for a number of reasons. In addition, because the patients in our clinical trials are suffering from life-threatening diseases, are often suffering from multiple complicating conditions and, in the case of transplant patients, are in a position of extreme immune deficiency at the time that they receive our therapy, it may be difficult to accurately assess the relationship between our product candidates and adverse events experienced by very ill patients. If we elect or are required to delay, suspend or terminate any clinical trial of any product candidates that we develop, the commercial prospects of such product candidates will be harmed and our ability to generate product revenues from any of these product candidates will be delayed or eliminated. Serious adverse events observed in clinical trials could hinder or prevent market acceptance of the product candidate at issue. Any of these occurrences may harm our business, prospects, financial condition and results of operations significantly.

Clinical trials are expensive, time-consuming and difficult to design and implement.

Human clinical trials are expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. Because our product candidates are based on relatively new technology, we expect that they will require extensive research and development and have substantial manufacturing and processing costs. Costs to treat patients with relapsed/refractory cancer and to treat potential side effects that may result from therapies such as our current and future product candidates can be significant. Accordingly, our clinical trial costs are likely to be significantly higher than for more conventional therapeutic technologies or drug products. In addition, our proposed product candidates involve several complex and costly manufacturing and processing steps, the costs of which will be borne by us. The costs of our clinical trials may increase if the FDA does not agree with our clinical development plans or requires us to conduct additional clinical trials to demonstrate the safety and efficacy of our product candidates.

We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Our potential competitors include major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products. We believe the key competitive factors that will affect the development and commercial success of our product candidates are efficacy, safety, tolerability, reliability, convenience of use, price and reimbursement.

Specifically, genetically engineering T cells faces significant competition from multiple companies, including, Adaptimmune, Allogene Therapeutics, Inc., Atara Biotherapeutics, Inc., Autolus Therapeutics plc, bluebird bio, Inc., Bristol-Meyer Squibb Co., Cellectis SA, Celyad S.A., GlaxoSmithKline plc, Intrexon Corporation, Immune Design Corp., Gilead Sciences, Inc., Iovance Biotherapeutics, Inc., Janssen Pharmaceutical, Kiadis Pharma B.V., Kuur Therapeutics, Legend Biotech, Lyell Immunopharma, Inc., Medigene AG, MolMed S.p.A., Mustang Bio, Inc., Novartis AG, Obsidian Therapeutics, Poseida Therapeutics, Precision Biosciences, Inc., Takeda Pharmaceutical Co, and Ziopharm Oncology.

Even if we obtain regulatory approval of our product candidates, the availability and price of our competitors' products could limit the demand and the price we are able to charge for our product candidates. We may not be able to implement our business plan if the acceptance of our product candidates is inhibited by price competition or the reluctance of physicians to switch from existing methods of treatment to our product candidates, or if physicians switch to other new drug or biologic products or choose to reserve our product candidates for use in limited circumstances. For additional information regarding our competition, see "Item 1. Business Competition" under Part I of our Annual Report.

We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy. Workforce and expense reductions may have an adverse impact on our internal programs, our ability to hire and retain key personnel and may be distracting to management.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, scientific and medical personnel. The loss of the services of any of our executive officers, other key employees, and other scientific and medical advisors, and our inability to find suitable replacements could result in delays in product development and harm our business.

On October 29, 2020, we implemented a restructuring plan that includes a reduction in our staff from 68 to 14 full-time employees by the end of 2020. This reduction in our staff includes our Chief Financial Officer, our Chief Legal and Strategy Officer and various scientific personnel. Depending on our need for additional funding and expense control, we may be required to implement further workforce and expense reductions in the future. Further workforce and expense reductions may not result in efficiencies and anticipated savings and could result in reduced progress on our internal programs. In addition, employees, whether or not directly affected by a reduction, may seek future employment with our business partners or competitors. Although our employees are required to sign a confidentiality agreement at the time of hire, the confidentiality of certain proprietary information and knowledge may not be maintained in the course of any such future employment. Further, we believe that our future success will depend in large part upon our ability to attract and retain highly skilled personnel. We may have difficulty retaining and attracting such personnel as a result of a perceived risk of future workforce and expense reductions. In addition, the implementation of expense reduction programs may result in the diversion of efforts of our executive management team and other key employees, which could adversely affect our business.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options and restricted stock units, or RSUs, that vest over time. The value to employees of stock options and RSUs that vest

over time may be significantly affected by movements in our stock price that are beyond our control and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain "key man" insurance policies on the lives of these individuals or the lives of any of our other employees. Our success also depends on our ability to continue to attract, retain and motivate highly skilled scientific and medical personnel.

The terms of our 2019 private placement of equity restrict our operating and financial flexibility, and give priority to certain investors, both of which could significantly harm our liquidity, financial condition, operating results, business and prospects and cause the price of our common stock to decline.

In August 2019, we completed an underwritten public offering of 575,000 shares of its Series 1 preferred stock and warrants to purchase up to 5,750,000 shares of its common stock. Concurrent with the public offering we entered into an agreement with certain institutional investors providing for a private placement, pursuant to which we agreed to sell at two or more separate closings, each at the option of the investors and subject to certain conditions, shares of Series 2 preferred stock and warrants to purchase common stock, and shares of Series 3 preferred stock and warrants to purchase common stock, for aggregate gross proceeds of up to $70.0 million. Pursuant to the terms of the securities purchase agreement for the private placement transaction, the investors in the private placement transaction have consent rights over certain significant matters of our business. These include decisions to authorize or issue equity securities that are senior or pari passu to the Series 3 preferred stock with respect to liquidation preference, the incurrence of indebtedness in excess of $1,000,000, the sale or license of certain of our technology and the payment of dividends. As a result, these stockholders, acting together, will have significant influence over certain matters affecting our business. The investors in the private placement may not exercise their rights to purchase additional tranches of preferred stock and may not consent to us seeking additional funds through debt or other equity financings. In addition, possible additional investors in the Company may decline to do so because of the preferential rights granted under the private placement agreement. Each of these factors could negatively impact our liquidity, financial condition, operating results, business and prospects and cause the price of our common stock to decline.

We are reliant on a third party to manufacture our clinical product candidates and may not be able to secure adequate manufacturing capacity.

In April 2020, we announced the closing of the sale of our U.S. manufacturing facility to M.D. Anderson. When M.D. Anderson assumed ownership of the facility, we became reliant on M.D. Anderson to supply our current clinical product candidates. We have endeavored to structure the transaction in a manner that ensures availability of adequate capacity and priority access thereto for the continued clinical development of our product candidates. Given the complexity of the manufacturing processes for cellular therapies, M.D. Anderson may be unable to effectively manufacture or release our products in accordance with applicable cGMP standards, which could result in significant costs or delays to our programs.

We need to oversee manufacturing of a complex supply chain of cellular therapy product candidates, viral vectors and small molecule drugs.

Because of the complex nature of our cell therapy products, we need to oversee the manufacture of multiple components that require a diverse knowledge base and appropriate manufacturing personnel. The supply chain for these components is separate and distinct, and no single manufacturer can supply more than one component of each of our products. Additionally, it is likely that the cell therapy products will need to be made within an appropriate geographic location for the area in which the products will be utilized, so one cell therapy manufacturing facility may not be able to supply diverse geographic areas. Any lack of capabilities to store, freeze, thaw and infuse our cell therapies would adversely affect our business and prospects.

Our autologous GoCAR-T product candidates, including BPX-601 and BPX-603 are manufactured on a patient-by-patient basis using each patient's own cells. Efficient manufacturing of these products relies upon our ability to sufficiently expand and activate the cells of patients who have undergone multiple lines of prior therapy, often including immunosuppressive chemotherapy. Rimiducid, the small molecule drug used to activate both our iMC and iC9 switches, is a complex molecule to synthesize and is relatively insoluble and lipophilic, rendering it difficult to formulate. We have limited internal expertise in small molecule drug development and manufacturing, and we have identified specialty contract manufacturers to produce the rimiducid drug substance and drug product. It is uncertain whether the drug substance and drug product manufacturers will be able to manufacture sufficient quantity and quality of rimiducid to conduct the necessary non-clinical and clinical trials.

We have not yet caused our product candidates to be manufactured or processed on a commercial scale. We may not be able to scale patient-by-patient manufacturing and processing to satisfy clinical or commercial demands for any of our product candidates. In addition, our anticipated reliance on a limited number of third-party manufacturers for manufacturing exposes us to the following risks:

- We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited, and any replacement contractor must be approved by regulatory authorities. This approval would require new testing and compliance inspections. In addition, a new manufacturer would have to be educated in, or develop substantially equivalent processes for, production of our products after receipt of regulatory approval, if any.
- Our third-party manufacturers might be unable to timely formulate and manufacture our product or produce the quantity and quality required to meet our clinical and commercial needs, if any.
- Our future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store and distribute our products.
- Manufacturers are subject to ongoing periodic unannounced inspection by regulatory agencies to ensure strict compliance with cGMP and other government regulations and standards. We do not have control over third-party manufacturers' compliance with these regulations and standards.
- We may not own, or may have to share, the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing process for our products.
- Our third-party manufacturers could breach or terminate their agreement with us.

Each of these risks could delay our clinical trials, the approval, if any of our product candidates or the commercialization of our product candidates or result in higher costs or deprive us of potential product revenue. In addition, we will rely on third parties to perform release tests on our product candidates prior to delivery to patients. If these tests are not appropriately done and test data are not reliable, patients could be put at risk of serious harm.

We have limited information available regarding the ultimate cost of our products, and cannot estimate what the cost of our products will be upon commercialization, should that occur.

We do not yet have sufficient information to reliably estimate the cost of the commercial manufacturing and processing of our product candidates, and the actual cost to manufacture and process our product candidates could materially and adversely affect the commercial viability of our product candidates. As a result, we may never be able to develop a commercially viable product. Because of the patient-specific nature of our manufacturing process, it is not amenable to traditional "scale up" to manufacture larger lots as is performed for traditional drugs and biological agents.

Cell-based therapies rely on the availability of specialty raw materials, which may not be available to us on acceptable terms or at all.

Gene-modified cell therapy manufacture requires many specialty raw materials, some of which are manufactured by small companies with limited resources and experience to support a commercial product. Some suppliers typically support biomedical researchers or blood-based hospital businesses and may not have the capacity to support commercial products manufactured under cGMP by biopharmaceutical firms. The suppliers may be ill-equipped to support our needs, especially in non-routine circumstances like an FDA inspection or medical crisis, such as widespread contamination. We also do not have commercial supply arrangements with many of these suppliers and may not be able to contract with them on acceptable terms or at all. Accordingly, we may experience delays in receiving key raw materials to support clinical or commercial manufacturing.

In addition, some raw materials are currently available from a single supplier, or a small number of suppliers. We cannot be sure that these suppliers will remain in business, or that they will not be purchased by one of our competitors or another company that is not interested in continuing to produce these materials for our intended purpose.

A variety of risks associated with marketing our product candidates internationally could materially adversely affect our business.

We may seek regulatory approval of our product candidates outside of the U.S. and, accordingly, we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- differing regulatory requirements in foreign countries;

- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the U.S.;
- potential liability under the FCPA or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the U.S.;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- differing payor reimbursement regimes, governmental payors or patient self-pay systems and price controls; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations may materially adversely affect our ability to attain or maintain profitable operations.

We may form or seek strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.

We may form or seek strategic alliances, create joint ventures or collaborations and enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our product candidates and any future product candidates that we may develop. Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders or disrupt our management and business. In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. It is possible that, following a strategic transaction or license, we may not achieve the revenue or specific net income that justifies such transaction. Any delays in entering into new strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

If we are unable to identify a strategic partner for rivo-cel, we may not realize value from this asset and we will continue to incur substantial costs.

We are actively pursuing a strategic partner for our CaspaCIDe-containing polyclonal T cell product candidate called rivogenleceucel, or rivo-cel. A partner would assume current and future development and commercialization responsibilities for this product candidate on a worldwide basis. Concurrently, we have substantially reduced and will continue to reduce our rivo-cel-related activities and spending. For example, we have closed our UK office, which was established to prepare for commercialization in Europe. If we are unable to identify an appropriate strategic partner or to negotiate and consummate a license agreement with such a partner, then it will be impossible to submit the planned Marketing Authorisation Applications, or MAA required to seek approval to commercialize this product candidate in Europe. Such a delay in the process of preparing and submitting the MAA will make it more difficult for us or any possible strategic partner to restart the process in the future and ultimately obtain approval for the product, increasing the likelihood that we may be unable to derive any meaningful revenue from this asset. In addition, we are obligated to continue certain regulatory and clinical activities following conclusion of the rivo-cel clinical trials and if we are unable to identify a strategic partner, we will continue to incur the costs for the internal and external resources required to complete those activities.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we rely on third parties to manufacture our drug substance and our drug product, and because we collaborate with various organizations and academic institutions on the advancement of our technology platform, we must, at times, share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, such as trade secrets. Despite these contractual provisions, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business.

We may use our financial and human resources to pursue a particular research program or product candidate and fail to capitalize on programs or product candidates that may be more profitable or for which there is a greater likelihood of success.

Because we have limited resources, we may forego or delay pursuit of opportunities with certain programs or product candidates or for indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs for product candidates may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through strategic collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate, or we may allocate internal resources to a product candidate in a therapeutic area in which it would have been more advantageous to enter into a partnering arrangement.

We and our contractors utilize hazardous materials in our business operations, and any claims relating to improper handling, storage, or disposal of these materials could harm our business.

Our activities involve the controlled use of potentially hazardous substances, including chemical and biological materials, by our third-party manufacturers. Our manufacturers are subject to federal, state and local laws and regulations in the U.S. governing the use, manufacture, storage, handling and disposal of medical and hazardous materials, and similar laws in other geographic regions. Although we believe that our manufacturers' procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

Our internal computer systems, or those used by our clinical investigators, contractors or consultants, may fail or suffer security breaches.

Despite the implementation of security measures, our internal computer systems and those of our contractors and consultants are vulnerable to damage from computer viruses and unauthorized access. While we have not experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

System outages, network disruptions and cyber-security threats could interrupt the operation of our business.

We are dependent on the use of information technology systems for our operations. Outages, disruptions and threats could have an adverse impact on our ability to conduct operations. Cyber-security threats, such as malware, phishing and network attacks, are on the rise. These attacks can affect the availability of our information technology systems, including their data, as well as the confidentiality and integrity of these systems. A security breach poses a risk to confidential data, including but not limited to intellectual property and trade secrets resulting in financial, legal or reputational harm to us. Insider threats may exist if an individual authorized to access our technology systems improperly discloses sensitive data to unauthorized persons or the public. We also have outsourced elements of our operations, including elements of our information technology infrastructure, and thus manage several independent vendor relationships with third parties who may have access to our confidential information. Confidentiality agreements are in place for authorized users and third parties to support the prevention of confidential information being improperly disclosed. We have policies and procedures in place, including controls around the access and activity of authorized users, active system monitoring, back-up and recovery, information technology security and mandatory annual information technology security awareness training to assist in the prevention and mitigation of an outage, disruption or threat. In addition, we have invested in high availability, redundant technologies that will reduce the risk of an outage, disruption or threat. However, our efforts may not prevent an outage, disruption or threat that would materially adversely affect us. We also may not have sufficient liability insurance, either type or amount, to cover us against claims related to a cyber-security threat.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our clinical investigators, contractors and consultants, could be subject to power shortages, telecommunications failures, water shortages, floods, earthquakes, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We rely on third-party manufacturers to produce and process our product candidates on a patient by patient basis. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption. In particular, certain third-party manufacturers may be unable to comply with their contractual obligations to us due to disruptions caused by COVID-19, including reduced operations or headcount reductions, or otherwise, and in certain cases we may have limited recourse if the non-compliance is due to factors outside of the manufacturer's control.

Our employees, independent contractors, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of employee fraud or other illegal activity by our employees, independent contractors, consultants, commercial partners and vendors. Misconduct by these parties could include intentional, reckless and/or negligent conduct that fails to: comply with the laws of the FDA and other similar foreign regulatory bodies; provide true, complete and accurate information to the FDA and other similar foreign regulatory bodies, comply with manufacturing standards we have established, comply with healthcare fraud and abuse laws in the U.S. and similar foreign fraudulent misconduct laws, or report financial information or data accurately or to disclose unauthorized activities to us. If we obtain FDA approval of any of our product candidates and begin commercializing those products in the U.S., our potential exposure under such laws will increase significantly, and our costs associated with compliance with such laws are also likely to increase. These laws may impact, among other things, our current activities with principal investigators and research patients, as well as proposed and future sales, marketing and education programs. In particular, the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of patient recruitment for clinical trials. The laws that may affect our ability to operate include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs;

- federal civil and criminal false claims laws and civil monetary penalties law, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid, or other third-party payors that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters;
- HIPAA, as amended by the Health and Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization;
- the federal Physician Payments Sunshine Act, and its implementing regulations, which requires certain manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the HHS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as require certain manufacturers and group purchasing organizations to report annually ownership and investment interests held by such physicians and their immediate family members;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and
- foreign laws that govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by or are in conflict with HIPAA, including the European Union General Data Protection Regulation, or the GDPR, which became effective on May 25, 2018, and which imposes privacy and security obligations on any entity that collects and/or processes health data from individuals located in the European Union. Under the GDPR, fines of up to 20 million euros or up to 4% of the annual global turnover of the infringer, whichever is greater, could be imposed for significant non-compliance. As well as complicating our compliance efforts, non-compliance with these laws could result in penalties or significant legal liability. The GDPR includes more stringent operational requirements for processors and controllers of personal data and creates additional rights for data subjects.

Additionally, we are subject to state and foreign equivalents of each of the U.S. healthcare laws described above, among others, some of which may be broader in scope and may apply regardless of the payor.

We have adopted a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, imprisonment, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional reporting requirements and/or oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of any of our product candidates outside the U.S. will also subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. We may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. For example, in May 2019, we were added as an additional defendant in an ongoing civil tort lawsuit in federal court in Los Angeles, California. The complaint alleges claims for wrongful death, negligence, breach of fiduciary duty, fraud, medical battery on decedent, medical battery on individual plaintiffs, products liability-failure to warn, breach of express warranty and products liability design or manufacturing defect. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit or cease commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, federal or state liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to clinical trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- the inability to commercialize any product candidate; and
- a decline in our share price.

Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of any products we develop, alone or with corporate collaborators. We currently carry product liability insurance covering our clinical trials, with other coverage limits as appropriate for certain foreign jurisdictions. Although we maintain such insurance, our insurance policies may have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

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

On March 27, 2020, President Trump signed into law the Coronavirus Aid, Relief, and Economic Security Act, or CARES Act, which provides temporary relief from certain aspects of the Tax Cuts and Jobs Act that had imposed limitations on the utilization of certain losses, interest expense deductions, and minimum tax credits. We are currently in the process of assessing the tax-related provisions of the CARES Act and its potential impact on us.

As of December 31, 2019, we had aggregate U.S. net operating loss carryforwards of approximately $390.3 million, and aggregate U.S. federal and Texas state research and development credits of approximately $11.3 million and $5.3 million, respectively. These net operating loss carryforwards could expire unused and be unavailable to offset future income tax liabilities. Under the Tax Cuts and Jobs Act and Cares Act, federal net operating losses incurred in taxable years ending after December 31, 2017 may be carried forward indefinitely, but the deductibility of federal net operating losses generated in tax years beginning after December 31, 2017 may be limited to 80% of current year taxable income for years beginning on or after January 1, 2021. It is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act. In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change" (which is generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period), the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income or taxes may be limited. We may have experienced one or more ownership changes in the past, including with respect to our August 2019 public offering, and we may also experience additional ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which may be outside of our control. If an ownership change occurs and our ability to use our net operating loss carryforwards is materially limited, it would harm our future operating results by effectively increasing our future tax obligations.

Risks Related to Government Regulation

The regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our product candidates.

We have not previously submitted a BLA to the FDA, or similar approval filings to other foreign authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish the product candidate's safety, purity and potency for each desired indication. It must also include significant information regarding the chemistry, manufacturing and controls for the product. We expect the novel nature of our product candidates to create further challenges in obtaining regulatory approval. For example, FDA's Office of Tissues and Advanced Therapies, or OTAT, has limited experience with combination products that include a small molecule component. Approval of our GoCAR product candidates, will likely require this FDA office to consult with other divisions of the FDA, which may result in further challenges in obtaining regulatory approval, including in developing final product labeling. The regulatory approval pathway for our product candidates may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

We may also experience delays in completing planned clinical trials for a variety of reasons, including delays related to:

- the availability of financial resources to commence and complete our planned clinical trials;
- reaching agreement on acceptable terms with prospective clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different clinical trial sites;
- recruiting suitable patients to participate in a clinical trial;
- having patients complete a clinical trial or return for post-treatment follow-up;
- clinical trial sites deviating from clinical trial protocol, failing to follow GCPs, or dropping out of a clinical trial;
- adding new clinical trial sites; or
- manufacturing sufficient quantities of qualified materials under cGMPs and applying them on a subject by subject basis for use in clinical trials.

We could also encounter delays if physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles. Further, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such clinical trials are being conducted, the Data Monitoring Committee for such clinical trial, or by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or clinical trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may ultimately lead to the denial of regulatory approval of our product candidates.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the EU or U.S., including additional preclinical studies or clinical trials. Studies and clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the EU and U.S. have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Even if we receive regulatory approval of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties and/or withdrawal of product approval if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Any regulatory approvals that we receive for our product candidates will require surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a Risk Evaluation and Mitigation Strategy, or REMS, in order to approve our product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include, among other things, submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of our product candidates, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- suspension or termination of manufacturing at one or more manufacturing facilities;
- product seizure or detention, or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the U.S. or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, and we may not achieve or sustain profitability.

Foreign legislative changes may also affect our ability to commercialize our product candidates. Effective as of May 25, 2018, the GDPR imposes privacy and security obligations on any entity that collects and/or processes personal information from individuals located in the European Union. Under the GDPR, fines of up to 20 million euros or up to 4% of the annual global turnover of the infringer, whichever is greater, could be imposed for significant non-compliance.

Even if we obtain regulatory approval of our product candidates, the products may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers, third-party payors and others in the medical community.

The use of engineered T cells as potential cancer treatments is a recent development and may not become broadly accepted by physicians, patients, hospitals, cancer treatment centers, third-party payors and others in the medical community. Many factors will influence whether our product candidates are accepted in the market, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals, cancer treatment centers and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA or other regulatory authorities;
- the extent and quality of the clinical evidence supporting the efficacy and safety of our product candidates;
- the timing of market introduction of our product candidates as well as competitive products;
- the cost of treatment in relation to alternative treatments;
- the pricing of our product candidates and the availability of adequate reimbursement by third-party payors and government authorities;
- the willingness and ability of patients to pay out-of-pocket in the absence of coverage by third-party payors, including government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies;
- confusion or lack of understanding regarding the effects of rimiducid and the timing and size of dosing of rimiducid after immune cell therapy; and
- the effectiveness of our sales and marketing efforts.

In addition, although we are not utilizing embryonic stem cells or replication competent vectors, adverse publicity due to the ethical and social controversies surrounding the therapeutic use of such technologies, and reported side effects from any clinical trials using these technologies or the failure of such clinical trials to demonstrate that these therapies are safe and effective may limit market acceptance our product candidates. If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

Even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates profitably.

Market acceptance and sales of our product candidates will depend in large part on global reimbursement policies and may be affected by future healthcare reform measures, both in the United States and other key international markets. Patients who are prescribed medicine for the treatment of their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products. Therefore, successful commercialization of our products will depend in part on the availability of governmental and third-party payor reimbursement for the cost of our product candidates and/or payment to the physician for administering our product candidates. In the United States, no uniform policy of coverage and reimbursement for drug products exists among third-party payors. Therefore, coverage and reimbursement for drug products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained. One third-party payor's decision to cover a particular medical product or service does not assure that other payors will also provide coverage for the medical product or service, or to provide coverage at an adequate reimbursement rate. As a result, the coverage determination process will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that adequate coverage and reimbursement will be obtained. Further, a third-party payor's decision to provide coverage for a medical product or service does not imply that an adequate reimbursement rate will be approved. The market for our product candidates will depend significantly on access to third-party payors' formularies or lists of treatments for which third-party payors provide coverage and reimbursement. Third party payors may also have difficulty in determining the appropriate coverage of our product candidates, if approved, due to the fact that they are combination products that include a small molecule drug, rimiducid.

Third-party payors establish coverage and reimbursement policies for new products, including our product candidates. In particular, in the United States, private health insurers and other third-party payors often provide reimbursement for treatments based on the level at which the government (through the Medicare or Medicaid programs) provides reimbursement for such treatments. In the United States, the EEA and other significant or potentially significant markets for our product candidate, government authorities and third-party payors are increasingly attempting to limit or regulate the price of medical products and services, particularly for new and innovative products and therapies, which has resulted in lower average selling prices. Further, the increased emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in Canada and the EEA will put additional pressure on product pricing, coverage, reimbursement and utilization, which may adversely affect our product sales and results of operations. These pressures can arise from policies and practices of managed care groups, judicial decisions and governmental laws and regulations related to Medicare, Medicaid and healthcare reform, coverage and reimbursement policies and pricing in general. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the PPACA, became law in the United States. PPACA substantially changed the way healthcare is financed by both governmental and private insurers and significantly affects the pharmaceutical industry. Among the provisions of the PPACA of greatest importance to the pharmaceutical industry are the following: (i) an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs; (ii) an increase in the rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13% of the average manufacturer price for branded and generic drugs, respectively; (iii) a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts to negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D; (iv) extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations; (v) expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals with income at or below 133% of the Federal Poverty Level, thereby potentially increasing manufacturers' Medicaid rebate liability; (vi) expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; (vii) expansion of health care fraud and abuse laws, including the federal civil False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance; and (viii) a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

There remain judicial and Congressional challenges to other aspects of the PPACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the PPACA. Since January 2017, President Trump has signed several Executive Orders designed to delay the implementation of certain provisions of the PPACA or otherwise circumvent some of the requirements for health insurance mandated by the PPACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the PPACA. While Congress has not passed comprehensive repeal legislation, several bills affecting the implementation of certain taxes under the PPACA have been signed into law. For example, the Tax Cuts and Jobs Act of 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the PPACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". Additionally, the 2020 federal spending package permanently eliminated, effective January 1, 2020, the PPACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. Congress may consider other legislation to replace elements of the PPACA. We continue to evaluate the potential effect of the possible repeal and replacement of the PPACA may have on our business.

In addition, other legislative changes have been proposed and adopted in the United States since the PPACA. For example, through the process created by the Budget Control Act of 2011, there are automatic reductions of Medicare payments to providers up to 2% per fiscal year, which went into effect in April 2013 and, following passage of the Bipartisan Budget Act of 2018, will remain in effect through 2030 unless additional Congressional action is taken. The Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020 and is designed to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2020, and extended the sequester by one year, through 2030. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers.

Further, recently there has been heightened governmental scrutiny in the United States over the manner in which drug manufacturers set prices for their marketed products, in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent congressional inquiries and proposed federal legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. At the federal level, the Trump administration's budget proposal for fiscal year 2021 includes a $135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. In addition, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained additional proposals to increase drug manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products, and reduce the out of pocket costs of drug products paid by consumers. The Department of Health and Human Services, or HHS, has solicited feedback on some of these measures and has implemented others under its existing authority. On July 24, 2020, The Trump administration announced four executive orders related to prescription drug pricing that attempt to implement several of the administration's proposals, including a policy that would tie Medicare Part B drug prices to international drug prices; one that directs HHS to finalize the Canadian drug importation proposed rule previously issued by HHS and makes other changes allowing for personal importation of drugs from Canada; one that directs HHS to finalize the rulemaking process on modifying the anti-kickback law safe harbors for discounts for plans, pharmacies, and pharmaceutical benefit managers; and one that reduces costs of insulin and epipens to patients of federally qualified health centers. While some of these and other measures may require additional authorization to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. We expect that additional federal and state healthcare reform measures will be adopted in the future, any of which could result in reduced demand for our products or other adverse effects on our business. For example, it is possible that additional governmental action is taken to address the COVID-19 pandemic.

We expect that additional federal and state healthcare reform measures, such as further amendments and changes to the PPACA will be adopted in the future, any of which could result in reduced demand for our products or other adverse effects on our business.

Certain countries have a very difficult reimbursement environment and we may not obtain reimbursement or pricing approval, if required, in all countries where we expect to market a product, or we may obtain reimbursement approval at a level that would make marketing a product in certain countries not viable.

We expect to experience pricing pressures in connection with the sale of any products that we may develop, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals. If we fail to successfully secure and maintain adequate coverage and reimbursement for our products or are significantly delayed in doing so, we will have difficulty achieving market acceptance of our products and expected revenue and profitability which would have a material adverse effect on our business, prospects, financial condition and results of operations.

Due to the novel nature of our technology and the small size of our target patient populations, we face uncertainty related to pricing and reimbursement for these product candidates.

Our target patient populations for our potential product candidates are relatively small, as a result, the pricing and reimbursement of our product candidates, if approved, must be adequate to support commercial and manufacturing infrastructure. If we are unable to obtain adequate levels of reimbursement, our ability to successfully market and sell our product candidates will be adversely affected. The manner and level at which reimbursement is provided for services related to our product candidates, for example, reimbursement for administration of our product candidates to patients, is also important. Inadequate reimbursement for such services may lead to physician resistance and adversely affect our ability to market or sell our products.

We are subject to extensive laws and regulations related to data privacy, and our failure to comply with these laws and regulations could harm our business.

We are subject to laws and regulations governing data privacy and the protection of personal information. These laws and regulations govern our processing of personal data, including the collection, access, use, analysis, modification, storage, transfer, security breach notification, destruction and disposal of personal data. There are foreign and state law versions of these laws and regulations to which we are currently and/or may in the future, be subject. For example, the collection and use of personal health data in the European Union is governed by the GDPR. The GDPR, which is wide-ranging in scope, imposes several requirements relating to the consent of the individuals to whom the personal data relates, the information provided to the individuals, the security and confidentiality of the personal data, data breach notification and the use of third-party processors in connection with the processing of personal data. The GDPR also imposes strict rules on the transfer of personal data out of the European Union to the United States, provides an enforcement authority and imposes large monetary penalties for noncompliance. The GDPR requirements apply not only to third-party transactions, but also to transfers of information within our company, including employee information. The GDPR and similar data privacy laws of other jurisdictions place significant responsibilities on us and create potential liability in relation to personal data that we or our third-party service providers process, including in clinical trials conducted in the United States and European Union. In addition, we expect that there will continue to be new proposed laws, regulations and industry standards relating to privacy and data protection in the United States, the European Union and other jurisdictions, and we cannot determine the impact such future laws, regulations and standards may have on our business.

Additionally, California recently enacted legislation that has been dubbed the first “GDPR-like” law in the United States. Known as the California Consumer Privacy Act, or the CCPA, it creates new individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. As of January 1, 2020, the CCPA requires covered companies to provide new disclosures to California consumers, provide such consumers new ways to opt-out of certain sales of personal information, and allow for a new cause of action for data breaches. As currently written, the CCPA will likely impact (possibly significantly) our business activities and exemplifies the vulnerability of our business to not only cyber threats but also the evolving regulatory environment related to personal data and protected health information.

We are subject to certain U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations, or collectively, Trade Laws. We can face serious consequences for violations.

Among other matters, Trade Laws prohibit companies and their employees, agents, clinical research organizations, legal counsel, accountants, consultants, contractors, and other partners from authorizing, promising, offering, providing, soliciting, or receiving directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of Trade Laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We engage third parties for clinical trials and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We also expect our non-U.S. activities to increase in time. We can be held liable for the corrupt or other illegal activities of our personnel, agents, or partners, even if we do not explicitly authorize or have prior knowledge of such activities.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, or FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties for clinical trials outside of the United States, to sell our products abroad once we enter a commercialization phase, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors, and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

Changes in funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including beginning on December 22, 2018 and ending on January 25, 2019, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical FDA, SEC and other government employees and stop critical activities. If repeated or prolonged government shutdowns occur, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Risks Related to Our Intellectual Property

We depend on intellectual property licensed from third parties and termination of any of these licenses could result in the loss of significant rights, which would harm our business.

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others. We license from Baylor College of Medicine, or Baylor, certain intellectual property related to methods for activating antigen presenting cells, to certain genetic constructs and to certain methods for inducing apoptosis. Baylor may terminate or modify our licenses in the event of a material breach by us that remains uncured following the date that is 90 days after written notice of such breach or upon certain insolvency events that remain uncured following the date that is 30 days following written notice of such insolvency event. In addition, we have funded certain of our clinical development activities and may fund certain of our future clinical development with funds from the State of Texas. The State of Texas may have rights to commercialize the results of those clinical trials if it determines that we have failed, after notice and an opportunity to cure, to use diligent and commercially reasonable efforts to commercialize or otherwise bring to practical application the results of the funded clinical trials. We are also dependent on our license agreements with Agensys, Inc. (a subsidiary of Astellas Pharma, Inc.) with respect to PSCA-targeted CARs, and BioVec Pharma Inc. with respect to making retrovirus for all of our programs. The termination of any of these licenses could have a material adverse effect on our business.

Any termination of these agreements, or other agreements to which we are a party could result in the loss of significant rights and could harm our ability to commercialize our product candidates.

Disputes may also arise between us and our licensors and other partners regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

We are generally also subject to all of the same risks with respect to protection of intellectual property that we license, as we are for intellectual property that we own. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize products could suffer.

If our efforts to protect the proprietary nature of our technologies are not adequate, we may not be able to compete effectively in our market.

Any disclosure to or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in our market. Certain intellectual property which is covered by our in-license agreements has been developed at academic institutions which have retained non-commercial rights to such intellectual property.

There are several pending U.S. and foreign patent applications in our portfolio, and we anticipate additional patent applications will be filed both in the U.S. and in other countries, as appropriate. However, we cannot predict:

- if and when patents will issue;
- the degree and range of protection any issued patents will afford us against competitors including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings which may be costly whether we win or lose.

Composition of matter patents for biological and pharmaceutical products are generally considered to be the strongest form of intellectual property. We cannot be certain that the claims in our pending patent applications directed to compositions of matter for our product candidates will be considered patentable by the U.S. Patent and Trademark Office, or the USPTO, or by patent offices in foreign countries, or that the claims in any of our issued patents will be considered valid by courts in the U.S. or foreign countries. Method of use patents have claims directed to the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products "off-label." Although off-label prescriptions may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our product candidates or uses thereof in the U.S. or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, patents in our portfolio may not adequately exclude third parties from practicing relevant technology or prevent others from designing around our claims. If the breadth or strength of our intellectual property position with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced. Since patent applications in the U.S. and most other countries are confidential for a period of time after filing, it is possible that patent applications in our portfolio may not be the first filed patent applications related to our product candidates. Furthermore, for U.S. applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third-party or instituted by the USPTO, to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. For U.S. applications containing a claim not entitled to priority before March 16, 2013, there is a greater level of uncertainty in the patent law with the passage of the America Invents Act (2012) which brings into effect significant changes to the U.S. patent laws that are yet untried and untested, and which introduces new procedures for challenging pending patent applications and issued patents. A primary change under this reform is creating a "first to file" system in the U.S. This will require us to be cognizant going forward of the time from invention to filing of a patent application.

We rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and any other elements of our product discovery and development processes that involve proprietary know-how, information, or technology that is not covered by patents. We require all of our employees to assign their inventions to us, and require all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements; however, it is possible that our trade secrets and other confidential proprietary information could be disclosed or that competitors may otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the U.S. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the U.S. and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results and financial condition.

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

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. Recently, under U.S. patent reform, new procedures including inter parties review and post grant review have been implemented. As stated above, this reform is untried and untested and will bring uncertainty to the possibility of challenge to our patents in the future. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents, of which we are currently unaware or have not sufficiently analyzed with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications, which may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover aspects of our formulations, the manufacturing process of our product candidates, constructs or molecules used in or formed during the manufacturing process, methods of use, including combination therapy or patient selection methods or any final product itself, the holders of any such patents may be able to block our ability to develop and commercialize the product candidate unless we obtained a license under the applicable patents, or until such patents expire or they are finally determined to be held invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. It is possible that any such license would not be available at all or on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize our product candidates, which could harm our business significantly.

For example, we are aware of a third-party patent having claims directed to chimeric DNA comprising DNA segments encoding (1) a single chain antibody domain and (2) transmembrane and cytoplasmic domains of an endogenous protein. Even though we have reason to believe that our product candidates are not covered by claims of this patent, an owner or licensee of the patent still might bring a patent infringement suit against us. If the patent is asserted against us, we may not prevail in defending against claims of infringement and/or challenging the validity of claims in the patent. We may not successfully develop alternative technologies or enter into an agreement by which we obtain rights to the patent. These rights, if necessary, may not be available on terms acceptable to us.

We are aware of third-party patents having claims that may be considered as being directed to single-chain antibody fragments that bind to PSCA and these patents may be considered relevant to BPX-601 and related technologies we are developing. We currently are evaluating whether or not we need to obtain rights to these patents under a license, and if it is determined that we need to obtain such rights, whether these rights can be obtained. We are also aware of third-party patent applications having claims that may be considered as being directed to cellular therapy constructs utilizing a heterodimer domain for activation of caspase 9. We are monitoring these applications and if they are granted with the claims as drafted, they may be relevant to our potential dual-switch product candidates containing such a heterodimer activation domain.

Also, while we are aware there are other third-party patents having claims that may be considered relevant to technologies for which we are seeking, or plan to seek, regulatory approval, we believe those patents have a patent term that may expire prior to the time we expect to obtain regulatory approval for these technologies. The estimated expiration dates for those patents were determined according to information on the face pages of the patents, and certain factors that could influence patent term, such as patent term adjustment and patent term extension, for example, were not factored into these estimates. Accordingly, the estimated expiration dates of those patents may not be accurate and one or more of those patents may not expire before we obtain regulatory approval for an applicable technology. Owners or licensees of one or more of those patents may bring a patent infringement suit against us. If one or more of those patents are asserted against us, we may be able to assert a defense for a safe harbor to patent infringement under 35 U.S.C. 271(e)(1) if certain requirements are met. It is possible that (1) certain of these requirements may not be met, and/or (2) one or more of the third-party patents might expire after one or more of our technologies obtain regulatory approval, and consequently we may not successfully assert such a defense to patent infringement. If we are unsuccessful in asserting a defense under 35 U.S.C. 271(e)(1), it is possible we may not prevail in defending against claims of infringement and/or challenging the validity of claims in those patents. We may not successfully develop alternative technologies or enter into agreements by which we obtain rights to applicable patents. These rights, if necessary, may not be available on terms acceptable to us.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

Because our programs may involve additional product candidates that may require the use of proprietary rights held by third parties, the growth of our business will likely depend in part on our ability to acquire, in-license or use these proprietary rights.

Our product candidates may also require specific formulations to work effectively and efficiently and these rights may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies, which may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities.

We may not be able to successfully complete negotiations and ultimately acquire the rights to the intellectual property that we may seek to acquire in the future.

We may be involved in lawsuits or other proceedings to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. It also is possible that a competitor we sue for patent infringement could countersue us for allegedly infringing one or more of their own patents or one or more patents they licensed from another entity. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure.

Interference proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could result in a loss of our patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. It also is possible that third parties could institute a patent office post-grant proceeding against one or more of our patents, or one or more patents licensed to us, such as a post grant review proceeding, inter parties review proceeding or reexamination proceeding at the USPTO, or an opposition proceeding in a jurisdiction outside the U.S. An unfavorable outcome in a post-grant proceeding could result in a loss of our patent rights. Litigation, interference proceedings or patent office post-grant proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. We also may not be able to prevent, alone or with our licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the U.S.

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

Obtaining and maintaining our patents depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent position could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. Such noncompliance events are outside of our direct control for (1) non-U.S. patents and patent applications owned by us, and (2) patents and patent applications licensed to us by another entity. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or the USPTO.

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate, as applicable, is invalid and/or unenforceable. In patent litigation in the U.S., defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the U.S. or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review, and equivalent proceedings in foreign jurisdictions, for example, opposition proceedings. Any such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art and that prior art that was cited during prosecution, but not relied on by the patent examiner, will not be revisited. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patents directed to our product candidates. A loss of patent rights could have a material adverse impact on our business.

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

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. In addition, the U.S. has recently enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. For example, in the recent case, Assoc. for Molecular Pathology v. Myriad Genetics, Inc., the U.S. Supreme Court held that certain claims to DNA molecules are not patentable. While we do not believe that any of the patents owned or licensed by us will be found invalid based on this decision, we cannot predict how future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents.

We have limited foreign intellectual property rights and may not be able to protect our intellectual property rights throughout the world.

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

Many companies have encountered significant problems in protecting and defending intellectual property in foreign jurisdictions. The legal systems of certain countries, particularly China and certain other developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property, particularly those relating to biopharmaceutical products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. To date, we have not sought to enforce any issued patents in these foreign jurisdictions. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. The requirements for patentability may differ in certain countries, particularly developing countries. Furthermore, generic drug manufacturers or other competitors may challenge the scope, validity or enforceability of our or our licensors' patents, requiring us or our licensors to engage in complex, lengthy and costly litigation or other proceedings. Certain countries in Europe and developing countries, including China and India, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

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

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

Risks Related to Ownership of our Common Stock

If we fail to satisfy applicable listing standards, our common stock may be delisted from the Nasdaq Capital Market.*

Our ability to publicly or privately sell equity securities and the liquidity of our common stock could be adversely affected if we are delisted from The Nasdaq Capital Market or if we are unable to transfer our listing to another stock market. On April 27, 2020, we were notified by The Nasdaq Stock Market LLC, or Nasdaq, that we were in breach of Listing Rule 5450(b)(2)(A), or the Market Value Rule, for continued listing on The Nasdaq Global Market because the market value of our listed securities for 30 consecutive business days had been less than $50 million. In lieu of seeking compliance with the Market Value Rule, on June 16, 2020, we received approval from Nasdaq to transfer the listing of our common stock from The Nasdaq Global Market to The Nasdaq Capital Market, which became effective at the opening of business on June 18, 2020. Although we were able to transfer our listing to The Nasdaq Capital Market, we could subsequently fail to satisfy Nasdaq's requirements for continued listing on The Nasdaq Capital Market and receive notice from Nasdaq that our stock may become subject to delisting.

If we are unable to continue to meet the requirements for listing on the Nasdaq Capital Market and our common stock is delisted by Nasdaq, it could lead to a number of negative implications, including the occurrence of an event of default under the Loan Agreement with Oxford, an adverse effect on the price of our common stock, increased volatility in our common stock, reduced liquidity in our common stock, the loss of federal preemption of state securities laws and greater difficulty in obtaining financing.

In addition, delisting of our common stock could deter broker-dealers from making a market in or otherwise seeking or generating interest in our common stock, could result in a loss of current or future coverage by certain sell-side analysts and might deter certain institutions and persons from investing in our securities at all. Delisting could also cause a loss of confidence of our customers, collaborators, vendors, suppliers and employees, which could harm our business and future prospects.

If our common stock is delisted by The Nasdaq Capital Market, the price of our common stock may decline, and although our common stock may be eligible to trade on the OTC Bulletin Board, another over-the-counter quotation system, or on the pink sheets, an investor may find it more difficult to dispose of their common stock or obtain accurate quotations as to the market value of our common stock. Further, if we are delisted, we would incur additional costs under state blue sky laws in connection with any sales of our securities. These requirements could severely limit the market liquidity of our common stock and the ability of our shareholders to sell our common stock in the secondary market.

The price of our stock is volatile and you could lose all or part of your investment.

Prior to our December 2014 IPO, there was no public market for our common stock. The trading price of our common stock is likely to continue to be highly volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control, including market conditions in general and a limited trading volume for our shares. In addition to the factors discussed in this "Risk Factors" section and elsewhere in our Annual Report, these factors include:

- the commencement, enrollment or results of the planned clinical trials of our product candidates or any future clinical trials we may conduct, or changes in the development status of our product candidates;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- adverse results or delays in our ongoing or future clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- adverse developments concerning our CID technology platform and our small molecule drug rimiducid;
- adverse developments concerning our contract manufacturers;
- changes in the structure of healthcare payment systems;
- our inability to maintain successful collaborations or to establish new collaborations if needed;
- our failure to commercialize our product candidates;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- introduction of new products or services offered by us or our competitors;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage our growth;
- the size and growth of our initial target markets;
- our ability to successfully treat additional types of diseases and cancers or at different stages;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or immunotherapy in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;
- trading volume of our common stock;

- changes in accounting practices;
- ineffectiveness of our internal controls;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

We do not intend to pay dividends on our common stock, so any returns will be limited to the value of our stock.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. In addition, the terms of the Loan Agreement with Oxford restrict our ability to declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest. Any return to stockholders will therefore be limited to the appreciation of their stock.

Our principal stockholders and management own a significant percentage of our stock and can exert significant control over matters subject to stockholder approval.

Our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates beneficially own a significant portion of our voting stock, including shares subject to outstanding options. As a result, if these shareholders were to choose to act together, they would have the ability to significantly influence all matters requiring stockholder approval. For example, these stockholders may be able to significantly influence elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

As of December 31, 2019, we are no longer an "emerging growth company" and, as a result, are required to comply with increased disclosure and governance requirements.

As more than five fiscal years have passed since the December 18, 2014, listing of common stock listing on the Nasdaq, we ceased to be an "emerging growth company" as defined in the JOBS Act as of December 31, 2019. However, we currently qualify as a "Smaller Reporting Company" under applicable SEC rules, which limits some of the otherwise applicable public company requirements. Below are specific requirements to which we are now subject that did not previously apply to us. These requirements include the "say on pay" provisions (requiring a non-binding stockholder vote to approve compensation of certain executive officers) and the "say on golden parachute" provisions (requiring a non-binding stockholder vote to approve golden parachute arrangements for certain executive officers in connection with mergers and certain other business combinations) of the Dodd-Frank Act and some of the disclosure requirements of the Dodd-Frank Act relating to compensation of our chief executive officer.

Compliance with such requirements is expensive and time-consuming for management, as the loss of "emerging growth company" status and compliance with the additional requirements substantially increases our legal and financial compliance costs and makes some activities more time-consuming and costly.

Changes in accounting rules, assumptions and/or judgments could materially and adversely affect us.

Accounting rules and interpretations for certain aspects of our operations are highly complex and involve significant assumptions and judgment. These complexities could lead to a delay in the preparation and dissemination of our financial statements. Furthermore, changes in accounting rules and interpretations or in our accounting assumptions and/or judgments, such as asset impairments, could significantly impact our financial statements. In some cases, we could be required to apply a new or revised standard retroactively, resulting in restating prior period financial statements. Any of these circumstances could have a material adverse effect on our business, prospects, liquidity, financial condition and results of operations.

Our consolidated financial statements, including our liabilities and statements of operations are subject to quarterly changes in our accounting of our outstanding Series 1 Preferred Stock, warrants and related option fee proceeds.

In accordance with ASC Topic 815, *Accounting for Derivative Instruments and Hedging Activities*, and ASC Topic 480, *Liabilities-Distinguishing from Equity*, convertible preferred shares are accounted for as temporary equity and warrants are accounted for as liabilities at their fair value during periods where they can be net cash settled in case of a change in control transaction. The warrants are accounted for as a liability at their fair value at each reporting period. The value of the derivative warrant liability is re-measured at each reporting period with changes in fair value recorded in earnings. To derive an estimate of the fair value of these warrants, the binomial model is utilized, adjusted for the effect of dilution, which embodies all of the requisite assumptions (including trading volatility, estimated terms, dilution and risk-free rates) necessary to determine the fair value of these instruments. This process requires the development of significant and subjective estimates that may, and are likely to, change over the duration of the instrument with related changes in internal and external market factors. Additionally, in connection with our August 2019 private placement we received option fee proceeds, or the Option Fee, which is accounted for as a liability. The value of the Option Fee is re-measured at each reporting period with changes in fair value recorded through earnings. As a result, our consolidated financial statements and results of operations may fluctuate quarterly, based on factors, such as the trading value of our common stock and certain assumptions, which are outside of our control. Consequently, our liabilities and consolidated statements of operations may vary quarterly, based on factors other than our revenues and expenses. The liabilities and accounting line items associated with our derivative securities on our balance sheet and statement of operations are non-cash items, and the inclusion of such items in our financial statements may materially affect the outcome of our quarterly and annual results, even though such items are non-cash and do not affect the cash we have available for operations. Investors should take such derivative accounting matters and other non-cash items into account when comparing our quarter-to-quarter and year-to-year operating results and financial statements.

Sales of a substantial number of shares of our common stock by our existing stockholders in the public market could cause our stock price to fall.

Certain holders of our outstanding shares of common stock, are entitled to rights with respect to the registration of their shares under the Securities Act of 1933, as amended, or the Securities Act. Any sales of these shares by such stockholders could have a material adverse effect on the trading price of our common stock.

We register on Form S-8 all shares of common stock that are issuable under our 2019 Equity Incentive Plan, as amended, or the EIP. As a consequence, these shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our EIP and shelf registration statement, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital will be needed in the future to continue our planned operations, including conducting clinical trials, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time, including pursuant to our shelf registration statement on Form S-3 that we filed with the SEC. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Any such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the existing holders of our common stock.

We completed a public offering of our Series 1 preferred stock on August 21, 2019 and are obligated to issue shares of Series 2 and Series 3 preferred stock in connection with the concurrent private placement, and if we are required to redeem shares of preferred stock, our cash position will be negatively impacted. In addition, we may not have sufficient funds to redeem such shares of preferred stock.

We issued 575,000 shares of Series 1 preferred stock in connection with our August 2019 public offering and are obligated to issue up to 350,000 shares of Series 2 preferred stock and 250,000 shares of Series 3 preferred stock pursuant to the purchase agreement governing our August 2019 private placement.

Subject to the terms of our certificate of incorporation, at any time on or after August 21, 2024, some or all of our outstanding shares of preferred stock will be redeemable at the option of the holder at a redemption price of $100.00 per share of Series 1 and Series 2 preferred stock and $140.00 per share of Series 3 preferred stock, upon delivery of an irrevocable written notice to us. If a holder of preferred stock requests redemption we will be required to redeem such shares of preferred stock. However, we may be unable to redeem such preferred stock if restrictions under applicable law or contractual obligations prohibit such redemption. For example, Delaware law provides that a redemption on capital stock may only be paid from "surplus" or, if there is no "surplus," from a corporation's net profits for the then-current or the preceding fiscal year. Unless we operate profitably, our ability to redeem the preferred stock would require the availability of adequate "surplus," which is defined as the excess, if any, of our net assets (total assets less total liabilities) over our capital. To date, we have operated at a loss. Accordingly, if we do not have sufficient "surplus" under Delaware law, we would be unable to effect such redemption. If we do have sufficient "surplus" to effect such redemption, our available cash will be negatively impacted and our ability to use the net proceeds from this offering could be substantially limited. In addition, such reduction in our available cash could decrease the trading price of our common stock, and, accordingly, the preferred stock and our warrants.

The issuance or sale of shares of our common stock, or rights to acquire shares of our common stock, including the issuance of our securities pursuant to our August 2019 private placement, could depress the trading price of our common stock.

Under the terms of the private placement transaction, we are obligated to issue (i) up to 350,000 shares of Series 2 preferred stock, at a purchase price of $100.00 per share, and related warrants to purchase up to 2,800,000 shares of our common stock at an exercise price of $10.00 per share, and (ii) 250,000 shares of Series 3 preferred stock, at a purchase price of $140.00 per share, and related warrants to purchase up to 875,000 shares of our common stock at an exercise price of $14.00 per share, for aggregate gross proceeds of up to $70,000,000, to certain institutional investors in two or more separate closings, each to occur at such investors' discretion. In addition, we may conduct future offerings of our common stock, preferred stock or other securities that are convertible into or exercisable for our common stock to finance our operations or fund acquisitions, or for other purposes. If we issue additional shares of our common stock or rights to acquire shares of our common stock, if any of our existing stockholders sells a substantial amount of our common stock, or if the market perceives that such issuances or sales may occur, then the trading price of our common stock, and, accordingly, the trading price of our common stock may significantly decrease. In addition, our issuance of additional shares of common stock will dilute the ownership interests of our existing common stockholders.

Certain investors in the private placement will have the ability to control or significantly influence certain business decisions.

Pursuant to the terms of the securities purchase agreement for the private placement transaction, certain investors in the private placement transaction have consent rights over certain significant matters of the Company's business. These include decisions to authorize or issue equity securities that are senior or pari passu to the Series 3 preferred stock with respect to liquidation preference, the incurrence of indebtedness in excess of $1,000,000, the sale or license of the Company's iMC switch technology and the payment of dividends. As a result, these stockholders, acting together, will have significant influence over certain matters affecting our business.

Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control which could limit the market price of our common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- a prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;
- a requirement that special meetings of stockholders be called only by the chairman of the board of directors, the chief executive officer, or by a majority of the total number of authorized directors;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors;
- a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;
- a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our certificate of incorporation; and
- the authority of the board of directors to issue convertible preferred stock on terms determined by the board of directors without stockholder approval and which convertible preferred stock may include rights superior to the rights of the holders of common stock.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.*

Our amended and restated certificate of incorporation and our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the exclusive forum for (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders; (iii) any action asserting a claim against us or any of our directors, officers or other employees arising pursuant to any provision of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws; or (iv) any action asserting a claim against us or any of our directors, officers or other employees governed by the internal affairs doctrine.

These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims.

These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find either exclusive-forum provision to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving the dispute in other jurisdictions, all of which could seriously harm our business.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. In the event securities or industry analysts that cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

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

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

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.

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation, as amended by the Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Registrant and the Second Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on August 6, 2020)
3.2	Certificate of Designations, Preferences and Rights of Series 1 Redeemable Convertible Non-Voting Preferred Stock, Series 2 Redeemable Convertible Non-Voting Preferred Stock and Series 3 Redeemable Convertible Non-Voting Preferred Stock of Bellicum Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on August 19, 2019).
3.3	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on December 23, 2014).
4.1	Reference is made to Exhibits 3.1, 3.2 and 3.3.
4.2	Form of Common Stock Certificate of the Registrant (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
4.3	Second Amended and Restated Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated August 22, 2014 (incorporated by reference to Exhibit 4.2 to Registrant's Registration Statement on Form S-1, as amended (File No. 333-200328), originally filed with the SEC on November 18, 2014).
4.4	Registration Rights Agreement by and among the Registrant and Baker Brothers Life Sciences, LP, and two of its affiliated funds, dated January 15, 2016 (incorporated by reference to Exhibit 4.4 to Registrant's Registration Statement on Form S-3 (File No. 333-209012), filed with the SEC on January 15, 2016).
4.5	Form of Warrant issued in public offering (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-36783), filed with the SEC on August 19, 2019).
4.6	Form of Warrant issued in private offering (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-36783), filed with the SEC on August 19, 2019).
4.7	Securities Purchase Agreement, dated August 16, 2019, by and among the Company and the institutional investors named therein, (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-36783), filed with the SEC on August 19, 2019).
10.1*	Amended and Restated License Agreement, dated March 7, 2011, by and between the Registrant and ARIAD Pharmaceuticals, Inc.
10.2*	Omnibus Amendment Agreement, dated October 3, 2014, by and between Registrant and ARIAD Pharmaceuticals, Inc.
10.3*	Exclusive License Agreement, dated March 20, 2008, by and between the Registrant and Baylor College of Medicine.
10.4*	Exclusive License Agreement, dated June 27, 2010, by and between the Registrant and Baylor College of Medicine.
10.5*	Cancer Research Grant Contract, dated July 27, 2011, by and between the Registrant and the Cancer Prevention and Research Institute of Texas.
10.6*	Exclusive License Agreement, effective November 1, 2014, by and between the Registrant and Baylor College of Medicine.
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	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document

* Certain portions of this exhibit (indicated by "[…***…]") have been omitted as the Registrant has determined (i) the omitted information is not material and (ii) the omitted information would likely cause harm to the Registrant if publicly disclosed.

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: November 5, 2020

By: /s/ Richard A. Fair
Richard A. Fair
President and Chief Executive Officer

Date: November 5, 2020

By: /s/ Atabak Mokari
Atabak Mokari
Chief Financial Officer

Date: November 5, 2020

By: /s/ David E. Strauss
David E. Strauss
Principal Accounting Officer

Exhibit 10.1

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY […*…], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM IF PUBLICLY DISCLOSED.**

AMENDED AND RESTATED LICENSE AGREEMENT

This Amended and Restated License Agreement (this "**Agreement**") is made effective as of March 7, 2011 (the "**Effective Date**") by and between ARIAD Pharmaceuticals, Inc., a Delaware corporation with its principal place of business at 26 Landsdowne Street, Cambridge, MA 02139 ("**ARIAD**"), and Bellicum Pharmaceuticals, Inc., a Delaware corporation with a place of business at 6400 Fannin St., Suite 2300, Houston, TX 77030 ("**Bellicum**"). ARIAD and Bellicum are each hereafter referred to individually as a "**Party**" and together as the "**Parties**".

WHEREAS, ARIAD is the owner of or otherwise controls certain proprietary Licensed Patent Rights and Licensed Technology (each as defined below); and

WHEREAS, Bellicum owns or otherwise controls the Bellicum Patent Rights and Bellicum Technology (as defined below); and

WHEREAS, the Parties and ARIAD Gene Therapeutics, Inc. ("**AGTI**") previously entered into that certain License Agreement, dated July 25, 2006 (the "**2006 Agreement**"), under which ARIAD and Bellicum each granted certain licenses to the other, subject to the terms and conditions of the 2006 Agreement; and

WHEREAS, AGTI has merged into ARIAD; and

WHEREAS, ARIAD has certain rights pursuant to its […***…] with […***…], including a non-exclusive license to certain intellectual property and a separate right to enter negotiations to obtain an exclusive license to intellectual property, both cases involving […***…]; and

WHEREAS, Bellicum desires that ARIAD waive the right to pursue an exclusive license to intellectual property relating to […***…] so that Bellicum may obtain a license to that intellectual property from […***…]; and

WHEREAS, Bellicum desires to convert its non-exclusive license to Licensed Patent Rights and Licensed Technology under the 2006 Agreement to an exclusive license to develop and commercialize Licensed Products (as defined below) and to expand the Primary Indications to which such exclusive license will apply; and

WHEREAS, the Parties now desire to amend and restate the 2006 Agreement in its entirety as of the Effective Date as set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

1. DEFINITIONS

Whenever used in the Agreement with an initial capital letter, the terms defined in this Article 1 shall have the meanings specified.

1.1 "**Additional Indication**" shall mean each specific cancer indication (other than […***…]) which Bellicum elects to include in the Licensed Field pursuant to the provisions of Section 2.1.2(a).

1.2 "**Affiliate**" shall mean any corporation, firm, Limited Liability Company, partnership or other entity that directly controls or is controlled by or is under common control with a Party to this Agreement. For purposes of this Section 1.2, "control" means ownership, directly or indirectly through one or more Affiliates, of fifty percent (50%) or more of the shares of stock entitled to vote for the election of directors, in the case of a corporation, or fifty percent (50%) or more of the equity interests in the case of any other type of legal entity, status as a general partner in any partnership, or any other arrangement whereby a Party controls or has the right to control the Board of Directors or equivalent governing body of a corporation or other entity.

1.3 "**Adverse Event**" shall mean any untoward medical occurrence in a patient or subject who is administered a Licensed Product, whether or not considered related to the Licensed Product, including, without limitation, any undesirable sign (including abnormal laboratory findings of clinical concern), symptom or disease temporally associated with the use of such Licensed Product.

1.4 "**Antigen**" shall mean a molecule that causes an immune system response.

1.5 "**ARIAD Data**" shall have the meaning set forth in Section 2.1.6.

1.6 "**ARIAD Dimerizer**" shall mean the compound known as AP1903, all analogs and derivatives of AP1903 and any Dimerizer or salt thereof, where the composition of matter thereof or its use as a divalent ligand is, at any time during the Primary License Term, within the scope of a claim in any patent or patent application within the Licensed Patent Rights.

1.7 "**ARIAD Dimerizer Product**" shall mean (i) an ARIAD Dimerizer or (ii) a Licensed Product in which dimerization is effected with an ARIAD Dimerizer.

1.8 "**ARIAD Indemnitees**" shall have the meaning set forth in Section 8.1.1.

1.9 "**ARIAD Products**" shall mean any product (a) that comprises or incorporates an ARIAD Dimerizer or Non-ARIAD Dimerizer or (b) that comprises a cell transfected with both (but not limited to) a gene for an Antigen and a gene for an Inducible Costimulatory Molecule where the gene for the Inducible Costimulatory Molecule is activated using an ARIAD Dimerizer or a Non-ARIAD Dimerizer.

1.10 "**ARIAD Regulatory Information**" shall have the meaning set forth in Section 2.1.6.

1.11 "[…***…]" shall mean […***…].

1.12 "[…***…]-**ARIAD MTA Technologies**" shall mean technologies resulting from experiments conducted with the materials provided pursuant to any of the […***…] Agreements whether or not the quantities of such materials used in the experiments were manufactured by ARIAD, including without limitation, the technologies known as […***…], […***…], […***…], […***…], […***…], […***…], and any other technologies disclosed in the patent applications or patents listed in "Licensed Patent Rights Covering […***…]-ARIAD MTA Technologies in Schedule A.

1.13 "[…***…] **Agreement**" shall mean each and any of (a) the […***…] between […***…] and ARIAD, (b) the […***…] between […***…] and ARIAD, (c) the […***…] between […***…] and ARIAD, (d) the […***…] between […***…] and ARIAD, (e) the […***…] between […***…] and ARIAD, and (f) the […***…] between […***…] and ARIAD, each as amended, which collectively cover, inter alia, the […***…]-ARIAD MTA Technologies.

1.14 "**Bellicum Data**" shall have the meaning set forth in Section 2.2.2.

1.15 "**Bellicum Indemnitees**" shall have the meaning set forth in Section 8.1.2.

1.16 "**Bellicum Information**" shall have the meaning set forth in Section 3.1.1.

1.17 "**Bellicum Patent Rights**" shall mean all Patent Rights Controlled by Bellicum as of the Original Effective Date or during the period from the Original Effective Date through the end of the Term, which are necessary or useful for the development, manufacture, use, sale, offer for sale or import of any ARIAD Product or Dimerizer, including any ARIAD Dimerizer or Non-ARIAD Dimerizer; provided, however, that Bellicum Patent Rights does not include any Patent Rights claiming (a) the composition of matter of any Antigen or Inducible Costimulatory Molecule, or (b) the composition of matter of any product (or treatment regime or process using a product) comprising a dendritic cell transfected with both (i) a gene for any Antigen, a peptide or protein that is an Antigen or an RNA that induces the expression of any Antigen and (ii) a gene for any Inducible Costimulatory Molecule, where such product does not use a Dimerizer to activate any gene that is a part of such product, or (c) any method of manufacture or use for such Antigen, Inducible Costimulatory Molecule or product described in clause (b) (or treatment regime or process using such product). Bellicum Patent Rights excludes all Patent Rights licensed to Bellicum or ARIAD by […***…] that cover any of the […***…]-ARIAD MTA Technologies.

1.18 "**Bellicum Regulatory Information**" shall have the meaning set forth in Section 2.2.2.

1.19 "**Bellicum Technology**" shall mean all Technology, whether or not patentable, Controlled by Bellicum as of the Original Effective Date or during the period from the Original Effective Date through the end of the Term, which is necessary or useful to practice any patent or patent application included in the Bellicum Patent Rights or is necessary or useful for the development, manufacture, use, sale, offer for sale or import of any ARIAD Product or any Dimerizer, including any ARIAD Dimerizer or Non-ARIAD Dimerizer. Bellicum Technology includes, without limitation, the Bellicum Information described in Section 3.1.1; provided, however, that

Bellicum Technology does not include any Technology specifically pertaining to (a) any Antigen or Inducible Costimulatory Molecule, or (b) any product, or treatment regime or process using any product, comprising a dendritic cell transfected with both (i) a gene for any Antigen, a peptide or protein that is an Antigen or an RNA that induces the expression of any Antigen and (ii) a gene for any Inducible Costimulatory Molecule, where such product does not use a Dimerizer to activate any gene that is a part of such product, or (c) any manufacture or use of such Antigen, Inducible Costimulatory Molecule or product described in clause (b) (or treatment regime or process using such product). Bellicum Technology excludes all Technology licensed to Bellicum or ARIAD by […***…] that covers any of the […***…]-ARIAD MTA Technologies.

1.20 "**BLA**" shall mean a biologics license application (as defined in Title 21 of the United States Code of Federal Regulations, as amended from time to time) filed with the FDA seeking Regulatory Approval to market and sell any Licensed Product in the United States for a particular indication within the Licensed Field.

1.21 "**Cell Transplantation Indication**" shall mean (i) GvHD or (ii) any other acute or chronic adverse clinical effect in a human being resulting from transplantation of bone marrow, hematopoietic or stem cells that can be treated by inducing apoptosis of transplanted cells, or (iii) in the case of a bone marrow, hematopoietic or stem cell product for transplantation that includes cells containing a gene coding for an Inducible Caspase, any disease or condition in a human being that can be treated by such product, where such treatment can lead to an indication in subsection (i) or (ii).

1.22 "**Common Stock**" shall mean (i) the common stock, par value $0.01 per share, of Bellicum and (ii) any other securities into which or for which any of the securities described in the foregoing clause (i) may be converted or exchanged pursuant to a plan of recapitalization, reorganization, merger, consolidation, sale of assets or other similar transaction.

1.23 "**Competition**" shall mean, with respect to a Licensed Product sold by Bellicum or an Affiliate or Sublicensee thereof in a given country, that one or more Third Parties are selling any product for the same indication, which product (a) would infringe a Valid Claim of the Licensed Patent Rights Listed in Part I of Schedule A but for the expiration of those Licensed Patent Rights in that country, (b) contains the same or equivalent (by applicable Regulatory Authority standards) active pharmaceutical ingredient(s) as contained in such Licensed Product in such country, and (c) sales of such product(s) represent at least […***…] percent ([…***…]%) of the total market share by volume for all sales of such product(s) and the Licensed Product in such country for any calendar quarter (as measured by reputable published data for such country, e.g. by reference to market share data collected by IMS).

1.24 "**Confidential Information**" shall mean with respect to a Party (the "Receiving Party"), all information which is disclosed by the other Party (the "Disclosing Party") to the Receiving Party hereunder or to any of its employees, consultants, Affiliates, licensees or sublicensees, except to the extent that the Receiving Party can demonstrate by written record or other suitable physical evidence that such information, (a) as of the date of disclosure is demonstrably known to the Receiving Party or its Affiliates other than by virtue of a prior confidential disclosure to such Party or its Affiliates; (b) as of the date of disclosure is, or subsequently becomes, publicly known, through no fault or omission of the Receiving Party; (c) is obtained from a Third Party having a lawful right to make such disclosure free from any obligation of confidentiality to the Disclosing Party; or (d) is independently developed by or for the Receiving Party without reference to or reliance upon any Confidential Information of the Disclosing Party.

1.25 "**Confidentiality Agreement**" shall have the meaning set forth in Section 5.1.

1.26 "**Control**" or "**Controlled**" shall mean with respect to any Patent Rights or Technology, the possession by a Party of the ability to grant a license or sublicense of such Patent Rights or Technology as provided for herein, without violating the terms of any arrangement or agreement between such Party and any Third Party.

1.27 **"Convertible Securities**" shall mean any stock, notes, warrants, options or other securities, including without limitation, all Options, entitling the holder to convert, exercise, or exchange such security for an ascertainable number of shares of Common Stock. For the avoidance of doubt, the Notes shall not be deemed to be Convertible Securities unless and until they are not repaid on the Maturity Date (as defined in the Note), and the Warrants shall not be deemed to be Convertible Securities until they become exercisable.

1.28 "**Dimerizer**" shall mean any molecule that is not a […***…] Analog and that induces the interaction or proximity of two or more proteins, modified to contain a dimerizer-binding domain, resulting in the activation of specific cell signaling, gene transcription, or protein secretion events in cultured cells, whole animals or humans.

1.29 "**Drug Approval Application**" shall mean any application for Regulatory Approval (including pricing and reimbursement approvals) required prior to any commercial sale or use of a Licensed Product in any country or jurisdiction in the Territory, including, without limitation, any BLA, NDA, MAA or equivalent application for Regulatory Approval filed with the FDA or any other Regulatory Authority required prior to any commercial sale or use of a Licensed Product in any country or jurisdiction in the Territory.

1.30 "**Equity Financing**" shall mean a bona fide issuance and sale of Common Stock or Convertible Securities other than upon the grant or exercise of any Option.

1.31 "**Existing Bellicum Product**" shall have the meaning set forth in Section 2.2.1(a).

1.32 "**Expansion Period**" shall have the meaning set forth in Section 2.1.2(a).

1.33 "**First Commercial Sale**" shall mean, on a country-by-country basis, the date of the first arm's length transaction, transfer or disposition for value to a Third Party of (i) a Licensed Product by or on behalf of Bellicum or any Affiliate of Bellicum or Sublicensee in such country or (ii) of an ARIAD Product by or on behalf of ARIAD or any Affiliate or sublicensee of ARIAD in such country.

1.34 "**FDA**" shall mean the United States Food and Drug Administration and any successor agency or authority thereto.

1.35 "**GvHD**" shall mean a clinical condition involving acute or chronic adverse effects or symptoms resulting from the allogenic transplantation of bone marrow, hematopoietic or stem cells into a human being in which engrafted donor cells attack the patient's organs and tissues which can be treated by activating cell signaling leading to apoptosis of the transplanted cells.

1.36 "[…***…]" shall mean the […***…].

1.37 "[…***…]" shall mean the […***…].

1.38 "**Improvement**" shall mean any invention or discovery created or otherwise Controlled by ARIAD or Bellicum during the period from the Original Effective Date through the end of the Term, which constitutes an enhancement or modification of any invention within the Licensed Technology or Licensed Patent Rights, together with the Patent Rights and Technology that claim or cover such invention or discovery; provided, however, that Improvement does not include (a) any Antigen or Inducible Co-Stimulatory Molecule, (b) any product (or treatment regime or process using a product), comprising (i) a dendritic cell transfected with both a gene for any Antigen, a peptide or a protein that is an Antigen or an RNA that induces the

expression of an Antigen and (ii) a gene for any Inducible Costimulatory Molecule, where such product does not use a Dimerizer to activate any gene that is a part of such product, or (c) any method of manufacture or use for such Antigen, Inducible Co- Stimulatory Molecule or product described in clause (b) (or treatment regime or process using such product), and, in each case, the Patent Rights and Technology that claim or cover such invention or discovery.

1.39 "**IND**" shall mean an investigational new drug application (as defined in Title 21 of the United States Code of Federal Regulations, as amended from time to time) filed or to be filed with the FDA with regard to any Licensed Product.

1.40 "**Indemnitees**" and "**Indemnifying Party**" shall have the meaning set forth in Section 8.2.

1.41 "**Inducible Caspase**" shall mean iCASP9 or icp30CASP9 or another molecule that will activate signaling leading to apoptosis. For purposes of this definition, the following terms shall have the meanings set forth in the following literature references:

- […***…]
- […***…]

1.42 "**Inducible Costimulatory Molecule**" shall mean iCD40, iTLR or another molecule that will activate signaling leading to maturation and activation of dendritic cells, including any chimera of the foregoing. For purposes of this definition, the following terms shall have the meanings set forth in the following literature references:

- […***…]
- […***…]

1.43 "**Licensed Field**" shall mean the treatment or prevention of the progression or occurrence in humans of any Primary Indication and/or any Additional Indication, […***…] to the extent permitted under Section 2.1.1 or any non-cancer indication as provided in Section 2.1.2(b), as the case may be.

1.44 "**Licensed Patent Rights**" shall mean (a) all Patent Rights Controlled by ARIAD as of the Original Effective Date or during the Primary License Term, which are necessary or useful for the development, manufacture, use, sale, offer for sale or import of Licensed Products or of Dimerizers used or incorporated in Licensed Products, including without limitation Patent Rights covering the […***…]- ARIAD MTA Technologies and (b) all Patent Rights whether or not controlled by ARIAD that are listed on Schedule A, attached hereto and made a part hereof, regardless of the ownership of such Patent Rights. The Licensed Patent Rights as of the Effective Date are listed in Schedule A, attached hereto and made a part hereof, which shall be updated, as necessary, from time to time by ARIAD by written notice to Bellicum.

1.45 **"Licensed Product**" shall mean: (a) cancer vaccines (whether used prophylactically or therapeutically), the manufacture, sale, import, administration, activation or other use of which is covered by a claim of any Patent Rights or by Technology, which Patent Rights or Technology are Controlled by Bellicum or its Affiliate (including, without limitation Patent Rights licensed or assigned to Bellicum that cover any of the […***…]-ARIAD MTA Technologies), either (x) containing both (but not limited to) (i) a gene for a […***…] Antigen or other Antigen directed to any indication within the Licensed Field and (ii) one or more genes for Inducible Costimulatory Molecules, (y) containing a dendritic cell transfected with both (but not limited to) (i) a gene for a […***…] Antigen or other Antigen directed to any indication within the Licensed Field and (ii) one or more genes for Inducible Costimulatory Molecules, or (z) containing (i) a peptide or protein that is a […***…] Antigen or other Antigen directed to any indication within the Licensed Field or an RNA that induces the expression of a […***…] Antigen or other Antigen

directed to any indication within the Licensed Field and (ii) a dendritic cell transfected with one or more genes for Inducible Costimulatory Molecule(s) where in any such case ((x), (y) or (z)) the encoded Inducible Costimulatory Molecule(s) are activated upon dimerization using a Dimerizer; (b) a gene or a cell transfected with such gene coding for an Inducible Caspase, either alone or in combination with other adjuvant genes (such as IL-12 or HSP), where the gene coding for such Inducible Caspase is activated upon dimerization of a Dimerizer; (c) Dimerizers for use with the products described in clauses (a) or (b) of this Section 1.45; and (d) any treatment regimen or process utilizing any products described in clauses (a), (b) or (c) of this Section 1.45; provided, however, that in the event the Licensed Field is expanded pursuant to Section 2.1.2(b) to include any non-cancer indication, clause (a) of this Section 1.45 shall include vaccines (as described therein) directed at such indication as well as cancer vaccines.

1.46 "**Licensed Technology**" shall mean and include all Technology, whether or not patentable, Controlled by ARIAD as of the Original Effective Date or during the Primary License Term, which (a) is necessary or useful to practice any patent or patent application included in the Licensed Patent Rights (including without limitation Patent Rights Controlled by ARIAD covering the […***…]-ARIAD MTA Technologies) or (b) is necessary or useful to practice any license granted to Bellicum hereunder. The Licensed Technology includes the ARIAD Regulatory Information and ARIAD know how and trade secrets including but not limited to the following technology for the manufacture of Dimerizers: optimum choice of synthetic route, optimized process steps and parameters, analytic methods using authentic standards to control chemical and chiral purity through the manufacturing path, background data supporting the chemical and chiral proof of structure of key intermediates, the structural identification of impurities characteristic of this route, their HPLC characteristics, and the qualification of these impurities for regulatory purposes.

1.47 "**Losses**" shall have the meaning set forth in Section 8.1.1.

1.48 "**MAA**" shall mean an application filed with the relevant Regulatory Authorities in Europe seeking Regulatory Approval to market and sell any Licensed Product in Europe or any country or territory therein for a particular indication within the Licensed Field.

1.49 "**NDA**" shall mean a new drug application (as defined in Title 21 of the United States Code of Federal Regulations, as amended from time to time) filed with the FDA seeking Regulatory Approval to market and sell any Licensed Product in the United States for a particular indication within the Licensed Field.

1.50 "**Net Sales**" shall mean the gross invoiced sales price for each Licensed Product sold by Bellicum, its Affiliates or Sublicensees to Third Parties throughout the Territory, less the following amounts incurred or paid by Bellicum or its Affiliates or Sublicensees with respect to sales of Licensed Products:

(a) […***…];

(b) […***…];

(c) […***…];

(d) […***…];

(e) […***…]; and

(f) […***…].

"Net Sales" shall not include sales or transfers between Bellicum and its Affiliates or Sublicensees, unless the Licensed Product is consumed by the Affiliate or Sublicensee. All sales and dispositions of Licensed Product for clinical or pre-clinical studies and "compassionate use" sales shall also be disregarded for purposes of calculating Net Sales.

1.51 "**Non-ARIAD Dimerizer**" shall mean any Dimerizer other than an ARIAD Dimerizer that is, at any time during the Primary License Term, within the scope of a claim other than a claim covering the composition of matter thereof or its use as a divalent ligand, but including, without limitation, any manufacture or use claim, in any patent or patent application within the Licensed Patent Rights.

1.52 "**Non-ARIAD Dimerizer Product**" shall mean (i) a Non-ARIAD Dimerizer or (ii) a Licensed Product in which dimerization is effected with a Non- ARIAD Dimerizer.

1.53 "**Non-Cancer Expansion Period**" shall have the meaning set forth in Section 2.1.2(b).

1.54 "**Non-Cancer Negotiation Period**" shall have the meaning set forth in Section 2.1.2(b).

1.55 "**Notes**" shall mean the series of […***…].

1.56 "**Option**" shall mean options or other securities granted or issued pursuant to any Stock Plan.

1.57 "**Original Effective Date**" shall mean July 25, 2006.

1.58 "**Orphan Drug Designation**" shall mean the request for designation of AP1903 for the treatment of GvHD as an orphan drug under 21 C.F.R. §316.20 that has been granted by the FDA under 21 C.F.R. §316.24.

1.59 "**Patent Rights**" shall mean all patents and patent applications, including, without limitation, certificates of invention and applications for certifications of invention, registered designs and registered design applications, industrial designs and industrial design applications and registrations, reissues, reexaminations, extensions, substitutions, confirmations, registrations, revalidations, renewals, term restorations, additions, provisionals, continuations, continuations-in-part, divisions, continued prosecution applications, and requests for continued examination thereof.

1.60 "**Phase 1 Clinical Trial**" shall mean, as to a particular Licensed Product, a lawful study in humans of the safety and dose ranging of such Licensed Product, which is prospectively designed to generate sufficient data (if successful) to commence a Phase 2 Clinical Trial of such Licensed Product.

1.61 "**Phase 1/2 Clinical Trial**" shall have the meaning set forth in Section 4.1.3.

1.62 "**Phase 2 Clinical Trial**" shall mean, as to a particular Licensed Product for a particular indication, a controlled and lawful study in humans of the safety, dose ranging and efficacy of such Licensed Product for such indication, which is prospectively designed to generate sufficient data (if successful) to commence a Phase 3 Clinical Trial of such Licensed Product for such indication.

1.63 "**Phase 2/3 Clinical Trial**" shall have the meaning set forth in Section 4.1.3.

1.64 "**Phase 3 Clinical Trial**" shall mean as to a particular Licensed Product for a particular indication, a controlled and lawful study in humans of the safety and efficacy of such Licensed Product for such indication, which is prospectively designed to demonstrate statistically whether such Licensed Product is safe and effective for use in such indication in a manner sufficient to file a BLA or NDA for Regulatory Approval to market and sell that Licensed Product in the United States for the indication under investigation in such study.

1.65 "**Primary Indications**" shall mean (a) […***…] and (b) any Cell Transplantation Indication.

1.66 "**Primary License Term**" shall mean, with respect to each Licensed Product, the period commencing on the Original Effective Date and continuing on a country-by-country, and product-by-product basis until the later of (a) the last to expire Valid Claim covering the composition of matter of the Licensed Product or any component thereof, or the manufacture or use in the Licensed Field of the Licensed Product or any component thereof, or (b) twelve (12) years from the date of First Commercial Sale in such country.

1.67 "**Qualified Financing**" shall mean the last Equity Financing as a result of which Bellicum will have received cumulative gross proceeds from one or more Equity Financings equal to at least […***…] Dollars ($[…***…]).

1.68 "[…***…] **Analog**" shall mean a compound which is an analog or derivative of […***…] that induces the formation of a complex with […***…] and […***…], mutants or other variants thereof, or fusion proteins containing part or all of […***…] and […***…], respectively, or their respective mutants or other variants.

1.69 "**Regulatory Approval**" shall mean any and all approvals (including pricing and reimbursement approvals), product and establishment licenses, registrations or authorizations of any kind of the FDA or any other Regulatory Authority necessary for the development, pre-clinical and/or human clinical testing, manufacture, quality testing, supply, use, storage, importation, export, transport, marketing and sale of a Licensed Product (or any component thereof) for use in the Licensed Field in any country or other jurisdiction in the Territory. "Regulatory Approval" shall include, without limitation, any IND, BLA, NDA, MAA or other Drug Approval Application.

1.70 "**Regulatory Authority**" shall mean any applicable supranational, national, federal, state or local regulatory agency, department, bureau or other governmental entity of any country or jurisdiction (including the FDA in the United States), having responsibility in such country or jurisdiction for any Regulatory Approvals of any kind in such country or jurisdiction, and any successor agency or authority thereto.

1.71 "[…***…]" shall mean the Board of Trustees of the […***…].

1.72 "[…***…] **Agreement**" shall have the meaning set forth in Section 4.1.4.

1.73 "[…***…] **IP**" shall mean all Licensed Patent Rights and Licensed Technology licensed to ARIAD under the […***…] Agreement. […***…] IP does not include […***…].

1.74 "**Stock Plan**" shall mean Bellicum's 2006 Stock Option Plan, as may be amended, and any other plan adopted by Bellicum for the issuance of equity securities or options to acquire equity securities to employees, consultants, directors or advisors of Bellicum.

1.75 "**Sublicensee**" shall mean any Third Party to whom Bellicum grants a sublicense of some or all of the rights to the Licensed Patent Rights and Licensed Technology granted to Bellicum under this Agreement.

1.76 "**Technology**" shall mean and include any and all unpatented, proprietary ideas, inventions, discoveries, Confidential Information, biologic materials, data, results, formulae, designs, specifications, methods, processes, formulations, techniques, ideas, know-how, technical information (including, without limitation, structural and functional information), trade secrets, process information, pre-clinical information, clinical information, and any and all proprietary biological, chemical, pharmacological, toxicological, pre-clinical, clinical, assay, control and manufacturing data and materials.

1.77 "**Term**" shall have the meaning set forth in Section 9.1.

1.78 "**Territory**" shall mean all countries and jurisdictions of the world.

1.79 "**Third Party**" shall mean any person or entity other than Bellicum, ARIAD and their respective Affiliates.

1.80 "**Valid Claim**" shall mean a claim in an issued, unexpired patent or in a pending patent application that has been pending for […***…] since the first substantive office action of the relevant patent office on such patent application within the Licensed Patent Rights (including without limitation Patent Rights covering the […***…]-ARIAD MTA Technologies Controlled by ARIAD) that (a) has not been finally cancelled, withdrawn, abandoned or rejected by any administrative agency or other body of competent jurisdiction, (b) has not been revoked, held invalid, or declared unpatentable or unenforceable in a decision of a court or other body of competent jurisdiction that is unappealable or unappealed within the time allowed for appeal, (c) has not been rendered unenforceable through disclaimer or otherwise, and (d) is not lost through an interference proceeding.

1.81 "**Warrants**" shall mean the warrants for Common Stock issued in connection with the Notes.

2. GRANT OF RIGHTS

2.1 License to Bellicum.

2.1.1 Grant of License. ARIAD hereby grants to Bellicum an exclusive (even as to ARIAD), royalty-bearing license, including the right to grant sublicenses in accordance with Section 2.1.4, under the Licensed Patent Rights and Licensed Technology and ARIAD's interest in any Improvements, subject at all times to the restrictions and obligations under the […***…] Agreement with respect to the […***…] IP, (a) to research, develop, test, obtain Regulatory Approval for, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported Licensed Products (including, without limitation, any Dimerizer included or utilized therein) in the Territory, for any and all uses within the Licensed Field during the Term, subject to the terms and conditions of this Agreement, and (b) to make, have made, use, import and export, in each case solely for research purposes, including pre-clinical IND-enabling toxicology and other pre-clinical studies (but not to conduct clinical trials with respect to or to obtain Regulatory Approval for, sell or commercialize), Licensed Products (including, without limitation, any Dimerizer included or utilized therein) (i) for any indication other than the Primary Indications until the end of the Expansion Period and, (ii) if Bellicum elects to add Additional Indications to the Licensed Field during the Expansion Period, for any indication other than the Primary Indications and the Additional Indications until the end of the Non-Cancer Expansion Period. Bellicum may, pursuant to the license granted under Section 2.1.1(a), include patients with […***…] in clinical trials of a Licensed Product intended for use in […***…] where the Antigen is PSMA and if Bellicum files an IND to seek Regulatory Approval of such Licensed Product for […***…], then Bellicum may seek Regulatory Approval of such Licensed Product for the treatment or prevention of the progression or occurrence in humans of […***…], and, if Bellicum receives Regulatory Approval of such Licensed Product for the treatment or prevention of the progression or occurrence in humans of […***…], then the Licensed Field shall include […***…].

2.1.2 Expansion of Licensed Field to Obtain Additional Exclusive Rights. Bellicum may exercise its rights to expand (or request the expansion of) its exclusive license granted in Section 2.1.1 as follows:

(a) During the period commencing on the […***…] and continuing for […***…] thereafter (the "**Expansion Period**"), Bellicum may, at Bellicum's election, add Additional Indications to the Licensed Field by delivering written notice to ARIAD which describes each specific cancer indication to be included in the Additional Indications or states that all cancer indications (other than […***…]) are to be included in the Additional Indications.

(b) Within a […***…] day period commencing on the later to occur of (i) Bellicum's exercise of its option to expand the Licensed Field to include Additional Indications pursuant to Section 2.1.2(a) and (ii) Bellicum's or its Affiliate's or Sublicensee's commencing a […***…], or, […***…] (the "**Non-Cancer Expansion Period**"), Bellicum may, at Bellicum's election, request that ARIAD agree to expand the Licensed Field to specific non-cancer indications (other than Cell Transplantation Indications) by delivering written notice to ARIAD within such Non- Cancer Expansion Period which describes the specific products and associated product development plans, capabilities and resources for the specific non-cancer diseases and/or conditions it desires to include within the Licensed Field. Upon receipt of such written notice, ARIAD shall in good faith consider Bellicum's request. If ARIAD is willing to so expand the Licensed Field, the Parties will negotiate with respect to a possible amendment to this Agreement setting forth all relevant terms (including milestones and royalties) pertaining to the expansion for a period of […***…] days from the date of ARIAD's receipt of the written request (the "**Non-Cancer Negotiation Period**"). If the Parties do not agree upon terms and conditions mutually acceptable to both Parties on or before the expiration of such Non-Cancer Negotiation Period despite their respective good faith efforts, then Bellicum shall have no further rights with respect to such expansion and ARIAD shall have no further obligation to negotiate pursuant to this Section 2.1.2.

2.1.3 Certain Exclusivity Rights. Notwithstanding anything to the contrary in this Agreement:

(a) ARIAD will not license (or sublicense) to any Third Party or develop or commercialize itself or together with any Third Party, for use in the treatment or prevention of (i) the Primary Indication or (ii) any Additional Indication which Bellicum elects to include in the Licensed Field pursuant to the provisions of Section 2.1.2(a) or any non-cancer indication (other than Cell Transplantation Indications) that is included in the Licensed Field pursuant to the provisions of Section 2.1.2(b), any Dimerizer or other product involving the use of a Dimerizer covered by Bellicum Patent Rights or Bellicum Technology or any Patent Rights covering the […***…]-ARIAD MTA Technologies licensed to ARIAD by […***…] as of the Original Effective Date or during the Primary License Term.

(b) Bellicum will not develop (except as permitted pursuant to the license granted in Section 2.1.1), manufacture, promote or sell any Dimerizer for any use outside of the Licensed Field as in effect from time to time; provided, however, that, to the extent Bellicum demonstrates to ARIAD's reasonable satisfaction that off-label use of any Licensed Product outside the Licensed Field has occurred in the complete absence of any promotion thereof by or on behalf of, or at the request or with the approval of, any of Bellicum, its Affiliates or its or their directors, officers, consultants and clinical investigators, such off-label use shall not constitute a violation of this provision or this Agreement.

2.1.4 Right to Sublicense and Subcontract. Bellicum shall have the right to grant sublicenses to any Affiliate and/or Sublicensee to all or any portion of its rights under the license granted pursuant to Section 2.1.1; provided, however, that (a) such sublicense under the license granted pursuant to Section 2.1.1 shall be granted in connection with a license to all Patent Rights and Technology Controlled by Bellicum, which are necessary or useful in the manufacture, use or sale of the Licensed Product(s) covered by the sublicense, (b) no sublicense may include a right to further sublicense any […***…] IP unless […***…] has provided prior written consent to Bellicum and ARIAD allowing such further sublicense (and, if requested by Bellicum, ARIAD will assist Bellicum in obtaining such consent from […***…]), and all such sublicenses of […***…] IP shall be subject and subordinate to, and consistent with, the terms and conditions of the […***…] Agreement with respect to sublicenses of […***…] IP, (c) ARIAD shall be notified of the grant of a sublicense to any and all potential sublicenses, (d) any and all sublicenses shall be subject to, and consistent with, the terms and conditions of this Agreement, (e) Bellicum shall remain obligated for the payment to ARIAD of all of its payment obligations hereunder, including, without limitation, the payment of any royalties described in Section 4 hereof, (f) upon termination of this Agreement, any such sublicense shall be considered a direct license from ARIAD as provided in Section 9.3 and (g) Bellicum shall provide ARIAD with a copy of each such sublicense agreement (from which Bellicum may redact confidential terms that are not necessary to disclose to ARIAD for purposes of confirming compliance with this Agreement and the […***…] Agreement) within […***…] days of execution. In addition, Bellicum shall have the right to subcontract with any Third Party, including […***…] (provided that any Third Party manufacturer of AP1903 shall be subject to approval by ARIAD in its commercially reasonable discretion), to have such Third Party perform work on Bellicum's behalf pursuant to the license granted pursuant to Section 2.1.1(b) on terms which are subject to, and consistent with, the terms and conditions of this Agreement.

2.1.5 Technology Transfer. ARIAD disclosed to Bellicum after the Original Effective Date, and shall disclose to Bellicum from time to time during the Primary License Term, all Licensed Patent Rights and Licensed Technology. The matters to be disclosed or delivered to Bellicum pursuant to this Section 2.1.5 are

outlined in Schedule A. Such trade secrets and Technology are disclosed or delivered to Bellicum by ARIAD hereunder on an “as is” basis. ARIAD makes no representation or warranty that such trade secrets and Technology are all that is reasonably necessary to practice the licenses granted to Bellicum hereunder or as to their fitness for such purpose.

2.1.6 ARIAD Regulatory Information. Subject to applicable laws governing patient confidentiality and to the extent necessary for Bellicum or its Sublicensee(s) to comply with applicable statutes, laws, regulations, ordinances and guidelines governing Regulatory Approval of Licensed Products, ARIAD shall provide Bellicum or its Sublicensee (i) summaries of, and the right to cross-reference to, any safety data (including Adverse Events) reported to any Regulatory Authority by ARIAD relating to AP1903, (ii) copies of the clinical investigators’ brochure, protocol and clinical study report in connection with a phase 1 study of AP1903 conducted by ARIAD, and (iii) summaries of relevant data generated by ARIAD in connection with its preclinical studies of AP1903 (“**ARIAD Data**”) (collectively, “**ARIAD Regulatory Information**”). ARIAD Regulatory Information shall be treated as Confidential Information of ARIAD. Bellicum and its Sublicensee(s) shall maintain such ARIAD Data disclosed to it pursuant to this Section 2.1.6 in confidence and shall not use or disclose it to any Third Party other than (i) Bellicum or its Sublicensee(s), itself or through its agent, may provide a cross-reference to ARIAD Data reported by ARIAD under any filing to obtain Regulatory Approval for Licensed Products using AP1903 in any country or may disclose ARIAD Data in a written submission to any such Regulatory Authority, in each case solely as required to obtain Regulatory Approval of a Licensed Product in the Licensed Field, but only after obtaining prior written permission from ARIAD to make such disclosure which is conditioned upon Bellicum or its Sublicensee obtaining written assurances from the Regulatory Authorities to whom the information is being disclosed that such ARIAD Data will be afforded confidential treatment by such Regulatory Authority, and (ii) Bellicum or its Sublicensee, upon prior written notice to ARIAD, may verbally disclose ARIAD Data in

any teleconference or meeting with any Regulatory Authority, in each case solely as required to obtain Regulatory Approval of the Licensed Products in the Licensed Field, but only after obtaining prior written permission from ARIAD which is conditioned upon affording appropriate ARIAD personnel the opportunity to participate in each such teleconference or meeting.

2.1.7 Transfer of Orphan Drug Designation. Subject to applicable statutes, laws, regulations, ordinances and guidelines governing the transfer of the Orphan Drug Designation, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ARIAD hereby transfers, assigns and conveys all its ownership of and any beneficial interest in the Orphan Drug Designation to Bellicum, effective as of the Effective Date. Within ten (10) business days after the Effective Date, (i) ARIAD and Bellicum shall each submit the required information to the FDA to effect the change of the named sponsor of the Orphan Drug Designation from ARIAD to Bellicum in accordance with the applicable statutes, laws, regulations, ordinances and guidelines, and (ii) ARIAD shall transfer a complete copy of the Orphan Drug Designation, including any amendments or supplements thereto, and correspondence regarding the Orphan Drug Designation to Bellicum. ARIAD shall cooperate reasonably with Bellicum, as requested by Bellicum and at Bellicum's expense, in Bellicum's efforts to maintain the Orphan Drug Designation.

2.1.8 Reservation of Rights. As between the Parties, ARIAD shall retain ownership of or license rights to all right, title and interest in and to the Licensed Patent Rights and Licensed Technology, and no other license, either express or implied or by implication or estoppel, is granted hereunder with respect to any Technology or Patent Rights of ARIAD or its licensors except as expressly stated in this Section 2.1 and ARIAD reserves all rights in and to the same. Bellicum acknowledges that […***…] and […***…] and the inventors identified in the […***…] Agreement each retain the rights to, respectively: (i) practice the […***…] IP solely for non-commercial research purposes; (ii) publish any information included in the […***…] IP; and (iii) provide tangible materials included in the […***…] IP to academic or not-for-profit research

institutions under the terms of a material transfer agreement, subject to the restriction in the […***…] Agreement that no rights shall be granted by […***…] or […***…] to any inventions or technology incorporating or utilizing such materials for any commercial purpose. Bellicum acknowledges that the […***…] IP is subject to 35 U.S.C. §§ 200-204, including an obligation that Licensed Products that would be "Licensed Products" under the […***…] Agreement sold or produced in the United States be "manufactured substantially in the United States". Bellicum acknowledges that the […***…] IP is subject to certain obligations to […***…] as set forth in the […***…] Agreement, a complete copy of which obligations to […***…] ARIAD has provided to Bellicum.

2.1.9 […***…] Agreement. […***…], […***…] and […***…], as applicable, are intended Third Party beneficiaries of this Section and Sections 2.1.8, 4.2, 4.3, 5.4, 5.5, 7.3.1, 8.3 and 11.1 of this Agreement, and such parties have the right to bring any suit at law or equity for any matter governed by or subject to such provisions. If the […***…] Agreement is terminated, then from and after the effective date of such termination, the license granted by ARIAD to Bellicum under the […***…] IP shall be deemed a direct license from […***…] to Bellicum and all obligations of Bellicum under this Agreement with regard to such license under the […***…] IP, and all obligations of ARIAD under the […***…] Agreement with regard to Licensed Products (as defined herein) developed, made, used or sold by Bellicum or any Affiliate or Sublicensee of Bellicum that would be "Licensed Products" under the […***…] Agreement including the payment of royalties to […***…], shall be deemed obligations of Bellicum to […***…]. As long as Bellicum has not materially breached any material obligation or condition that would entitle ARIAD to terminate this Agreement, ARIAD will not voluntarily terminate or willfully breach the […***…] Agreement. In addition to specific provisions in this Agreement relating to the […***…] Agreement, the provisions of Articles 8, 9 and 10 of the […***…] Agreement, with Bellicum substituted for AGTI in such provisions, are expressly included in this Agreement for the benefit or […***…], […***…] and […***…]. To the extent the provisions of Articles 8, 9 and 10 of the […***…] Agreement cover the same subject matter as other provisions in this Agreement relating

to the […***…] Agreement, the provisions imposing the greatest obligation on Bellicum shall apply.

2.2 License to ARIAD.

2.2.1 Grant of License.

(a) Bellicum hereby grants to ARIAD a non-exclusive, royalty-free (subject only to Section 2.2.1(b)) license, including the right to grant sublicenses, under the Bellicum Patent Rights and Bellicum Technology, and Bellicum's interest in any Improvements, to develop, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported ARIAD Products (including products comprising or utilizing AP1903) for any and all uses outside of the Licensed Field, subject to the terms and conditions of this Agreement. In no event will ARIAD practice any Bellicum Patent Rights or Bellicum Technology, or Bellicum's interest in any Improvements (excluding any Improvements licensed to Bellicum and ARIAD by […***…] that cover any of the […***…]-ARIAD MTA Technologies), for any use within the Licensed Field or to sell, offer for sale, have sold, import, have imported, export and have exported any ARIAD Product (including any product comprising or utilizing AP1903) for any use outside of the Licensed Field, if such ARIAD Product is the same (for regulatory purposes) as any Licensed Product listed on Schedule B pursuant to Section 3.2.1 prior to ARIAD's commencement of the development thereof and that is being developed or commercialized to ARIAD's knowledge by Bellicum or any of its Affiliates or Sublicensees for any use within the Licensed Field (an "**Existing Bellicum Product**"). In the event that Bellicum has not filed an IND for a particular Licensed Product within […***…] after such Licensed Product is listed on Schedule B, then the foregoing prohibition shall not apply to such Licensed Product. Notwithstanding the foregoing, ARIAD shall be free to develop, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported, any Dimerizer for any purpose without restriction, except that ARIAD shall not sell, offer for sale, have sold, import, have imported, export or have exported any Dimerizer covered by Bellicum Patent Rights that is specifically labeled by ARIAD for use with an Existing Bellicum Product.

(b) If any Bellicum Patent Rights or Bellicum Technology licensed to Bellicum by any Third Party would require payment to such Third Party upon ARIAD's practice thereof pursuant to the license granted under this Section 2.2.1, then Bellicum shall so notify ARIAD in writing promptly after obtaining the license. ARIAD may, by written notice to Bellicum provided at any time prior to the First Commercial Sale of any ARIAD Product utilizing the subject matter of the Bellicum Patent Rights or Bellicum Technology licensed to Bellicum by the Third Party, (i) elect to accept the license to such Bellicum Patent Rights or Bellicum Technology, in which case, ARIAD shall be responsible for making any payment to such Third Party resulting from ARIAD's practice of such Bellicum Patent Rights or Bellicum Technology pursuant to the license granted under this Section 2.2.1 and shall provide Bellicum written notice confirming that it has made such payments (and, if it fails to make any such payment in accordance with the terms of the agreement with such Third Party, the license to such Bellicum Patent Rights or Bellicum Technology under this Section 2.2.1 shall terminate), or (ii) elect to decline the license to such Bellicum Patent Rights or Bellicum Technology (and shall be deemed to decline the license to such Bellicum Patent Rights or Bellicum Technology if it does not provide Bellicum written notice of its election as set forth above), in which case such Bellicum Patent Rights or Bellicum Technology shall be excluded from the license granted to ARIAD under this Section 2.2.1.

2.2.2 Bellicum Regulatory Information. To facilitate the development of ARIAD Products by ARIAD or its sublicensee(s) pursuant to the license granted under this Section 2.2, and subject to applicable laws governing patient confidentiality and to the extent necessary for ARIAD or its sublicensee(s) to comply with applicable statutes, laws, regulations, ordinances and guidelines governing Regulatory Approval of ARIAD Products, Bellicum shall provide, and shall require its Sublicensees to provide, to ARIAD or its sublicensee (i) the right to cross-reference to any safety data (including Adverse Events) reported to the FDA by Bellicum under any

IND relating to a Licensed Product using AP1903, (ii) copies of all investigator safety letters provided by Bellicum to its clinical investigators in connection with clinical studies of Licensed Products using AP1903 and (iii) summaries of relevant data generated by Bellicum in connection with its preclinical studies of a Licensed Product using AP1903 ("**Bellicum Data**") (collectively, "**Bellicum Regulatory Information**"). Bellicum Regulatory Information should be treated as Confidential Information of Bellicum. ARIAD and its sublicensee(s) shall maintain such Bellicum Data disclosed to it pursuant to this Section 2.2.2 in confidence and shall not use or disclose it to any Third Party other than (i) ARIAD or its sublicensee(s), themselves or through their agents, may provide a cross-reference to Bellicum Data reported to the FDA by Bellicum under any IND or corresponding foreign country filing to obtain Regulatory Approval for ARIAD Products using AP1903 in any country or may disclose Bellicum Data in a written submission to any such Regulatory Authority, in each case solely as required to obtain Regulatory Approval of a ARIAD Product using AP1903 outside the Licensed Field, but only after obtaining prior written permission from Bellicum to make such disclosure which is conditioned upon ARIAD or its sublicensee obtaining written assurances from the Regulatory Authorities to whom the information is being disclosed that such Bellicum Data will be afforded confidential treatment by such Regulatory Authority, and (ii) ARIAD or its sublicensee, upon prior written notice to Bellicum, may verbally disclose Bellicum Data in any teleconference or meeting with any Regulatory Authority, in each case solely as required to obtain Regulatory Approval of the ARIAD Products using AP1903 pursuant to the license granted in Section 2.2, but only after obtaining prior written permission from Bellicum which is conditioned upon affording appropriate Bellicum personnel the opportunity to participate in each such teleconference or meeting.

2.2.3 Reservation of Rights. As between the Parties, Bellicum shall retain ownership of or license rights to all right, title and interest in and to the Bellicum Patent Rights and Bellicum Technology, and no other license, either express or implied or by implication or estoppel, is granted hereunder with respect to any Technology or Patent Rights of Bellicum or its licensors except as expressly stated in this Section 2.2 and Bellicum reserves all rights in and to the same.

3. DEVELOPMENT AND COMMERCIALIZATION OF LICENSED PRODUCTS.

3.1 Commercialization.

3.1.1 Responsibility. From and after the Original Effective Date, Bellicum shall have full control and authority over the development and commercialization of Licensed Products in the Licensed Field in the Territory, including without limitation, (a) all pre-clinical development activities (including any pharmaceutical development work on formulations or process development relating to any Licensed Product), (b) all activities related to human clinical trials (including all clinical studies), (c) all activities relating to manufacture and supply of all Licensed Products (including all required process development and scale up work with respect thereto), (d) all marketing, promotion, sales, distribution, import and export activities relating to any Licensed Product, and (e) all activities relating to any regulatory filings, registrations, applications and Regulatory Approvals relating to any of the foregoing (including any INDs or foreign equivalents, any manufacturing facility validation and/or licensure, any Drug Approval Applications and any other Regulatory Approvals). Bellicum shall own all data, results and all other information arising from any such activities of Bellicum with respect to Licensed Products in the Licensed Field in the Territory under this Agreement, including without limitation, all regulatory filings, registrations, applications and Regulatory Approvals relating to Licensed Products (including any INDs or foreign equivalents, any Drug Approval Applications and any other Regulatory Approvals) (collectively, "**Bellicum Information**"), and all of the foregoing Bellicum Information shall be considered Confidential Information and Technology solely owned by Bellicum. Bellicum Information which is necessary or useful for the development, manufacture, use, sale, offer for sale or import of any Dimerizer, including any ARIAD Dimerizer or Non-ARIAD Dimerizer, or any ARIAD

Product, shall be included in Bellicum Technology and subject to the license granted to ARIAD in Section 2.2.1. All activities relating to development and commercialization of Licensed Products under this Agreement shall be undertaken at Bellicum's sole cost and expense, except as otherwise expressly provided in this Agreement.

3.2 Diligence. Bellicum will exercise commercially reasonable efforts and diligence in developing and commercializing at least one Licensed Product that is a cancer vaccine described in clause (a) of Section 1.45 and one Licensed Product that is a gene or a cell transfected with such gene coding for an Inducible Caspase described in clause (b) of Section 1.45 and in undertaking investigations and actions required to obtain Regulatory Approvals necessary to market such Licensed Products in the Licensed Field in the Territory, taking into account the competitiveness of the marketplace, the proprietary position of the Licensed Product, the relative potential safety and efficacy of the Licensed Product, the cost of goods and availability of capacity to manufacture and supply the Licensed Product at commercial scale, the profitability of the applicable Licensed Product, and other relevant factors including, without limitation, technical, legal, scientific or medical factors.

3.3 Updates and Reports.

3.3.1 Updates and Reports. Bellicum shall update Schedule B each time Bellicum or any Sublicensee determines to manufacture (or have manufactured) GLP or GMP Quality Licensed Product for use in GLP toxicology studies for any potential Licensed Product and shall furnish such updated Schedule B to ARIAD. Bellicum shall provide ARIAD with written reports no less frequently than […***…] during the Term summarizing Bellicum's efforts to develop and commercialize Licensed Products hereunder. Such reports shall include, at a minimum, information sufficient to enable […***…] to satisfy its reporting requirements to the United States Government, and shall contain a tabulation and key results of clinical trials, clinical plans, and summaries of the results of preclinical and clinical studies relating to Licensed Products for the then preceding half-year. Bellicum shall provide ARIAD with

at least […***…] prior written notice of the intended filing, prior to any public disclosure of such filing, by Bellicum or, to the extent Bellicum is aware, a Sublicensee with the FDA or any other Regulatory Authority of any IND or equivalent application with regard to any Licensed Product or any Drug Approval Application or the intended commencement by Bellicum of any clinical trial of any Licensed Product and will notify ARIAD of any such filing or commencement of a clinical trial within […***…] after such filing is made or such clinical trial is commenced. In addition, Bellicum shall provide ARIAD with prompt written notice of the occurrence of the First Commercial Sale of any Licensed Product in any country. In addition to such reports, Bellicum agrees (i) upon request by ARIAD, to provide ARIAD with copies of all documents submitted to, or received from, Regulatory Authorities, relating to Licensed Products, including without limitation, INDs and their foreign equivalent, and correspondence to and from Regulatory Authorities, and (ii) to provide ARIAD with Adverse Event information and product complaint information relating to Licensed Products as compiled and prepared by Bellicum in the normal course of business in connection with the development, commercialization or sale of any Licensed Product, within time frames consistent with reporting obligations under applicable laws and regulations. All reports, updates, Adverse Event, product complaint and other information provided by one party to the other Party under this Agreement (including under this Section 3), shall be considered Confidential Information of the Disclosing Party, subject to the terms of Section 5 hereof.

3.4 Manufacturing. Bellicum shall have the right to manufacture or have manufactured such quantities of any Dimerizer as it may require in order to develop and commercialize any Licensed Product pursuant to the terms of this Agreement. Bellicum will notify ARIAD in writing of its intent to manufacture (or have manufactured by a Third Party) any Dimerizer at least […***…] prior to commencement of manufacture by itself or through a Third Party. Upon ARIAD's request at any time, the Parties will negotiate in good faith a supply agreement under which ARIAD will provide […***…] rolling […***…] forecasts of its anticipated need

for such Dimerizer (of which an agreed number of months will be binding) provided that, under such supply agreement, either (a) Bellicum will use commercially reasonable efforts to supply all quantities of Dimerizer ordered by ARIAD and will supply such Dimerizer to ARIAD and ARIAD's licensees on at a price equal to fully burdened manufacturing costs plus […***…] percent ([…***…]%); or (b) if a Third Party manufactures such Dimerizer for Bellicum, then Bellicum shall (i) procure for ARIAD and its Affiliates and licensees the right to purchase such Dimerizers from the Third Party on terms no less favorable than those granted to Bellicum, giving ARIAD and its Affiliates and licensees equal priority with respect to quantity or lead time for delivery of such Dimerizers as given to Bellicum, its Affiliates and its Sublicensees, and (ii) grant to such Third Party all licenses to Patent Rights and Technology Controlled by Bellicum (without Bellicum incurring additional expense or obligations to Third Party licensors of Bellicum) as may be required in order for the Third Party to supply ARIAD and ARIAD's licensees with such Dimerizers. In addition, the supply agreement will provide that, if Bellicum or its Third Party manufacturer fails to supply Dimerizer as required thereby, Bellicum or its Third Party manufacturer will transfer to ARIAD or its designee all technology necessary to manufacture such Dimerizer and will grant all necessary licenses to ARIAD or its designee on a royalty fee basis.

3.5 Compliance With Law. Each Party shall comply with all applicable laws, rules, regulations and guidelines, including without limitation, rules and guidelines of all institutions at which any work relevant to this Agreement or Licensed Products is conducted and rules and guidelines of relevant professional societies, including without limitation the American Society of Gene Therapy.

4. PAYMENTS AND ROYALTIES

4.1 Payment of Royalties; Royalty Rates; Minimum Royalties

4.1.1 Initial Payment. In consideration of (i) the conversion of Bellicum's license for […***…] from a non-exclusive license to an exclusive license, and (ii) the inclusion of Cell Transplantation Indications as Primary Indications and the consequent

grant to Bellicum of an exclusive license for Cell Transplantation Indications, Bellicum agrees to pay to ARIAD the non-refundable amount of two hundred fifty thousand dollars ($250,000) within […***…].

4.1.2 Royalty Payments. In consideration of (i) the grant of the license by ARIAD under this Agreement, and (ii) the Licensed Technology and Orphan Drug Designation provided and/or transferred hereunder, and subject to the other terms of this Agreement (including the remainder of this Section 4), Bellicum shall pay to ARIAD royalty on annual Net Sales for such Licensed Product at the percentage rates as follows:

(a) subject to Section 4.1.2(b) and (c) below, commencing on the date of the First Commercial Sale of each Licensed Product in each country in the Territory and continuing until expiration of the Primary License Term with respect to such Licensed Product:

Annual Net Sales	ARIAD Dimerizer Products	Non-ARIAD Dimerizer Products
[…***…]MM	[…***…]%	[…***…]%
>$[…***…]MM	[…***…]%	[…***…]%

(b) if either (x) the only remaining Valid Claim with respect to such Licensed Product in a country is a claim in Patent Rights covering the […***…]-MTA Technologies and there is Competition or (y) all Valid Claims covering the composition of matter of such Licensed Product or any component thereof, or the use in the Licensed Field of such Licensed Product or any component thereof, in such country have expired but the Primary License Term with regard to such Licensed Product in such country has not expired and there is no Competition, then the following royalty rates shall instead apply until the end of the Primary

License Term with regard to such Licensed Product in such country:

Annual Net Sales	ARIAD Dimerizer Products	Non-ARIAD Dimerizer Products
[…***…]MM	[…***…]%	[…***…]%
>$[…***…]MM	[…***…]%	[…***…]%

(c) If all Valid Claims covering the composition of matter of such Licensed Product or any component thereof, or the use in the Licensed Field of such Licensed Product or any component thereof, in such country have expired but the Primary License Term with regard to such Licensed Product has not expired and there is Competition, then in consideration of the Licensed Technology and Orphan Drug Designation provided and/or transferred hereunder, the following royalty rates shall instead apply until the end of the Primary License Term with regard to such Licensed Product in such country:

Annual Net Sales	ARIAD Dimerizer Products	Non-ARIAD Dimerizer Products
[…***…]MM	[…***…] %	[…***…] %
>$[…***…]MM	[…***…] %	[…***…] %

Following expiration of the Primary License Term with regard to a Licensed Product in a country, Bellicum shall have a fully paid up, perpetual, irrevocable license under Section 2.1.1 with regard to such Licensed Product in such country.

4.1.3 Milestone Payments. Bellicum shall make the following milestone payments to ARIAD within […***…] after the occurrence of the following events:

Event	**Payment**
[…***…]	

[…***…]	$[…***…]
[…***…]	$[…***…]
[…***…]	$[…***…]

In the event of a […***…], the milestone payable upon the occurrence of […***…] shall be payable by Bellicum (x) upon commencement of […***…] or (y) upon commencement of […***…]; provided that the foregoing shall not apply to any […***…] of a Licensed Product commenced prior to the Effective Date.

In the event of a […***…], the milestone payable upon occurrence of commencement of the […***…] shall be payable by Bellicum upon commencement of […***…] and the milestone payable upon occurrence of commencement of […***…] shall be payable by Bellicum upon the later of (i) commencement of […***…], or (ii) the date (which may during or after such […***…]) when […***…].

4.1.4 Royalty Payments to Certain Third Parties. Any royalty payments owed and payable with respect to the Licensed Products to […***…] University pursuant to that certain […***…], by and between the […***…] and ARIAD Gene Therapeutics, Inc., as amended from time to time (the "[…***…] **Agreement**"), shall be the sole responsibility and obligation of ARIAD. All other royalty or other payments owed and payable with respect to the Licensed Products, including without limitation any royalty or other payments due to […***…], will be the sole responsibility and obligation of Bellicum.

4.1.5 Acknowledgement. Bellicum recognizes and acknowledges that each of the following, separately and together, has substantial economic benefit to Bellicum: (i) ARIAD's expertise concerning the discovery and understanding of Dimerizers and dimerization technology; (ii) the licenses granted to Bellicum hereunder with respect to Licensed Technology that is not within the claims of any Licensed Patent Rights; (iii) the licenses granted to Bellicum under Licensed Patent Rights; (iv) the Orphan Drug Designation transferred to Bellicum hereunder; and (v) the exclusivity, if any, which may be afforded to Bellicum by each of the foregoing. The Parties agree that the royalty rates set forth in Section 4.1.2 reflect a fair and reasonable blended allocation of the values provided by ARIAD to Bellicum, regardless of whether any particular Licensed Product utilizes any ARIAD Dimerizer or is covered by Licensed Patent Rights.

4.2. Payment Terms.

4.2.1 Payment of Royalties. Unless otherwise expressly provided, Bellicum shall make any license or royalty payments owed to ARIAD hereunder in arrears, within […***…] from the end of each quarter in which such payment accrues. For purposes of determining when a sale of any Licensed Product occurs under this Agreement, the sale shall be deemed to occur on the earlier of (a) […***…] or (b) on the date of […***…]. Each royalty payment shall be accompanied by a report for each country in the Territory in which sales of Licensed Products occurred in the calendar

quarter covered by such statement, specifying: the gross sales (if available) and Net Sales in each country's currency; the applicable royalty rate under this Agreement; the royalties payable, including an accounting of deductions taken in the calculation of Net Sales; the applicable exchange rate to convert from each country's currency to United States Dollars under this Section 4.2, if any; and the royalties payable in United States Dollars.

4.2.2 Overdue Payments. Subject to the other terms of this Agreement, any payments not paid within the time period set forth in this Section 4 shall bear interest at a rate of […***…] percent ([…***…]%) per […***…] from the due date until paid in full, provided that in no event shall said annual rate exceed the maximum interest rate permitted by law in regard to such payments. Such payment when made shall be accompanied by all interest so accrued. Said interest and the payment and acceptance thereof shall not negate or waive the right of ARIAD to any other remedy, legal or equitable, to which it may be entitled because of the delinquency of the payment.

4.2.3 Accounting. All payments hereunder shall be made by Bellicum in the United States in United States dollars. Conversion of foreign currency to United States dollars shall be made at the conversion rate existing in the United States (as reported in […***…]) on the last business day of the quarter immediately preceding the applicable calendar quarter. If […***…] ceases to be published, then the rate of exchange to be used shall be that reported in such other business publication of national circulation in the United States as the Parties reasonably agree.

4.2.4 Tax Withholding; Restrictions on Payment. All payments hereunder shall be made free and clear of any taxes, duties, levies, fees or charges, except for withholding taxes (to the extent applicable). Bellicum shall make any applicable withholding payments due on behalf of ARIAD and shall provide ARIAD with such written documentation regarding any such payment as available to Bellicum relating to an application by ARIAD for a foreign tax credit for such payment with the United States Internal Revenue Service.

4.3 Records Retention; Review.

4.3.1 Royalties. Commencing as of the date of First Commercial Sale of the first Licensed Product hereunder, Bellicum and its Affiliates and Sublicensees shall keep for at least […***…] from the end of the calendar year to which they pertain complete and accurate records of sales by Bellicum or its Affiliates and Sublicensees, as the case may be, of each Licensed Product, in sufficient detail to allow the accuracy of the payments hereunder to be confirmed.

4.3.2 Review. Subject to the other terms of this Section 4.3.2, at the request of ARIAD, which shall not be made more frequently than […***…] during the Term, upon at least […***…] prior written notice from ARIAD, and at the expense of ARIAD (except as otherwise provided herein), Bellicum shall permit an independent certified public accountant reasonably selected by ARIAD and reasonably acceptable to Bellicum to inspect (during regular business hours) the relevant records required to be maintained by Bellicum under this Section 4.3 (provided no records may be reviewed more than once under this Section 4.3.2). Results of any such review shall be binding on both Parties absent manifest error. ARIAD agrees to treat the results of any such accountant's review of records under this Section 4.3 as Confidential Information of Bellicum subject to the terms of Section 5. If any review reveals a deficiency in the calculation and/or payment of royalties by Bellicum, then (a) Bellicum shall promptly pay ARIAD the amount remaining to be paid, and (b) if such underpayment is by […***…] percent ([…***…]%) or more, Bellicum shall pay the reasonable out-of- pocket costs and expenses incurred by ARIAD in connection with the review. If any review reveals an overpayment of royalties by Bellicum, ARIAD shall promptly remit such overpaid amounts to Bellicum.

4.3.3 Other Parties. Bellicum shall include in any agreement with its Affiliates or Sublicensees terms requiring such party to retain records as required in this Section 4.3 and to permit ARIAD to inspect such records as required by this Section 4.3.

4.4 Initial Issuance of Common Stock. The Parties hereby acknowledge that in connection with the 2006 Agreement and pursuant to the Stock Purchase Agreement, dated July 25, 2006, between the Parties, Bellicum issued to ARIAD and ARIAD received 206,111 shares of Common Stock, which 206,111 shares of Common Stock constituted, after giving effect to such issuance, […***…] percent ([…***…]%) of Bellicum's Shares of Common Stock on a Fully Diluted Basis as of July 25, 2006.

5. TREATMENT OF CONFIDENTIAL INFORMATION

5.1 Confidential Obligations. The Mutual Non-Disclosure Agreement between the Parties dated October 16, 2004 (the "Confidentiality Agreement") shall apply to information provided under this Agreement. Each Party shall take such action, and shall cause its Affiliates or Sublicensees to take such action, to preserve the confidentiality of each other's Confidential Information as it would customarily take to preserve the confidentiality of its own Confidential Information, using, in all such circumstances, not less than reasonable care to prevent the Confidential Information of the other Party from being copied, used or disclosed to any Third Party without the other Party's prior written consent except for those Third Parties to whom disclosure of the Confidential Information is permitted pursuant to the terms of the Confidentiality Agreement. To the extent of any conflict between the provisions of this Article 5 and the Confidentiality Agreement, the provisions of this Article 5 shall control and pertain to all information provided under this Agreement and the Confidentiality Agreement, retroactive to October 16, 2004.

5.2 Limited Disclosure and Use. ARIAD and Bellicum each agree that any disclosure of the other Party's Confidential Information to any officer, employee, consultant or agent of the other Party or any of its Affiliates or Sublicensees shall be made only if and to the extent necessary to carry out its rights and responsibilities under this Agreement, shall be limited to the maximum extent possible consistent with such rights and responsibilities and shall only be made to the extent any such persons are bound by written confidentiality obligations to maintain the confidentiality thereof and not to use such Confidential Information except as expressly permitted by this Agreement. ARIAD and Bellicum each further agree not to disclose or transfer the other Party's Confidential Information to any Third Parties under any circumstance without the prior written approval from the other Party (such approval not to be unreasonably withheld), except as otherwise required by law, and except as otherwise expressly permitted by this Agreement. Each Party may disclose the Confidential Information of the other Party to any investors, prospective investors, lenders and other potential financing sources and Third Parties conducting due diligence in connection with any financing or acquisition transaction who are obligated to keep such information confidential. Each Party, upon the request of the other Party, will return all the Confidential Information disclosed or transferred to it by the other Party pursuant to this Agreement, including all copies and extracts of documents and all manifestations in whatever form, within […***…] of such request or, if earlier, the termination or expiration of this Agreement; provided however, that a Party may retain (a) any Confidential Information of the other Party relating to any license which expressly survives such termination and (b) one (1) copy of all other Confidential Information in inactive archives solely for the purpose of establishing the contents thereof.

5.3 Publicity. Neither Party may publicly disclose the existence or terms or any other matter of fact regarding this Agreement without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed; provided, however, that (a) either party may issue a press release upon execution hereof, (b) either Party may make such a disclosure (i) to the extent required by law or by the requirements of any nationally recognized securities exchange, quotation system or over-the-counter market on which such Party has its securities

listed or traded, and (ii) to any investors, prospective investors, lenders and other potential financing sources who are obligated to keep such information confidential, provided that in the event that such disclosure is required under clause (b)(i) of this Section 5.3, the disclosing Party shall provide the other Party with notice beforehand and, to the extent reasonably practical, coordinate with the other Party with respect to the wording and timing of any such disclosure, and (c) ARIAD may disclose the filing by Bellicum or a Sublicensee with the FDA or any other Regulatory Authority of any IND, NDA, BLA or equivalent application or the commencement by Bellicum or a Sublicensee of any clinical trial, provided that ARIAD may only disclose such filing or commencement by a Sublicensee (x) if (i) Bellicum or the Sublicensee makes prior public disclosure of such filing or commencement and (ii) ARIAD provides Bellicum with notice beforehand and, to the extent reasonably practical, coordinates with Bellicum with respect to the wording and timing of any such disclosure or (y) if the Sublicensee consents. If Bellicum or the Sublicensee does not intend to make prior public disclosure of such filing or commencement, Bellicum will so notify ARAIAD with the notice thereof pursuant to Section 3.2.1 and will use good faith efforts to obtain the consent of the Sublicensee for ARIAD to make such disclosure. Once any press release or any other written statement is approved for disclosure by both Parties, either Party may make subsequent public disclosure of the contents of such statement without the further approval of the other Party.

5.4 Use of Name. Neither Party shall employ or use the name of the other Party or the name of […***…], […***…], […***…] or […***…] in any promotional materials or advertising without the prior express written permission of the other party.

5.5 […*…]**. Notwithstanding anything to the contrary in this Agreement, ARIAD may disclose the terms of this Agreement and Bellicum's Confidential Information (including the terms of any Bellicum sublicense) to […***…] as reasonable and necessary required to fulfill its obligations under the […***…] Agreement.

6. PROVISIONS CONCERNING THE FILING, PROSECUTION AND MAINTENANCE OF PATENT RIGHTS

6.1 Patent Filing, Prosecution, Maintenance and Enforcement. ARIAD shall have the sole right, but not the obligation, to prepare, file, prosecute, obtain and maintain, and a first right to enforce, any Licensed Patent Rights (excluding all Patent Rights licensed to Bellicum by […***…] that cover any of the […***…]-ARIAD MTA Technologies). In the event that ARIAD elects not to enforce any of the Licensed Patent Rights, if the alleged infringement is in the Licensed Field with a product that comprises a cell transfected with both (but not limited to) a gene for an Antigen and one or more genes for Inducible Costimulatory Molecule(s) where the gene or genes for the Inducible Costimulatory Molecule(s) are activated using an ARIAD Dimerizer or a Non-ARIAD Dimerizer, Bellicum may do so at its sole expense; provided that, if the Licensed Patent Right alleged to be infringed is a patent other than a Licensed Patent Right covering any of the […***…]-ARIAD MTA Technologies, Bellicum may do so only with the advance written consent of ARIAD, which may be granted or withheld in ARIAD's sole discretion. Bellicum may recover, collect and keep any damages collected as a result of such enforcement by Bellicum. Bellicum shall have the sole right, but not the obligation, to prepare, file, prosecute, obtain, maintain and enforce any Bellicum Patent Rights, and as between Bellicum and ARIAD, Bellicum shall have the sole right to prepare, file, prosecute, obtain and maintain any Patent Rights licensed to Bellicum by […***…] that cover any of the […***…]-ARIAD MTA Technologies in accordance with the terms and conditions agreed upon between Bellicum and […***…]. Subject to any rights granted, at any time, by Bellicum to its Affiliates and/or Sublicensees, in the event that Bellicum elects not to enforce any of the Bellicum Patent Rights, ARIAD may do so only at its own expense and only with the advance written consent of Bellicum, which may be granted or withheld in Bellicum's sole discretion. ARIAD may recover, collect and keep any damages collected as a result of such enforcement by ARIAD.

To the extent Bellicum assumes enforcement of Licensed Patent Rights or ARIAD assumes enforcement of Bellicum Patent Rights under this Section 6, and later elects not to enforce such rights, such Party will notify the other Party in writing promptly upon such election not to so enforce, and in any event, at least […***…] prior to the deadline to submit any filing related thereto.

7. REPRESENTATIONS AND WARRANTIES

7.1 ARIAD Representations. ARIAD represents and warrants to Bellicum that:

(a) the execution and delivery of this Agreement and the performance of the transactions contemplated hereby have been duly authorized by all appropriate ARIAD corporate action and will not require the consent or approval of ARIAD's stockholders;

(b) this Agreement is a legal and valid obligation binding upon ARIAD and enforceable in accordance with its terms, and the execution, delivery and performance of this Agreement by the Parties does not conflict with any agreement, instrument or understanding to which ARIAD is a party or by which it is bound;

(c) ARIAD has the full right and legal capacity to grant the rights granted to Bellicum hereunder without violating the rights of any Third Party;

(d) ARIAD has provided a true and complete copy of the […***…] Agreement and each […***…] Agreement to Bellicum, and ARIAD is not in material default of the […***…] Agreement or any […***…] Agreement; and

(e) No royalty or other payment is due under any agreement between ARIAD and a Third Party, as a result of the license granted by ARIAD herein or the practice of the rights granted to Bellicum hereunder, other than any remuneration which may be due pursuant to the […***…] Agreement and the […***…] Agreements.

7.2 Bellicum Representations. Bellicum represents and warrants to ARIAD that:

(a) the execution and delivery of this Agreement and the performance of the transactions contemplated hereby have been duly authorized by all appropriate Bellicum corporate action and will not require the consent or approval of Bellicum's stockholders;

(b) this Agreement is a legal and valid obligation binding upon Bellicum and enforceable in accordance with its terms, and the execution, delivery and performance of this Agreement by the Parties does not conflict with any agreement, instrument or understanding to which Bellicum is a party of or by which it is bound;

(c) Bellicum has the full right and legal capacity to grant the rights granted to ARIAD hereunder without violating the rights of any Third Party; and

(d) No royalty or other payment is due under any agreement between Bellicum and a Third Party, as a result of the license granted by Bellicum herein or the practice of the rights granted to ARIAD hereunder; and

(e) To Bellicum's knowledge, after due investigation, […***…] is the owner of all of the Patent Rights listed in Schedule A under "Part II: For […***…]-ARIAD MTA Technologies", except for rights to the patents and patent applications entitled "induced activation in dendritic cells" in said Part II of Schedule A, which were partially released to the inventors and licensed to Bellicum by the inventors by license agreement dated as of […***…]. As of the Effective Date, Bellicum (i) has not filed any patent application, (ii) has no internal patent disclosures or similar documents, and (iii) has no license from […***…], except for license agreements dated as of […***…] and […***…], that in each case relates to any product or other discovery or invention conceived or reduced to practice using any proprietary materials provided under any […***…] Agreement, including without limitation, […***…] and any other Dimerizer or […***…] Analog, regardless of whether the quantities of such proprietary materials actually used were manufactured by ARIAD, Bellicum or […***…].

7.3 No Warranties.

7.3.1 Nothing in this Agreement is or shall be construed as:

(a) a warranty or representation by either Party as to the validity or scope of any patent application or patent licensed hereunder;

(b) a warranty or representation that anything made, used, sold or otherwise disposed of under any license granted pursuant to this Agreement is or will be free from infringement of patents, copyrights, and other rights of third parties;

(c) a warranty or representation by ARIAD that any information, trade secrets or Technology provided by ARIAD to Bellicum under any license granted pursuant to this Agreement is sufficient to practice the Licensed Patent Rights granted hereunder.

(d) any warranty or representation regarding (i) an obligation of ARIAD or […***…] to bring or prosecute actions or suits against Third Parties for infringement; (ii) granting by implication, estoppel or otherwise any licenses or rights under patents or other rights of […***…] or […***…] or other persons other than the […***…] IP, regardless of whether such patents or other rights are dominant or subordinate to any Licensed Patent Right.

7.3.2 EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OF NON-INFRINGEMENT OF ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER RIGHTS OF THIRD PARTIES, OR ANY OTHER IMPLIED WARRANTIES.

8. INDEMNIFICATION

8.1 Indemnification.

8.1.1 Bellicum Indemnity. Bellicum shall indemnify, defend and hold harmless ARIAD, […***…], […***…], and their respective Affiliates, directors, officers, employees, stockholders and agents, the inventors identified in the […***…] License Agreement, and each of their respective successors, heirs and assigns, its Affiliates and their respective directors, officers, employees, stockholders and agents, and their respective successors, heirs and assigns (the "**ARIAD Indemnitees**") from and against any liability, damage, loss or expense (including reasonable attorneys' fees and expenses of litigation) (collectively, "**Losses**") incurred by or imposed upon such ARIAD Indemnitees, or any of them, in connection with any Third Party claims, suits, actions, demands or judgments, including, without limitation, personal injury and product liability matters, to the extent arising out of (a) the development, testing, production, manufacture, supply, promotion, import, sale or use by any person of any Licensed Product (or any component thereof) manufactured or sold by Bellicum or any Affiliate or Sublicensee under this Agreement, or (b) gross negligence or willful misconduct on the part of Bellicum or any of its Affiliates or Sublicensees, except to the extent that such Losses are attributable to the breach by ARIAD of any of its representations, warranties or covenants set forth in this Agreement or the gross negligence or willful misconduct of an ARIAD Indemnitee.

8.1.2 **ARIAD Indemnity.** Subject to Section 8.1.1 above, ARIAD shall indemnify, defend and hold harmless Bellicum, its Affiliates and Sublicensees and their respective directors, officers, employees, and agents, and their respective successors, heirs and assigns (the "**Bellicum Indemnitees**"), from and against any Losses incurred by or imposed upon such Bellicum Indemnitees, or any of them, in connection with any Third Party claims, suits, actions, demands or judgments, including, without limitation, personal injury and product liability matters, to the extent arising out of (a) the development, testing, production, manufacture, supply,

promotion, import, sale or use by any person of any ARIAD Product (or any component thereof) manufactured or sold by ARIAD or any Affiliate or ARIAD sublicensee under this Agreement, or (b) gross negligence or willful misconduct on the part of ARIAD or any of its Affiliates or sublicensees, except to the extent that such Losses are attributable to the breach by Bellicum of any of its representations, warranties or covenants set forth in this Agreement or the gross negligence or willful misconduct of a Bellicum Indemnitee.

8.2 Indemnification Procedures. In the event that any ARIAD Indemnitee or Bellicum Indemnitee (each, an "**Indemnitee**") is seeking indemnification under Section 8.1 above from a Party (the "**Indemnifying Party**"), the Indemnitee shall notify the Indemnifying Party of such claim with respect to such Indemnitee as soon as reasonably practicable after the Indemnitee receives notice of the claim, and the Indemnitee shall permit the Indemnifying Party to assume direction and control of the defense of the claim (including the right to settle the claim solely for monetary consideration) and shall cooperate as reasonably requested (at the expense of the Indemnifying Party) in the defense of the claim. The indemnification obligations under Article 8 shall not apply to any harm suffered as a direct result of any delay in notice to the Indemnifying Party hereunder or to amounts paid in settlement of any claim, demand, action or other proceeding if such settlement is effected without the consent of the Indemnifying Party, which consent shall not be withheld or delayed unreasonably. The Indemnitee, its employees and agents, shall reasonably cooperate with the Indemnifying Party and its legal representatives in the investigation of any claim, demand, action or other proceeding covered by Section 8.1.

8.3 Limitation of Liability. Except for liability to a Third Party under Section 8.1, NEITHER PARTY NOR ITS AFFILIATES OR LICENSORS SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES ARISING OUT OF THIS AGREEMENT, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY.

9. TERM AND TERMINATION

9.1 Term; Expiration. The term of this Agreement shall commence upon the Effective Date and shall expire upon the expiration of the last Primary License Term, unless terminated as set forth herein (the "Term").

9.2 Termination Rights for Breach.

9.2.1 Termination for Breach. Subject to the other terms of this Agreement, this Agreement and the rights and options granted herein may be terminated by either Party upon any material breach by the other Party of any material obligation or condition, effective thirty (30) days after giving written notice to the breaching Party of such termination in the case of a payment breach and ninety (90) days after giving written notice to the breaching Party of such termination in the case of any other breach, which notice shall describe such breach in reasonable detail. The foregoing notwithstanding, if such default or breach is cured or remedied or shown to be non-existent within the aforesaid thirty (30) or ninety (90) day period, the notice shall be automatically withdrawn and of no effect.

9.2.2 Voluntary Termination. Bellicum shall have the right to terminate this Agreement at any time after two (2) years from the Effective Date in the event that Bellicum determines not to develop or commercialize any Licensed Product.

9.2.3 Termination for Bankruptcy. In the event that either Party files for protection under bankruptcy laws, makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over its property, files a petition under any bankruptcy or insolvency act or has any such petition filed against it which is not discharged within sixty (60) days of the filing thereof, then the other Party may terminate this Agreement effective immediately upon written notice to such Party.

9.3 Effects of Termination. Upon any termination of this Agreement by ARIAD or Bellicum under Section 9.2.1 or by Bellicum pursuant to Section 9.2.2, as of the effective date of such termination all relevant licenses and sublicenses granted by ARIAD to Bellicum shall terminate automatically. Upon any termination of this Agreement by ARIAD or Bellicum under Section 9.2.1 or by Bellicum pursuant to Section 9.2.2, subject to applicable statutes, laws, regulations, ordinances and guidelines governing the transfer of the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903, Bellicum will transfer, assign and convey all its ownership of and any beneficial interest in the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903 to ARIAD, effective as of the date of termination, and within ten (10) days of such termination, ARIAD and Bellicum shall each submit the required information to the FDA and any other relevant Regulatory Authority to effect the change of the named sponsor of the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903 from Bellicum to ARIAD in accordance with the applicable statutes, laws, regulations, ordinances and guidelines, and Bellicum shall transfer a complete copy of the Orphan Drug Designation and any similar designation in any jurisdiction of orphan drug status for AP1903, including any amendments or supplements thereto, and correspondence relating thereto, to ARIAD. No termination of this Agreement shall affect ARIAD's rights pursuant to the Investor Rights Agreement, dated as of July 25, 2006, as amended, except as stated therein. Notwithstanding the foregoing, and subject at all times to the provisions of the […***…] Agreement with respect to the […***…] IP to the extent a license under such […***…] IP is granted to Bellicum under this Agreement, (a) no such termination of this Agreement shall be construed as a termination of any valid sublicense of any Sublicensee hereunder, and thereafter each such Sublicensee shall be considered a direct licensee of ARIAD, provided that (i) such Sublicensee is then in full compliance with all terms and conditions of its sublicense, (ii) all accrued payments obligations of such Sublicensee to ARIAD have been paid, and (iii) such Sublicensee agrees in writing to assume all applicable obligations of Bellicum under this Agreement arising thereafter to the extent

of the scope of the sublicense, and (b) Bellicum and its Affiliates and Sublicensees shall have the right, for six (6) months or such longer time period (if any) on which the Parties mutually agree in writing, to sell or otherwise dispose of all Licensed Products then on hand, with royalties to be paid to ARIAD on all Net Sales of such Licensed Products as provided for in this Agreement.

9.4 Remedies. Except as otherwise expressly set forth in this Agreement, the termination provisions of this Article 9 are in addition to any other relief and remedies available to either Party at law.

9.5 Surviving Provisions. Notwithstanding any provision herein to the contrary, the rights and obligations of the Parties set forth in Sections 1, 2.1.8, 2.1.9, 2.2.1, 2.2.2, 2.2.3, 4.1.2 (last sentence and with respect to events occurring before termination or sales after termination permitted by Section 9.3), 4.1.4, 4.3.1 (for the period stated therein), 4.3.2, 4.3.3, 5, 6, 7, 8, 9.3, 9.4, 9.5, 10 and 11, as well as any rights or obligations otherwise accrued hereunder (including any accrued payment obligations), shall survive the expiration or termination of the Term. Without limiting the generality of the foregoing, Bellicum shall have no obligation to make any milestone or royalty payment to ARIAD that has not accrued prior to the effective date of any termination of this Agreement, but shall remain liable for all such payment obligations accruing prior to the effective date of such termination.

10. DISPUTES

10.1 Negotiation. The Parties recognize that a bona fide dispute as to certain matters may from time to time arise during the Term that relates to either Party's rights and/or obligations hereunder. In the event of the occurrence of such a dispute, either Party may, by written notice to the other Party, have such dispute referred to their respective senior officials designated below or their successors, for attempted resolution by good faith negotiations within […***…] after such notice is received. Said designated senior officials are as follows:

For Bellicum: Chief Executive Officer

For ARIAD: Chief Executive Officer

In the event the designated senior officials are not able to resolve such dispute within the […***…] period, either Party may invoke the provisions of Section 10.2.

10.2 Arbitration. Subject to Section 10.1, any dispute, controversy or claim initiated by either Party arising out of, resulting from or relating to this Agreement, or the performance by either Party of its obligations under this Agreement (other than bona fide Third Party actions or proceedings filed or instituted in an action or proceeding by a Third Party against a Party), whether before or after termination of this Agreement, shall be finally resolved by binding arbitration. Whenever a Party shall decide to institute arbitration proceedings, it shall give written notice to that effect to the other Party. Any such arbitration shall be conducted under the Commercial Arbitration Rules of the American Arbitration Association by a panel of three arbitrators appointed in accordance with such rules. Any such arbitration shall be held in Boston, Massachusetts. The method and manner of discovery in any such arbitration proceeding shall be governed by the laws of the State of New York. The arbitrators shall have the authority to grant injunctions and/or specific performance and to allocate between the parties the costs of arbitration in such equitable manner as they determine. Judgment upon the award so rendered may be entered in any court having jurisdiction or application may be made to such court for judicial acceptance of any award and an order of enforcement, as the case may be. In no event shall a demand for arbitration be made after the date when institution of a legal or equitable proceeding based upon such claim, dispute or other matter in question would be barred by the applicable statute of limitations. Notwithstanding the foregoing, either Party shall have the right, without waiving any right or remedy available to such Party under this Agreement or otherwise, to seek and obtain from any court of competent jurisdiction any interim or provisional relief that is necessary or desirable to protect the rights or property of such Party, pending the selection of the arbitrators hereunder or pending the arbitrators' determination of any dispute, controversy or claim hereunder.

11. MISCELLANEOUS

11.1 Insurance.

11.1.1 To the extent and for so long as any […***…] IP is licensed to Bellicum under Section 2.1.1 and as required by the […***…] Agreement, Bellicum shall comply with the terms of this Section 11.1.1. Bellicum shall comply, through insurance written by reputable and financially secure insurance carriers, with all statutory workers' compensation and employers' liability requirements covering any and all employees with respect to its activities performed under this Agreement. In addition to the foregoing, Bellicum shall maintain Comprehensive General Liability Insurance, including Products Liability Insurance, covering Bellicum's indemnification obligations hereunder, with reputable and financially secure insurance carrier(s) to cover the activities of Bellicum, its Affiliates and Sublicensees. Such insurance shall provide minimum limits of liability considered to be standard for Bellicum's industry prior to human clinical trials. Commencing with human clinical trials of a Licensed Products, Bellicum shall maintain such insurance with minimum limits of liability of […***…] dollars ($[…***…]) per occurrence and […***…] dollars ($[…***…]) in aggregate and shall include ARIAD and […***…], […***…], […***…], […***…] and their respective trustees, directors, officers, employees, students, and agents as additional insureds. Such insurance shall be written to cover claims incurred, discovered, manifested, or made during and after the Term. At ARIAD's request, Bellicum shall furnish a Certificate of Insurance evidencing primary coverage and requiring […***…] prior written notice of cancellation or material change to ARIAD. Bellicum shall advise ARIAD, in writing, that it maintains excess liability coverage (following form) over primary insurance for at least the minimum limits set forth above. All such insurance of Bellicum shall be primary coverage; insurance of the above additional insureds shall be excess and noncontributory. ARIAD acknowledges

that the insurance specified in this Section 11.1.1 may be or become unavailable or unavailable on commercially practicable terms. In such event, ARIAD agrees to discuss with Bellicum commercially reasonable alternatives. Each Party shall carry appropriate insurance covering such Party's indemnification obligations under this Agreement, through insurance written by reputable and financially secure insurance carriers.

11.2 Notification. All notices, requests and other communications hereunder shall be in writing, shall be addressed to the receiving party's address set forth below or to such other address as a party may designate by notice hereunder, and shall be either (i) delivered by hand, (ii) made by facsimile transmission (to be followed with written fax confirmation), (iii) sent by private courier service providing evidence of receipt, or (iv) sent by registered or certified mail, return receipt requested, postage prepaid. The addresses and other contact information for the parties are as follows:

If to ARIAD: ARIAD Pharmaceuticals, Inc.
26 Landsdowne Street
Cambridge, MA 02139
Attn: Chief Executive Officer

With a copy to: Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
One Financial Center
Boston, MA 02111
Attn: Jeffrey M. Wiesen, Esq.

If to Bellicum: Bellicum Pharmaceuticals, Inc.
6400 Fannin St., Suite 2300
Houston, TX 77030
Attn: Chief Executive Officer

With a copy to: Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
Attn: L. Kay Chandler, Esq.

All notices, requests and other communications hereunder shall be deemed to have been given either (i) if by hand, at the time of the delivery thereof to the receiving party at the address of such party set forth above, (ii) if made by telecopy or facsimile transmission, at the time that receipt thereof has been acknowledged by the recipient, (iii) if sent by private courier, on the day such notice is delivered to the recipient, or (iv) if sent by registered or certified mail, on the fifth (5th) business day following the day such mailing is made.

11.3 Language. This Agreement has been prepared in the English language and the English language shall control its interpretation.

11.4 Governing Law. This Agreement will be construed, interpreted and applied in accordance with the laws of the State of New York (excluding its body of law controlling conflicts of law).

11.5 Limitations. Except as expressly set forth in this Agreement, neither Party grants to the other Party any right or license to any of its intellectual property.

11.6 Entire Agreement. This Agreement, together with the Confidentiality Agreement, constitute the entire agreement between the Parties with respect to the subject matter hereof and supersede all prior representations, understandings and agreements between the Parties with respect to the subject matter hereof. ARIAD and Bellicum agree that the 2006 Agreement is amended and restated in its entirety as set forth in this Agreement as of the Effective Date and that the 2006 Agreement was in effect from the Original Effective Date until the Effective Date. No modification shall be effective unless in writing with specific reference to this Agreement and signed by the Parties.

11.7 Waiver. The terms or conditions of this Agreement may be waived only by a written instrument executed by the Party waiving compliance. The failure of either Party at any time or times to require performance of any provision hereof shall in no manner affect its rights at a later time to enforce the same. No waiver by either Party of any condition or term shall be deemed as a continuing waiver of such condition or term or of another condition or term.

11.8 Headings. Section and subsection headings are inserted for convenience of reference only and do not form part of this Agreement.

11.9 Assignment. Neither this Agreement nor any right or obligation hereunder may be assigned, delegated or otherwise transferred, in whole or part, by either Party without the prior express written consent of the other; provided, however, that either Party may, without the written consent of the other, assign this Agreement and its rights and delegate its obligations or sublicense its rights hereunder to its Affiliates, or in connection with the transfer or sale of all or substantially all of such Party's assets or business related to this Agreement, or in the event of its merger, consolidation, change in control or similar transaction. In the event of such transaction, however, intellectual property rights of the acquiring party in such transaction (if other than one of the Parties to this Agreement) shall not be included in the technology licensed hereunder. Any permitted assignee shall assume all obligations of its assignor under this Agreement. Any purported assignment in violation of this Section 11.9 shall be void. The terms and conditions of this Agreement shall be binding upon and inure to the benefit of the permitted successors and assigns of the parties.

11.10 Force Majeure. Neither Party shall be liable for failure of or delay in performing obligations set forth in this Agreement, and neither shall be deemed in breach of its obligations, if such failure or delay is due to natural disasters or any causes beyond the reasonable control of such Party. In event of such force majeure, the Party affected thereby shall use reasonable efforts to cure or overcome the same and resume performance of its obligations hereunder.

11.11 Construction. The Parties hereto acknowledge and agree that: (i) each Party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (ii) the rule of construction to the effect that any ambiguities are resolved against the drafting Party shall not be employed in the interpretation of this Agreement; and (iii) the terms and provisions of this Agreement shall be construed fairly as to all Parties hereto and not in favor of or against any Party, regardless of which Party was generally responsible for the preparation of this Agreement.

11.12 Severability. If any provision(s) of this Agreement are or become invalid, are ruled illegal by any court of competent jurisdiction or are deemed unenforceable under then current applicable law from time to time in effect during the Term hereof, it is the intention of the Parties that the remainder of this Agreement shall not be affected thereby provided that a Party's rights under this Agreement are not materially affected. The Parties hereto covenant and agree to renegotiate any such term, covenant or application thereof in good faith in order to provide a reasonably acceptable alternative to the term, covenant or condition of this Agreement or the application thereof that is invalid, illegal or unenforceable, it being the intent of the Parties that the basic purposes of this Agreement are to be effectuated.

11.13 Status. Nothing in this Agreement is intended or shall be deemed to constitute a partner, agency, employer-employee, or joint venture relationship between the Parties.

11.14 Section 365(n). All licenses granted under this Agreement are deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code, licenses of right to "intellectual property" as defined in Section 101 of such Code. The Parties agree that Bellicum may fully exercise all of its rights and elections under the U.S. Bankruptcy Code, regardless of whether either Party files for bankruptcy in the United States or other jurisdiction. The Parties further agree that, in the event Bellicum elects to retain its rights as a licensee under such Code, Bellicum shall be entitled to complete access to any technology licensed to it hereunder and all embodiments of such technology. Such embodiments of the technology shall be delivered to the Bellicum not later than:

(a) the commencement of bankruptcy proceedings against the licensor, upon written request, unless the licensor elects to perform its obligations under the Agreement, or

(b) if not delivered under Section 11.14(a) above, upon the rejection of this Agreement by or on behalf of Bellicum, upon written request.

11.15 Export Compliance. Each Party, and its Affiliates and sublicensees shall comply with all United States laws and regulations controlling the export of certain commodities and technical data, including without limitation all Export Administration Regulations of the United States Department of Commerce. Among other things, these laws and regulations prohibit or require a license for the export of certain types of commodities and technical data to specified countries. Bellicum hereby gives written assurance that it will comply with, and will cause its Affiliates and Sublicensees to comply with, all United States export control laws and regulations, that it bears sole responsibility for any violation of such laws and regulations by itself or its Affiliates or Sublicensees, and that it will indemnify, defend, and hold ARIAD harmless (in accordance with Section 8) for the consequences of any such violation.

11.16 Further Assurances. Each Party agrees to execute, acknowledge and deliver such further instructions, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

11.17 Counterparts. This Agreement may be executed simultaneously in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representative in two (2) originals.

Bellicum Pharmaceuticals, Inc.	**ARIA Pharmaceuticals, Inc.**
By: /s/ Thomas J. Farrell	By: /s/ Harvey J. Berger, M.D.
Thomas J. Farrell	Harvey J. Berger, M.D.
Title: Chief Executive Officer	Chairman and Chief Executive Officer

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Schedule B

Licensed Products

1. BPX-101 (formerly BP-GMAX-CD1)
2. CaspaCIDe Donor Lymphocyte Infusion

Exhibit 10.2

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY […*…], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM IF PUBLICLY DISCLOSED.**

OMNIBUS AMENDMENT AGREEMENT

THIS OMNIBUS AMENDMENT AGREEMENT ("**Agreement**") is entered into and made effective as of October 3, 2014 (the "**Effective Date**") by and between **ARIAD PHARMACEUTICALS, INC.,** a Delaware corporation with its principal place of business at 26 Landsdowne Street, Cambridge, MA 02139 ("**ARIAD**"), and **BELLICUM PHARMACEUTICALS, INC.,** a Delaware corporation with a place of business at 2130 Holcombe Boulevard, Suite 850, Houston, TX 77030 ("**Bellicum**"). ARIAD and Bellicum may be referred to herein individually as a "**Party**" and collectively as "**Parties.**"

WHEREAS, the Parties previously executed the following agreements: an Amended and Restated License Agreement, dated March 7, 2011 (the "**License Agreement**"); an Investor Rights Agreement, dated July 25, 2006, as amended on March 25, 2009 (the "**IRA**"); and a Stock Purchase Agreement, dated July 25, 2006 (the "**SPA**") (collectively, these three agreements are referred to herein as the "**Current Agreements**"); and

WHEREAS, the Parties wish to restructure and amend the Current Agreements in accordance with the terms and conditions set forth herein, it being understood that certain provisions in the License Agreement are not being amended but may no longer be applicable.

NOW THEREFORE, in consideration of the foregoing premises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, agree as follows:

1. DEFINED TERMS.

1.1 Any capitalized term used but not defined herein shall have the meaning ascribed to it under the Current Agreements.

2. PROMISSORY NOTE.

2.1 Payments by Bellicum. Bellicum will pay ARIAD Fifty Million US dollars ($50,000,000) in up to three installments pursuant to this Agreement and a promissory note that will be executed by the Parties contemporaneously with this Agreement (the "**Note**").

(a) The first payment by Bellicum, in the amount of Fifteen Million US dollars ($15,000,000); the "**First Payment**") shall be delivered to ARIAD on the Effective Date following execution of this Agreement.

(b) The second payment by Bellicum, in the amount of Twenty Million US dollars ($20,000,000; the "**Second Payment**"), is due on June 30, 2015.

(c) The third payment by Bellicum, in the amount of Fifteen Million US dollars ($15,000,000; the "**Third Payment**"), is due on June 30, 2016.

(d) Although specific due dates are recited in subsections (b) and (c) of this Section 2.1, Bellicum may prepay the Second Payment and/or the Third Payment at any time following the First Payment and prior to the applicable due date.

2.2 Bellicum's Other Obligations; Termination of the Note; Termination of this Agreement. Bellicum's obligations for the Second Payment and the Third Payment under the Note are absolute and unconditional, and such obligations of Bellicum are not affected by the expiration or termination of the Current Agreements (or any of them) and/or this Agreement, for any reason other than the termination of both the License Agreement by Bellicum in accordance with Section 9.2 of the License Agreement and this Agreement by Bellicum in accordance with the penultimate sentence of this Section 2.2 for an uncured material breach by ARIAD of at least one of the specific provisions of the License Agreement as listed and described in **Exhibit B** (attached hereto and incorporated herein; each a "**Section 2.2 Material Breach**"), wherein each such Section 2.2 Material Breach, if

uncured, would constitute grounds for termination of the License Agreement by Bellicum under Section 9.2 of the License Agreement. In the event of an uncured Section 2.2 Material Breach, the Note will terminate upon delivery of written notice of termination by Bellicum to ARIAD referencing this Section 2.2, and thereafter the Note will have no further force or effect. In addition to automatic termination of this Agreement as set forth in Section 3.2(d) hereof, each of Bellicum and ARIAD, as applicable, has the right to terminate this Agreement solely in the event such Party terminates the License Agreement in accordance with Section 9.2.1 of the License Agreement based on an uncured material breach of the License Agreement by the other Party that would constitute grounds for termination under Section 9.2 of the License Agreement. For clarity, in the event of termination in accordance with Section 9.2.1 of the License Agreement, Section 9.3 of the License Agreement (as amended hereby) shall apply.

3. AMENDMENTS TO THE CURRENT AGREEMENTS.

3.1 Upon First Payment. From and after the date of ARIAD's receipt of the First Payment on the Effective Date:

(a) Each of the defined terms Dimerizer, Licensed Field, Licensed Patent Rights, Licensed Product and [...***...] Analog, as set forth in the License Agreement, is hereby deleted and replaced in its entirety with the following, corresponding new defined terms:

"**Dimerizer**" shall mean any molecule that induces the interaction or proximity of two or more proteins, modified to contain a dimerizer-binding domain, resulting in the activation of specific signaling, gene transcription, or protein secretion events in cultured cells, whole animals or humans.

"**Licensed Field**" shall mean the treatment or prevention of the progression or occurrence of any disease, disorder or condition in humans, other than a treatment or prevention achieved through an administration within the Excluded Field.

"**Licensed Patent Rights**" shall mean (a) all Patent Rights Controlled by ARIAD as of the Original Effective Date or during the Primary License Term, which are necessary or useful for the development, manufacture, use, sale, offer for sale or import of Licensed Products or of Dimerizers used or incorporated in Licensed Products, including without limitation Patent Rights covering the [...***...]-ARIAD MTA Technologies and (b) all Patent Rights whether or not controlled by ARIAD that are listed on Schedule A1 ("**Homodimerizer Patent Rights**") and Schedule

A2 ("**Heterodimerizer Patent Rights**"), attached hereto and made a part hereof, regardless of the ownership of such Patent Rights. Schedule A3 sets forth Patent Rights under the [...***...]-ARIAD MTA Technologies. Schedules A1, A2 and A3 shall be updated, as necessary, from time to time by ARIAD by written notice to Bellicum.

"**Licensed Product**" shall mean any prophylactic or therapeutic product the manufacture, sale, import, administration, activation or other use of which is covered by a claim of any Licensed Patent Rights or by Licensed Technology (including, without limitation, Patent Rights licensed or assigned to Bellicum that cover any of the [...***...]-ARIAD MTA Technologies), and that (a) contains proteins or genes encoding proteins, the interaction or proximity of which proteins is induced by a Homodimerizer; (b) is a Homodimerizer for use with a product described in clause (a); or (c) is a treatment regimen or process utilizing any product described in clause (a) or (b). The definition of Licensed Product expressly includes those products that are within the definition of Licensed Product on or prior to the effective date of the Omnibus Amendment. For clarity, the term "Licensed Product," as amended by the Omnibus Amendment, shall have the foregoing meaning until such time as the Third Payment (as defined in the Omnibus Amendment) has been made pursuant to the terms of the Omnibus Amendment, and the term "Licensed Product" shall have the meaning set forth in Section 3.3(a) of the Omnibus Amendment after the Third Payment has been made pursuant to the terms of the Omnibus Amendment.

"**[...***...] Analog**" shall mean a compound similar to [...***...] in [...***...].

and each of the following new defined terms (Academic MTA, Excluded Field, Heterodimerizer, Homodimerizer, Human Gene Therapy, MTA Technology and Omnibus Amendment) is hereby inserted into Section 1 of the License Agreement in the appropriate alphabetical location:

"**Academic MTA**" shall mean a material transfer agreement pursuant to which ARIAD provided a dimerizer or one or more genetic constructs encoding a dimerizer binding protein to a researcher at an academic institution or at a not-for-profit entity.

"**Excluded Field**" shall mean (1) Human Gene Therapy and (2) regulation of the expression of proteins or other macromolecules [...***...].

"**Heterodimerizer**" shall mean a Dimerizer that contains two structurally and functionally distinct binding motifs, and that induces the interaction or proximity of proteins containing structurally and functionally different dimerizer-binding domains. By way of non-limiting example, [...***...] Analogs are Heterodimerizers.

"**Homodimerizer**" shall mean a Dimerizer that contains two structurally and functionally identical binding motifs, and that induces the interaction or proximity of proteins containing functionally identical dimerizer-binding domains. By way of non-limiting example, [...***...] is a Homodimerizer.

"**Human Gene Therapy**" shall mean the in vivo administration of genetic material directly into a human being using viral vectors, including but not limited to AAV Vectors, to transfer such material into the patient's own cells for the purpose of producing proteins or other macromolecules that are expressed in or secreted from the transduced cells for therapeutic or prophylactic purposes, where (i) the expression of such proteins or other macromolecules is regulated through the administration of [...***...] or another [...***...] Dimerizer, or (ii) the inserted genetic material is not regulated through the administration of a Dimerizer. For clarity, "**Human Gene Therapy**" shall not include (a) any use where genetic material is inserted into a cell ex vivo, including without limitation any use for a cancer or non-cancer vaccine or immunotherapeutic product or (b) any use where activation of genetic material for any function other than expression is regulated through the administration of Dimerizer.

"**MTA Technology**" shall mean Homodimerizer and Heterodimerizer technology and related intellectual property rights related to Licensed Products in the Licensed Field which have been licensed or otherwise conveyed to ARIAD under an Academic MTA and which ARIAD has the right to sublicense or otherwise convey to Bellicum hereunder.

"**Omnibus Amendment**" shall mean the Omnibus Amendment Agreement, dated October 3, 2014, executed by the Parties.

(b) Section 2.1.1 of the License Agreement is hereby deleted and replaced with the following:

Grant of License. From and after the effective date of the Omnibus Amendment, ARIAD hereby grants to Bellicum an exclusive (even as to ARIAD), fully-paid, irrevocable (unless this Agreement is terminated in accordance with the terms of the Omnibus Amendment) license, including the right to grant sublicenses in accordance with Section 2.1.4, under the Licensed Patent Rights and Licensed Technology and ARIAD's interest in any Improvements, subject at all times to the restrictions and obligations under the [...***...] Agreement with respect to the [...***...] IP, (a) to research, develop, test, obtain Regulatory Approval for, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export and have exported Licensed Products (including, without limitation, any Dimerizer included or utilized therein) in the Territory, for any and all uses within the Licensed Field during the Term, subject to the terms and conditions of this Agreement, and (b) to research, develop, test, make, have made, use, import and export, in each case solely for research purposes, including pre-clinical IND-enabling toxicology and other pre-clinical studies (but not to conduct clinical

trials with respect to or to obtain Regulatory Approval for, sell or commercialize), a product that uses or incorporates a Heterodimerizer in the Licensed Field. For clarity, from and after the Effective Date, the term "**Licensed Technology**" includes MTA Technology relevant to Homodimerizers in the Licensed Field. From and after the effective date of the Omnibus Amendment, the term "**Licensed Technology**" includes MTA Technology relevant to Heterodimerizers in the Licensed Field.

(c) Section 2.1.4 of the License Agreement is hereby deleted and replaced with the following:

> Right to Sublicense and Subcontract. Bellicum shall have the right to grant sublicenses to any Affiliate and/or Sublicensee to all or any portion of its rights under the license granted pursuant to Section 2.1.1; provided, however, that (a) such sublicense under the license granted pursuant to Section 2.1.1 shall be granted in connection with a license to all Patent Rights and Technology Controlled by Bellicum, which are necessary or useful in the manufacture, use or sale of the Licensed Product(s) covered by the sublicense, (b) no sublicense may include a right to further sublicense any [...***...] IP unless [...***...] has provided prior written consent to Bellicum and ARIAD allowing such further sublicense (and, if requested by Bellicum, ARIAD will assist Bellicum in obtaining such consent from [...***...]), and all such sublicenses of [...***...] IP shall be subject and subordinate to, and consistent with, the terms and conditions of the [...***...] Agreement with respect to sublicenses of [...***...] IP, (c) ARIAD shall be notified of the grant of a sublicense to any and all potential sublicenses, (d) any and all sublicenses shall be subject to, and consistent with, the terms and conditions of this Agreement, (e) upon termination of this Agreement, any such sublicense shall be considered a fully-paid, direct license from ARIAD, as provided in Section 9.3 as amended hereby, and (f) Bellicum shall provide ARIAD with a copy of each such sublicense agreement (from which Bellicum may redact confidential terms that are not necessary to disclose to ARIAD for purposes of confirming compliance with this Agreement and the [...***...] Agreement) within thirty (30) days of execution. In addition, Bellicum shall have the right to subcontract with any Third Party, including [...***...], to have such Third Party perform work on Bellicum's behalf pursuant to the license granted pursuant to Section 2.1.1 on terms which are subject to, and consistent with, the terms and conditions of this Agreement. ARIAD acknowledges and agrees that, after the effective date of the Omnibus Amendment, Bellicum has no obligation to ARIAD to collect payments from its current or future sublicensees in respect of any sublicense of the rights granted to Bellicum under this Agreement.

(d) Section 2.1.2 is hereby deleted from the License Agreement and replaced with the words "This section intentionally omitted." All other provisions of Section 2.1 of the License Agreement (Sections 2.1.3 and 2.1.5 through 2.1.9) remain unchanged and in full force and effect.

(e) Bellicum's obligation to develop and commercialize certain Licensed Products in the Licensed Field, as set forth in Section 3.2 of the License Agreement, will continue until ARIAD's parallel obligation to [...***...] terminates upon the expiry of the patents as set forth in the agreement between ARIAD and [...***...]. Upon the date of termination of such parallel obligation of ARIAD, all of Bellicum's obligations under Section 3.2 of the License Agreement are automatically terminated.

(f) Section 3.4 of the License Agreement is amended by adding the following sentence at the end thereof: "For clarity, ARIAD retains the right to manufacture or have manufactured any Dimerizer other than [...***...] for use outside the Licensed Field, and to grant licenses to Third Parties to do so, subject to ARIAD's compliance with Section 2.2.1(a)."

(g) All other provisions of Article 3 of the License Agreement (Sections 3.1, 3.3 and 3.5) remain unchanged and in full force and effect.

(h) With the exception of Section 4.1.4 (which continues in full force and effect), Sections 4.1 through 4.3 of the License Agreement have no further force and effect and are deleted from the License Agreement. Each such deleted section is hereby replaced with the words: "This section intentionally omitted."

(i) Under Section 6.1 of the License Agreement, ARIAD will continue to have the sole right, but not the obligation, to prepare, file, prosecute, obtain and maintain the Licensed Patent Rights, other than the Licensed Patent Rights covering the [...***...]-ARIAD MTA Technologies, which are currently being prepared, filed, prosecuted, obtained and maintained by Bellicum pursuant to ARIAD's delegation of such responsibility to Bellicum. ARIAD will give good faith consideration to Bellicum's requests and input regarding such activities in connection with the Licensed Patent Rights, and will not discontinue such activities or materially diminish the scope of claims within any Licensed Patent Rights without prior written notice to Bellicum and good faith consideration of Bellicum's interests and comments. If ARIAD wishes to discontinue payments for maintenance of any patent within the Licensed Patent Rights, ARIAD hereby grants to Bellicum the right to make such maintenance payments for such patent. Notwithstanding anything to the contrary in Section 6.1 of the License Agreement, the following will apply from and after the Effective Date: In relation to Section 6.1 of the License Agreement, ARIAD will continue to have the first right to enforce any Licensed Patent Rights, provided, however that (1) if ARIAD elects not to enforce any of the Licensed Patent Rights owned by ARIAD against alleged infringement by the manufacture, use, sale or import by a Third Party(ies) (as defined in the License Agreement) of a product within the definition of "**Licensed Product**" in the Licensed Field, Bellicum may do so at its sole expense without any further consent required from ARIAD; and (2) if ARIAD elects not to enforce any of the Licensed Patent Rights licensed by ARIAD from a Third Party(ies) against alleged infringement by the manufacture, use, sale or import by a Third Party(ies) of a product within the definition of "**Licensed Product**" in the Licensed Field, then to the full extent that ARIAD may do so under its license agreement with such Third Party(ies), but subject to any right of such Third Party(ies) to enforce such Licensed Patent Rights, ARIAD will delegate to Bellicum the right to enforce such Licensed Patent Rights at Bellicum's sole expense; provided that, if such consent is required under any license agreement from a Third Party(ies), ARIAD will use good faith efforts to obtain consent to delegate such enforcement right to Bellicum; and further provided that, if the Third

Party licensor agrees that ARIAD may enforce such Licensed Patent Rights on behalf of Bellicum, but will not consent to delegation of such enforcement right to Bellicum, then ARIAD will exercise its enforcement right on behalf of Bellicum, at Bellicum's direction and expense. In addition, any filing, prosecution and/or maintenance rights, and any enforcement rights, that ARIAD possesses under an Academic MTA shall be treated in the same manner as Licensed Patent Rights described in Section 6.1 of the License Agreement (as modified by this Section 3.1(i)).

(j) Section 9.3 of the License Agreement is hereby amended by deleting clause (a) (ii) thereof and by deleting from clause (b) the words "with royalties to be paid to ARIAD on all Net Sales of such Licensed Products as provided for in this Agreement."

(k) ARIAD will not sell, transfer, pledge or otherwise dispose of any shares of Bellicum Common Stock, unless (i) Bellicum has completed a registered public offering of its Common Stock (an "**IPO**") at any time and has not made the Second Payment by October 31, 2015 (including applicable interest commencing July 1, 2015 as set forth in Section 3.2(b) of this Agreement); or (ii) each of the License Agreement and this Agreement has been terminated.

(l) ARIAD will not modify the [...***...] Agreement or the [...***...] Agreement in any manner, and will not take or fail to take any actions that would diminish Bellicum's rights or increase Bellicum's obligations under those agreements. Notwithstanding anything to the contrary in the License Agreement, ARIAD will be solely responsible for paying, and shall pay, any and all royalties, milestone payments and other payments owed under the [...***...] Agreement as a result of Net Sales or milestone achievements by Bellicum, its Affiliates or Sublicensees. If the [...***...] Agreement is terminated (as described in Section 2.1.9 of the License Agreement), ARIAD will remain responsible for making any payments to [...***...] that are owed as a result of Bellicum's activities as a direct licensee of [...***...].

(m) Bellicum recognizes that ARIAD has executed numerous Academic MTAs, pursuant to many of which ARIAD has obtained certain non-exclusive rights which may be useful to Bellicum in the practice of the licenses granted to Bellicum under the License Agreement (as amended by this Agreement). ARIAD has provided to Bellicum before the Effective Date a listing of such Academic MTAs which ARIAD believes (but does not represent) is complete. To the extent necessary and permitted by any Academic MTA, ARIAD consents to Bellicum contacting the researcher or his or her institution or entity under such Academic MTA to discuss or seek rights to the intellectual property rights resulting from the research conducted thereunder. Subject to any confidentiality obligation under any Academic MTA, ARIAD will notify Bellicum in writing of the existence of patents and patent applications relevant to the research, development, testing, manufacture, use, sale or import of Licensed Products in the Licensed Field, and disclosed to ARIAD in connection with such Academic MTAs. If ARIAD has a right to negotiate for any option or license rights to such patents and patent applications, then at Bellicum's written request, ARIAD will reasonably cooperate with Bellicum to seek to obtain a right for Bellicum to negotiate for such option or license rights to such patents and patent applications; provided that if ARIAD has a right to convey such option or license rights to another party, but is unable to obtain such negotiation right for Bellicum after good faith efforts, then if the other party to the Academic MTA agrees that ARIAD may negotiate such option of license rights on behalf of Bellicum, but will not consent to delegation of such negotiation right

to Bellicum, ARIAD will cooperate with Bellicum in negotiating such option or license rights on behalf of Bellicum, and convey to Bellicum the negotiated rights, all at Bellicum's sole expense. If Bellicum believes that a researcher, or his or her institution or entity, is not complying with his/her Academic MTA, ARIAD and Bellicum will cooperate to ensure that such researcher is in compliance.

3.2 Upon Second Payment. From and after the date of ARIAD's receipt of the Second Payment (together with any applicable interest payable pursuant to subsection (b) below) ("**Second Payment Date**"):

(a) ARIAD will surrender to Bellicum all shares of Bellicum Common Stock held by ARIAD as of the Second Payment Date, provided that the Second Payment Date is no later than December 31, 2015, and concurrently with such surrender of shares, each of the SPA and IRA will terminate and have no further force or effect (unless the SPA and/or the IRA has/have previously terminated in accordance with its/their respective terms).

(b) If the Second Payment is not delivered by Bellicum on or before June 30, 2015, then, from July 1, 2015 until such time as the Second Payment, plus interest from July 1, 2015 (at the rate of ten percent (10%) per annum or the maximum rate allowed by applicable law, if lower), is paid in full: (i) ARIAD will not surrender the Bellicum Common Stock held by ARIAD; (ii) each of the SPA and IRA will continue in full force and effect, unless terminated upon an IPO in accordance with their respective terms; (iii) under Section 2.1.4 of the License Agreement, any right of Bellicum to grant sublicenses without ARIAD's consent will be suspended until the Second Payment is delivered; (iv) Bellicum shall pay ARIAD, from an escrow account held by an independent third party to be established at the time of the first receipt of Cash Consideration (defined below) to provide funds for such payment, (A) on July 1, 2015, fifty percent (50%) of any cash consideration received by Bellicum under sublicense agreements and directly related contemporaneous agreements executed by Bellicum with such sublicensees ("**Cash Consideration**") subsequent to August 22, 2014 and prior to July 1, 2015; provided that the following are expressly excluded from such Cash Consideration described in this Section 3.2(b) and in Section 3.3(b) below: amounts received by Bellicum (1) in arrears and based on reported expenditures of time and materials for the performance of bona fide product development work or research work, (2) for equity (including, convertible equity, such as warrants and convertible debt) at fair market value, and (3) in arrears and based on reported expenditures for patent expenses incurred by Bellicum; and (B) one hundred percent (100%) of any milestone payments that would have been owed by Bellicum to ARIAD under the License Agreement as it existed prior to the Effective Date, if the corresponding milestone event is achieved subsequent to the Effective Date of this Agreement and prior to the Second Payment Date.

(c) For avoidance of doubt, Bellicum's failure to deliver the Second Payment on or before June 30, 2015 does not give ARIAD the right to terminate the License Agreement in response to such failure.

(d) If the Second Payment is not delivered by Bellicum on or before June 30, 2016, ARIAD will have the right, in its sole discretion, to terminate the License Agreement in its entirety upon delivery to Bellicum of written notice of termination that makes reference to this Section 3.2(d). In the event of such termination, this Agreement shall be terminated automatically. For clarity, termination of this Agreement pursuant to this Section 3.2(d) shall not terminate the Note, which shall continue in full force and effect.

3.3 Upon Third Payment. From and after the date of ARIAD's receipt of the Third Payment (together with any applicable interest payable pursuant to subsection (b) below) ("**Third Payment Date**"):

(a) If the Third Payment is delivered by Bellicum on or before June 30, 2016, the defined term Licensed Product will be further amended and expanded in scope to the extent permitted by ARIAD's pre-existing obligations and agreements, as follows:

> "**Licensed Product**" shall mean any prophylactic or therapeutic product the manufacture, sale, import, administration, activation or other use of which is covered by a claim of any Licensed Patent Rights or by Licensed Technology (including, without limitation, Patent Rights licensed or assigned to Bellicum that cover any of the [...***...]-ARIAD MTA Technologies) and that (a) contains proteins or genes encoding proteins, the interaction or proximity of which proteins is induced by either a Homodimerizer or a Heterodimerizer; (b) is a Homodimerizer or Heterodimerizer for use with a product described in clause (a); or (c) is a treatment regimen or process utilizing any product described in clause (a) or (b). For clarity, this definition of Licensed Product expressly includes those products that are within the definition of Licensed Product as of the effective date of the Omnibus Amendment.

(b) If the Third Payment is not delivered by Bellicum on or before June 30, 2016, then from July 1, 2016 until such time as the Third Payment, plus interest from July 1, 2016 (at the rate of ten percent (10%) per annum or the maximum rate allowed by applicable law, if lower), is paid in full: (i) under Section 2.1.4 of the License Agreement, any right of Bellicum to grant sublicenses without ARIAD's consent will be suspended until the Third Payment is delivered; (ii) Bellicum shall pay ARIAD, from an escrow account to be established to provide funds for such payment, (A) on July 1, 2016, fifty percent (50%) of any Cash Consideration received by Bellicum subsequent to the date of the Second Payment and prior to July 1, 2016 (excluding amounts paid to ARIAD pursuant to Section 3.2(b)(iv)(A) above), and (B) one hundred percent (100%) of any milestone payments that would have been owed by Bellicum to ARIAD under the License Agreement as it existed prior to the effective date of the Omnibus Amendment, if the corresponding milestone event is achieved subsequent to the Second Payment Date and prior to the Third Payment Date (excluding amounts paid to ARIAD pursuant to Section 3.2(b)(iv)(B) above).

(c) During any period in which the Second Payment or the Third Payment, as applicable, remains unpaid past its due date, fifty percent (50%) of any funds raised by Bellicum in any private equity or debt financing for capital raising purposes (i.e., not including bank line-of-credit or equipment financings) ("**Raised Capital**") will be applied against such past due, unpaid amount. If all of the Second Payment and Third Payment have not been delivered by Bellicum on or before June 30, 2017, ARIAD will have the right, in its sole discretion, to terminate the License Agreement, upon delivery to Bellicum of written notice of termination that makes reference to this Section 3.3(c). In the event of such termination, this Agreement shall be terminated automatically.

(d) Bellicum shall maintain and keep, until the Third Payment has been delivered to ARIAD, complete and accurate records of (i) all Cash Consideration received by Bellicum as set forth in Sections 3.2(b)(iv)(A) and 3.3(b)(ii)(A), (ii) all Raised Capital as set forth in Section 3.3(c) and (iii) achievement of milestone events as set forth in Sections 3.2(b)(iv)(B) and 3.3(b)(ii)(B). Subject to the other terms of this Section 3.3(d), at the request of ARIAD, which request shall not be made more than once per calendar year during the Term, then upon at least thirty (30) days' prior written notice from ARIAD, and at the expense of ARIAD (except as otherwise provided herein), Bellicum shall permit an independent certified public accountant reasonably selected by ARIAD and reasonably acceptable to Bellicum to inspect (during regular business hours) the relevant records required to be maintained by Bellicum under this Section 3.3(d) (provided no records may be reviewed more than once under this Section 3.3(d)). Results of such inspection shall be binding on both Parties absent manifest error. ARIAD shall treat the results of any such accountant's review of records under this Section 3.3(d) as Confidential Information of Bellicum subject to the terms of Section 5.1 of the License Agreement. If any such inspection reveals a deficiency in the calculation of amounts deposited in the escrow account and/or payment by Bellicum required by Section 3.2(b)(iv) or 3.3(b)(ii), then Bellicum shall promptly add such deficiency to the escrow account or pay ARIAD the amount remaining to be paid.

4. BELLICUM COMPANY SALE AND PUBLIC OFFERINGS.

4.1 Payment Due Date Modification in the Event of Company Sale or Certain Registered Public Offerings. In the event of a Company Sale (as defined in the SPA) of Bellicum, any remaining balance of the Second Payment and the Third Payment that has not been paid shall become due and payable at the closing of the Company Sale. In the event Bellicum raises (a) Seventy-Five Million US dollars ($75,000,000) or more in one or more registered public offerings (a "**Public Offering**") on or before March 31, 2015, or (b) One Hundred Million US dollars ($100,000,000) or more in one or more Public Offerings subsequent to March 31, 2015, then, the Third Payment will become due and payable on the date that is the earlier of (x) nine (9) months after the closing of the Public Offering that brings the aggregate proceeds received by Bellicum (before expenses, discounts and commissions and other deductions from the gross amount of the Public Offering ("**Gross Proceeds**")) to at least $75 million or $100 million, as applicable; or (y) in the event of a Public Offering resulting in aggregate Gross Proceeds received by Bellicum of at least $100 Million, December 31, 2015. Notwithstanding the foregoing, if Bellicum completes an IPO and a secondary Public Offering that alone or together raise aggregate Gross Proceeds of at least One Hundred Twenty-Five Million US dollars ($125,000,000), the Third Payment shall become due and payable within five (5) days of the closing of the IPO or secondary Public Offering that results in aggregate Gross Proceeds received by Bellicum of at least One Hundred Twenty-Five Million US dollars ($125,000,000). In no event shall the Third Payment be due later than June 30, 2016.

5. CONSTRUCTION OF AGREEMENT.

5.1 Entire Agreement. (a) This Agreement shall be effective for all purposes as of the Effective Date. To the extent that there are any inconsistencies between the express provisions of this Agreement and any of the Current Agreements, the terms of this Agreement shall supersede those set forth in the Current Agreements. Except as expressly modified by this Agreement, each of the Current Agreements shall remain in full force and effect in accordance with its terms. As of the Effective Date, the term "Agreement" as used in the Current Agreements shall mean the Current Agreements as amended by this Agreement. (b) This Agreement, together with the Current Agreements, as amended hereby, constitutes the entire agreement between the Parties with respect to the subject matter of the Current Agreements and this Agreement. No modification shall be effective unless in writing with specific reference to this Agreement and signed by the Parties. (c) The terms of this Agreement are hereby deemed confidential information of each Party, and this confidential information shall be treated in the same manner under this Agreement as "Confidential Information" is treated under the License Agreement; provided, however, that subject to the following sentence, the Parties intend to issue a joint press release upon full execution of this Agreement, and thereafter either Party may issue a press release upon delivery of the Second Payment and the Third Payment, and in the event of termination of this Agreement. Each Party shall provide any proposed press release in connection with this Agreement, the Second Payment or the Third Payment to the other Party at least five (5) days prior to issuing such proposed press release, and shall give good faith consideration to comments from the other Party.

5.2 Disputes. In the event of the occurrence of a dispute as to either Party's rights and/or obligations hereunder, the resolution of the dispute will be governed by Article 10 of the License Agreement.

5.3 Governing Law. This Agreement will be construed, interpreted and applied in accordance with the laws of the State of New York (excluding its body of law controlling conflicts of law).

5.4 Counterparts. This Agreement may be executed in any number of counterparts by original, facsimile or PDF signature, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument, binding on the Parties notwithstanding that each of the Parties may have signed different counterparts.

5.5 Waiver. The terms or conditions of this Agreement may be waived only by a written instrument executed by Bellicum and ARIAD. The failure of either Party at any time or times to require performance of any provision hereof shall in no manner affect its rights at a later time to enforce the same. No waiver by either Party of any condition or term shall be deemed as a continuing waiver of such condition or term or of another condition or term.

5.6 Assignment. Neither this Agreement nor any right or obligation hereunder may be assigned, delegated or otherwise transferred, in whole or part, by either Party without the prior written consent of the other Party; provided, however, that either Party may, without the written consent of the other, assign this Agreement and its rights and delegate its obligations to its Affiliates or in connection with the transfer or sale of all or substantially all of such Party's

assets or business related to this Agreement, or in the event of its merger, consolidation, change in control or similar transaction. Any permitted assignee shall assume all obligations of its assignor under this Agreement. Any purported assignment in violation of this Section 5.5 shall be void. The terms and conditions of this Agreement shall be binding upon and inure to the benefit of the permitted successors and assigns of the Parties.

6. HEDGING TRANSACTIONS.

6.1 Until such time as all payments due hereunder or under the Note have been made by Bellicum to ARIAD, Bellicum will not engage in any Hedging Transaction with Comerica Bank, any affiliate of Comerica Bank, or any successor in interest to the rights of Comerica Bank under the Subordination Agreement dated October 3, 2014 by and among Comerica Bank, ARIAD and Bellicum. As used herein, "Hedging Transaction" means any interest rate swap transaction, basis swap transaction, forward rate transaction, equity transaction, equity index transaction, foreign exchange transaction, cap transaction, floor transaction (including any option with respect to any of these transactions and any combination of any of the foregoing).

Signature page follows.

IN WITNESS WHEREOF, the Parties hereto have caused their duly authorized representatives to execute this Omnibus Amendment Agreement as of the Effective Date.

Ariad Pharmaceuticals, Inc.	**Bellicum Pharmaceuticals, Inc.**
/s/ Hugh M. Cole	/s/ Thomas J. Farrell
(signature)	(signature)
By: Hugh M. Cole	By: Thomas J. Farrell
(print or type name)	(print or type name)
Title: Chief Business Officer	Title: President and CEO
Date: October 3, 2014	Date: October 3, 2014

Schedule A1

Homodimerizer Patent Rights

Technologies Other Than [...***...]-ARIAD MTA Technologies

Title	Country	Serial No.	Patent No.
[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
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	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]
[...***...]	[...***...]	[...***...]	
	[...***...]	[...***...]	

Schedule A2

Heterodimerizer Patent Rights

Technologies Other Than [...***...]-ARIAD MTA Technologies

Title	Country	Serial No.	Patent No.	Issued
[...***...]	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
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	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
	[...***...]	[...***...]	[...***...]	[...***...]
[...***...]	[...***...]	[...***...]		

Schedule A3

[...***...]-ARIAD MTA Technologies

Country	Publication No.	Serial No.	Title	Patent No.
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]		[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	
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[...***...]	[...***...]	[...***...]	[...***...]	
[...***...]	[...***...]	[...***...]	[...***...]	[...***...]
[...***...]		[...***...]	[...***...]	

Exhibit B

Section 2.2 Material Breaches

Section 2.1.1 — any act or omission by ARIAD that is inconsistent with, or that materially adversely affects, the rights and licenses granted to Bellicum as set forth in Section 2.1.1;

Section 2.1.3(a) – any act by ARIAD that is inconsistent with the prohibitions imposed on ARIAD pursuant to Section 2.1.3(a), including, but not limited to, any such act that materially adversely changes any such prohibition, or that to any extent releases ARIAD from any such prohibition;

Section 2.1.4 — any act or omission by ARIAD that is inconsistent with, or that materially adversely affects, Bellicum's right to grant sublicenses and to subcontract with Third Parties, as set forth in Section 2.1.4, including, but not limited to, any act or omission whereby ARIAD fails to take steps to assist Bellicum in obtaining consent from [...***...], as set forth in clause (b) of Section 2.1.4;

Section 2.1.5 – any willful or intentional material breach of ARIAD's obligation to disclose all Licensed Patent Rights and Licensed Technology as set forth in Section 2.1.5;

Section 2.1.6 – any act or omission by ARIAD that materially adversely affects Bellicum's right to receive, or Bellicum's receipt of, ARIAD Regulatory Information as set forth in Section 2.1.6;

Section 2.2.1(a) – any act by ARIAD that constitutes a material breach of Section 2.2.1(a) solely due to (i) the practice by ARIAD of any Bellicum Patent Rights, Bellicum Technology or Bellicum's interest in any Improvements, or (ii) the grant by ARIAD to a Third Party of a sublicense to practice Bellicum Patent Rights, Bellicum Technology and or Bellicum's interest in any Improvements, in either case (i) or (ii) to develop, make, have made, use, have used, sell, offer for sale, have sold, import, have imported, export or have exported ARIAD Products in the Licensed Field;

Section 4.1.4 – any willful or intentional material breach of ARIAD's royalty payment obligation set forth in the first sentence of Section 4.1.4;

Sections 5.1, 5.2 and 5.3 – any material breach of ARIAD's confidentiality obligations owed to Bellicum that materially adversely affects the Licensed Patent Rights licensed to Bellicum by ARIAD; and

Section 6 — any act or omission by ARIAD that constitutes a material breach of ARIAD's obligations under Section 6.1, and where such material breach materially adversely affects the Licensed Patent Rights licensed to Bellicum by ARIAD

Exhibit 10.3

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY […*…], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM IF PUBLICLY DISCLOSED.**

Exclusive License Agreement

BAYLOR COLLEGE OF MEDICINE
BELLICUM PHARMACEUTICALS, INC.

RE: 1. **OTA # 01.085**, entitled "Induced CD40 Activation in Dendritic Cell-based Prostate Cancer Vaccines." Developers: David M. Spencer, Kevin M. Slawin, Brent A. Hanks.

2. **BLG # 08-024**, entitled, "Development of an Improved, Inducible CD-40 — "iCD40 Turbo." Developer: David M. Spencer.

This Exclusive License Agreement (hereinafter called "Agreement"), to be effective as of the day of March, 2008 (hereinafter called "Agreement Date"), is by and between Baylor College of Medicine (hereinafter called "BAYLOR"), a Texas nonprofit corporation having its principal place of business at One Baylor Plaza, Houston, Texas 77030, and Bellicum Pharmaceuticals, Inc., a corporation organized under the laws of Delaware and having a principal place of business at Twelve Greenway Plaza, Suite 1380, Houston, TX 77046, and its Affiliates (hereinafter, collectively referred to as "BELLICUM"),

WITNESSETH:

WHEREAS, BAYLOR, by virtue of its relationship with its faculty, staff and students and conveyances with the Developers (as defined below) and under and pursuant to the terms and provisions of its Policy on Inventions and Patents, is the owner of certain right, title and interest in and to the Subject Technology and Patent Rights (as defined below); and

WHEREAS, BAYLOR granted certain rights in the Subject Technology and Patent Rights to David M. Spencer, Kevin M. Slawin and Brent A. Hanks by the written release dated February 11, 2004 and by the Assignment from BAYLOR to assignees David M. Spencer, Kevin M. Slawin and Brent A. Hanks, dated April 6, 2004; and

WHEREAS, BAYLOR granted certain rights in the Subject Technology and Patent Rights to [...***...] under the terms of the Material Transfer Agreement between Baylor College of Medicine and [...***...], dated [...***...]; and

WHEREAS, BAYLOR is willing to grant a worldwide, exclusive license to all of the right, title and interest owned by BAYLOR as of the Agreement Date in the Subject Technology and Patent Rights to BELLICUM on the terms set forth herein; and

NOW, THEREFORE, for and in consideration of the foregoing and rights and obligations hereafter, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto expressly agree as follows:

1. DEFINITIONS AS USED HEREIN

1.1 "Affiliates" shall mean any corporation, partnership, joint venture or other entity of which the common stock or other equity ownership thereof is 50% or more owned by BELLICUM.

1.2 "Common Stock" shall have the meaning given in Paragraph 4.1.

1.3 "Confidential Information" shall mean any proprietary and secret ideas, proprietary technical information, know-how and proprietary commercial information or other similar proprietary information. Neither Party shall have an obligation of confidentiality with respect to Confidential Information that:

(i) at the time of its disclosure or thereafter is disclosed in a publicly available document through no fault of the receiving Party;

(ii) at the time of its disclosure is, or thereafter becomes without fault of the receiving Party, part of the public domain;

(iii) was in the possession of the receiving Party prior to disclosure by the disclosing Party hereunder and was not acquired directly or indirectly from any third party under obligation of confidentiality to the disclosing Party;

(iv) subsequent to its disclosure, is obtained from a third party not subject to a contractual or fiduciary obligation for confidentiality to the disclosing Party; or

(v) is required by court or governmental order, law or regulation to be disclosed.

1.4 "Developers" shall mean David M. Spencer, employee of BAYLOR, and Kevin M. Slawin and Brent A. Hanks, past employees of BAYLOR.

1.5 "Legal Costs" shall mean all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses related to prosecuting, obtaining and maintaining patent protection on the Patent Rights in the United States and foreign countries.

1.6 "Licensed Method(s)" will mean any method the practice of which would constitute, but for the license granted to BELLICUM under this Agreement, an infringement of any Valid Claim of the Patent Rights.

1.7 “Licensed Product(s)” will mean any product that the manufacture, use or sale of which would constitute, but for the license granted to BELLICUM under this Agreement, an infringement of any Valid Claim of the Patent Rights.

1.8 ‘Party” shall mean either BELLICUM or BAYLOR, and the “Parties” shall mean BELLICUM and BAYLOR.

1.9 “Patent Rights” shall mean all right, title and interest owned by BAYLOR as of the Agreement Date in patent applications filed before, on or after the Agreement Date, that pertain to the Subject Technology, including without limitation United States Patent Application No. 10/781,384 (entitled “Induced Activation in Dendritic Cells,” filed 02/18/2004), European Patent Application No. 4712328.9, and Canadian Patent Application No. 2,516,320, the inventions described and claimed therein, and all other pending United States or foreign patent applications or parts thereof and any United States or foreign patent which issues from any such patent applications, and any and all divisions, reissues, re-examinations, renewals, continuations, continuations-in-part to the extent the claims are directed to subject matter specifically described in the aforementioned patent applications, and extensions thereof, and all other counterpart, pending or issued patents in all other countries.

1.10 “Subject Technology” shall mean and include all right, title and interest owned by BAYLOR as of the Agreement Date in any technology, biological materials, methods, documents, materials, tests, know-how and all confidential information existing as of the Agreement Date pertaining to the following technology disclosures (as listed in Appendix A):

1. **OTA # 01-085**, entitled “Induced Activation in Dendritic Cell-based Prostate Cancer Vaccines.” Developers: David M. Spencer, Kevin M. Slawin, Brent A. Hanks.

2. **BLG # 08-024**, entitled, “Development of an Improved, Inducible CD-40 — “iCD40 Turbo,” Developer: David M. Spencer.

1.11 “Valid Claim” means a claim of an issued unexpired patent within the Patent Rights that has not been held unenforceable, unpatentable or invalid by a final decision of a court of competent jurisdiction or by a final decision of a patent office, and that has not been admitted to be invalid or unenforceable through reissue, disclaimer or otherwise.

2. GRANT OF LICENSE

2.1 **Grant**. Subject to the reservations of rights set forth in Paragraph 2.2, BAYLOR hereby grants to BELLICUM, and BELLICUM hereby accepts, an exclusive, worldwide, sublicensable, fully paid-up license under the Patent Rights and Subject Technology, to make, have made, use, import, export, distribute, research, develop, obtain regulatory approval, manufacture, have manufactured, offer for sale and sell Licensed Products and Licensed Methods.

2.2 **Restrictions**. The grant in Paragraph 2.1 shall be further subject to, restricted by and non-exclusive with respect to:

(i) the making or use of the Subject Technology and Patent Rights by BAYLOR for non-commercial research, patient care, teaching and other educationally related purposes;

(ii) any non-exclusive license of the Subject Technology and/or Patent Rights that BAYLOR grants to other academic or research institutions for non-commercial research purposes; and

(iii) any non exclusive license of the Subject Technology and/or Patent Rights that BAYLOR is required by law or regulation to grant to the United States of America or to a foreign state pursuant to an existing or future treaty with the United States of America; and

(iv) the non-exclusive, worldwide, paid-up license granted to [...***...] under the terms of the [...***...] between Baylor College of Medicine and [...***...], dated [...***...].

The grant in Paragraph 2.1 also is subject to BAYLOR'S grant of certain rights in the Subject Technology and Patent Rights to David M. Spencer, Kevin M. Slawin and Brent A. Hanks by the written release dated February 11, 2004 and by the Assignment from BAYLOR to assignees David M. Spencer, Kevin M. Slawin and Brent A. Hanks, dated April 6, 2004.

2.3 **Government Reservation**. Rights under this Agreement are subject to rights required to be granted to the Government of the United States of America pursuant to 35 USC Section 200-212, including a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject inventions throughout the world.

3. PAYMENTS

3.1 **Common Stock**. As full consideration for the rights conveyed by BAYLOR under this Agreement, BELLICUM shall issue to BAYLOR forty-thousand (40,000) shares of its common stock, $0.01 par value (the "Common Stock"), within sixty (60) days after the Agreement Date. Such Common Stock shall be distributed as per Appendix A.

3.2 **Legal Costs**. BELLICUM will be responsible for payment of all Legal Costs incurred after the Agreement Date, which BELLICUM will pay directly to each legal service provider on invoices for such legal costs received by BELLICUM.

4. REPORTING

4.1 **Annual Reports**. BELLICUM shall provide to BAYLOR a summary commercialization plan of research for each Licensed Product and Licensed Method in clinical development [...***...] days after the commencement of clinical development of the first Licensed Product, and it will provide an activity report to BAYLOR on [...***...]. Information in the summary commercialization plan and the activity reports is Confidential Information of BELLICUM.

4.2 **Notification of Merger**. In the event of acquisition, merger, change of corporate name, or change of make-up, organization, or identity, BELLICUM shall notify BAYLOR in writing within [...***...] days of such event.

5. TRANSFER OF SUBJECT TECHNOLOGY

Upon receipt of the Common Stock described in Paragraph 3.1, BAYLOR shall, upon written request by BELLICUM, provide BELLICUM with reasonable quantities of the Subject Technology. The Subject Technology shall be sent to such address and using such shipping method as may be specified by BELLICUM in the request.

6. SUBLICENSES

All sublicenses granted by BELLICUM of its rights hereunder shall be subject to the terms of this Agreement. BELLICUM shall be responsible for its sublicensees and shall not grant any rights which are inconsistent with the rights granted to and obligations of BELLICUM hereunder. Should BELLICUM become aware of an act or omission of a sublicensee that would be a material breach of this Agreement, BELLICUM shall use reasonable business efforts to cause the sublicensee to cure the breach. No such sublicense agreement shall contain a provision that illegally extends the term of Patent Rights under this Agreement. BELLICUM shall give BAYLOR prompt notification of the identity and address of each sublicensee with whom it concludes a sublicense agreement and shall supply BAYLOR with a copy of each such sublicense agreement in which BELLICUM may redact financial information.

7. PATENTS AND INFRINGEMENT

7.1 **Patent Prosecution Responsibility**. From the Agreement Date and for the term of this Agreement, BELLICUM shall have primary responsibility, at its sole cost, to use patent counsel of its choice that is reasonably acceptable to BAYLOR for filing, prosecuting and maintaining all patent applications and patents included in the Patent Rights and Subject Technology licensed hereunder, except that BAYLOR may assume responsibility at its sole expense for pursuing any protection which BELLICUM declines to prosecute pursuant to Paragraph 7.2 of this Agreement.

7.2 **Notification of Intent Not to Pursue**. In the event that BELLICUM decides not to pay for the costs associated with either: (i) the prosecution of patent applications in the Patent Rights or (ii) maintenance of any United States or foreign issued patent in the Patent Rights, BELLICUM shall provide BAYLOR [...***...] days written notice thereof. BELLICUM's right under this Agreement to practice an invention claimed in an issued patent not pursued under this Section 7.2 shall terminate [...***...] days of such notice in the jurisdiction of the patent not pursued.

7.3 **Obligation to Inform**. BELLICUM agrees to keep BAYLOR reasonably informed, at [...***...]'s expense, of prosecution and other actions pursuant to this Section 7, including submitting to BAYLOR copies of all official actions and responses thereto.

7.4 **Obligation to Cooperate**. BAYLOR agrees to reasonably cooperate with BELLICUM to whatever extent is reasonably necessary to provide BELLICUM the full benefit of the license granted herein.

7.5 **Infringement Procedures**. During the term of this Agreement, each Party shall promptly inform the other of any suspected infringement of any claims in the Patent Rights or the misuse, misappropriation, theft or breach of confidence of other proprietary rights in the Subject Technology and/or Patent Rights by a third party, and with respect to such activities as are suspected. Any action or proceeding against such third party shall be instituted as follows:

(i) BAYLOR and BELLICUM may agree to jointly institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. Such joint action shall be brought in the names of both BAYLOR and BELLICUM. If BAYLOR or BELLICUM decide to jointly prosecute an action or proceeding after it has been instituted by one Party, the action shall be continued in the name or names they both agree is expedient for efficient prosecution of such action. BELLICUM and BAYLOR shall agree to the manner in which they shall exercise control over any joint action or proceeding, providing however that if they cannot agree BAYLOR shall have the right to unilaterally decide on control. In such joint action or proceeding, the out-of-pocket costs shall be borne equally, and any recovery or settlement shall be shared equally.

(ii) If BELLICUM does not agree to participate in a joint action or proceeding then BAYLOR shall have the right, but not the obligation, to institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. If BAYLOR elects to institute action, it does so at its own cost. If BAYLOR fails to bring such an action or proceeding within a period of three (3) months after receiving notice or otherwise having knowledge of such infringement, then BELLICUM shall have the right, but not the obligation, to prosecute the same at its own expense. Should either BAYLOR or BELLICUM commence action under the provisions of this Paragraph 7.5 and

thereafter elect to abandon the same, it shall give timely notice to the other Party who may, if it so desires, continue prosecution of such action or proceeding. All recoveries, whether by judgment, award, decree or settlement, from infringement or misuse of Subject Technology and/or Patent Rights shall be apportioned as follows: (a) the Party bringing the action or proceeding shall first recover an amount equal the costs and expenses incurred by such Party directly related to the prosecution of such action or proceeding, (b) the Party cooperating in such action or proceeding shall then recover costs and expenses incurred by such Party directly related to its cooperation in the prosecution of such action or proceeding and (c) the remainder will be divided proportionately between BAYLOR and BELLICUM according to the fraction of the costs and expenses incurred by each Party.

7.6 **Consent to Settle**. Neither BAYLOR nor BELLICUM shall settle any action covered by Paragraph 7.5 without first obtaining the consent of the other Party, which consent will not be unreasonably withheld.

7.7 **Liability for Losses**. BAYLOR shall not be liable for any losses incurred as the result of an action for infringement brought against BELLICUM as the result of BELLICUM's exercise of any right granted under this Agreement. The decision to defend or not defend shall be in BELLICUM's sole discretion.

8. TERM AND EXPIRATION

Upon issuance of the Common Stock to Baylor as per the terms of Paragraph 3.1, BELLICUM shall have a perpetual, paid-in-full (i.e., royalty free) license in and to the Subject Technology and Patent Rights.

9. TERMINATION

9.1 **Termination by Baylor: Breach**. In the event of default or failure by BELLICUM to perform any of the terms, covenants or provisions of this Agreement, BELLICUM shall have ninety (90) days after the receipt by BELLICUM of written notice of such default by BAYLOR to correct such default. If such default is not corrected within the said ninety (90) day period, BAYLOR shall have the right, at its option, to cancel and terminate this Agreement. The Parties may mutually agree, in writing, to extend the cure period for a default if BELLICUM has demonstrated good faith efforts to cure said default. However, BAYLOR is not obligated to grant such an extension. The failure of BAYLOR to exercise such right of termination shall not be deemed to be a waiver of any right BAYLOR might have, nor shall such failure preclude BAYLOR from exercising or enforcing said right upon any subsequent failure by BELLICUM.

9.2 **Termination by Baylor: Insolvency**. BAYLOR shall have the right, at its option, to cancel and terminate this Agreement in the event that BELLICUM shall (i) become involved in insolvency, dissolution, bankruptcy or receivership proceedings affecting the operation of its business or (ii) make an assignment of all or substantially

all of its assets for the benefit of creditors, or in the event that (iii) a receiver or trustee is appointed for BELLICUM and BELLICUM shall, after the expiration of thirty (30) days following any of the events enumerated above, have been unable to secure a dismissal, stay or other suspension of such proceedings.

9.3 **Termination by Bellicum**. BELLICUM, upon thirty (30) days prior written notice to BAYLOR, may terminate this Agreement with or without cause.

9.4 **Effects of Termination**. In the event of termination of this Agreement, all rights to the Subject Technology and Patent Rights shall revert to BAYLOR. At the date of any termination of this Agreement, BELLICUM shall immediately cease using any of the Subject Technology and Patent Rights and BELLICUM shall immediately destroy the Subject Technology and send to BAYLOR a written affirmation of such destruction signed by an officer of BELLICUM; provided, however, that BELLICUM may sell any Licensed Products actually in the possession of BELLICUM on the date of termination.

9.5 **Termination: Sublicenses**. Upon termination of this Agreement by BELLICUM or BAYLOR, BAYLOR agrees to accept as a successor to BELLICUM, any existing sublicense that is in compliance with the terms of this Agreement at the date of termination, provided however, that for each sublicense to be accepted the sublicensee agrees in writing to be bound to BAYLOR by the provisions of this Agreement. The sublicensee for each sublicense to be accepted shall also agree that the license from BAYLOR to such sublicensee shall be adjusted to conform to the scope of the sublicense rights granted to the sublicensee by BELLICUM.

9.6 **No Refund**. In the event this Agreement is terminated pursuant to this Section 9, BAYLOR is under no obligation to refund any consideration made by BELLICUM to BAYLOR, as set forth in Section 3, prior to the effective date of such termination or expiration.

9.7 **Survival of Termination**. No termination of this Agreement shall constitute a termination or a waiver of any rights of either Party against the other Party accruing at or prior to the time of such termination. The obligations of Sections 12, 15 and 16 shall survive termination of this Agreement,

10. ASSIGNABILITY

BELLICUM may assign this Agreement as part of:

(i) A sale or other transfer of BELLICUM’s entire business; or

(ii) A sale or other transfer of that part of BELLICUM’s business to which the license granted hereby relates;

BELLICUM shall give BAYLOR [...***...] days prior written notice of such assignment, including the new contact information of assignee. BAYLOR, however, shall not be

deemed to have approved such assignment and transfer unless and until such assignee has agreed in writing to BAYLOR to be bound by all the terms and provisions of this Agreement, in which event BELLICUM shall be released of liability hereunder. Upon such assignment of this Agreement by such assignee, the term " BELLICUM" as used herein (i) will include the name of the assignee should BELLICUM assign a partial right and/or interest hereunder to the assignee, or (ii) will be replaced by the name of the assignee should BELLICUM assign its full right and interest hereunder to the assignee.

11. GOVERNMENTAL COMPLIANCE

11.1 **Compliance with Laws**. BELLICUM shall, during the term of this Agreement and for so long as it shall use the Subject Technology or Patent Rights or sell Licensed Products, comply with and cause its sublicensees to comply with all laws that may control the import, export, manufacture, use, sale, marketing, distribution and other commercial exploitation of the Subject Technology, Patent Rights, Licensed Products or any other activity undertaken pursuant to this Agreement.

11.2 **Export Control Regulations**. The Subject Technology is subject to, and BELLICUM agrees to use commercially reasonable efforts to comply with, U.S. law including but not limited to U.S. export controls under the Export Administration Regulations (15 C.F.R. Part 734 et seq.) and U.S. economic sanctions and embargoes codified in 31 C.F.R. Chapter V. BELLICUM agrees that BELLICUM bears sole responsibility for understanding and complying with current U.S. trade controls laws and regulations as applicable to its activities subject to this Agreement. Without limitation on the general agreement to comply set forth in the first sentence of this Paragraph 13.3, BELLICUM agrees not to sell any goods, services, or technologies subject to this Agreement, or to re-export the same: (1) to any destination prohibited by U.S. law, including any destination subject to U.S. economic embargo; (2) to any end-user prohibited by U.S. law, including any person or entity listed on the U.S. government's Specially Designated Nationals list, Denied Parties List, Debarred Persons List, Unverified List, or Entities List. Furthermore, any transfer of Patent Rights from BAYLOR to BELLICUM under this Agreement may be subject to U.S. export license authorization under U.S. law, and BAYLOR agrees to comply with applicable laws for such transfer.

11.3 **Requirement for U.S. Manufacture**. BAYLOR represents and certifies that research giving rise to the Patent Rights was funded by Federal funds, and that such Federal funds were solely from the National Institutes of Health (NIH) and the Department of Defense (DOD). BELLICUM agrees that Licensed Products developed as a result of such Federal funds and are leased or sold in the United States shall be manufactured substantially in the United States, unless a written waiver is obtained from the NIH and/or the DOD. At the request of BELLICUM, BAYLOR agrees to the best of its abilities to assist BELLICUM should BELLICUM seek such a waiver.

12. ARBITRATION

12.1 **Amicable Resolution**. The Parties shall attempt to settle any controversy between them amicably. To this end, a senior executive from each Party shall consult and negotiate to reach a solution. The Parties agree that the period of amicable resolution shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing mediation if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that these amicable resolution negotiations have commenced.

12.2 **Mediation**. If a controversy arises out of or relates to this agreement, or the breach thereof, and if the controversy cannot be settled through amicable resolution, the Parties agree to try in good faith to settle the controversy by mediation before resorting to final and binding arbitration. The Party seeking mediation shall propose five mediators, each of whom shall be a lawyer licensed to practice by the state of Texas, having practiced actively in the field of commercial law for at least 15 years, to the other Party who shall select the mediator from the list. The Parties shall split the cost of the mediator equally. The Parties agree that the period of mediation shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing arbitration if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that amicable resolution negotiations have commenced,

12.3 **Arbitration**. Any dispute, controversy, or claim arising out of or relating to this Agreement, or the breach, termination or invalidity thereof, including claims for tortious interference or other tortious or statutory claims arising before, during or after termination, providing only that such claim touches upon matters covered by this Agreement shall be finally settled by arbitration administered by the American Arbitration Association pursuant to the Commercial Arbitration Rules in force at the time of the commencement of the arbitration, except as modified by the specific provisions of this Agreement. It is the specific intent of the Parties that this arbitration provision is intended to be the broadest form allowed by law.

12.4 **Parties to Arbitration**. This agreement to arbitrate is intended to be binding upon the signatories hereto, their principals, successors, assigns, subsidiaries and affiliates. This agreement to arbitrate is also intended to include any disputes, controversy or claims against any Party's employees, agents, representatives, or outside legal counsel arising out of or relating to matters covered by this Agreement or any agreement in which this Agreement is incorporated.

12.5 **Consolidation Permitted**. The Parties expressly agree that any court with jurisdiction may order the consolidation of any arbitrable controversy under this Agreement with any related arbitrable controversy not arising under this Agreement, as the court may deem necessary in the interests of justice or efficiency or on such other grounds as the court may deem appropriate.

12.6 **Entry of Judgment**. The Parties agree that a final judgment on the arbitration award may be entered by any court having jurisdiction thereof.

12.7 **Appointing Arbitrators**. The American Arbitration Association shall appoint the arbitrator(s) from its Large, Complex Claims Panel. If such appointment cannot be made from the Large, Complex Claims Panel, then from its Commercial Panel. The Parties hereby agree to and acquiesce in any appointment of an arbitrator or arbitrators that may be made by such appointing authority.

12.8 **Qualifications of the Arbitrator(s)**. The arbitrator(s) must be a lawyer, having practiced actively in the field of commercial law for at least 15 years.

12.9 **Governing Substantive Law**. The arbitrator(s) shall determine the rights and obligations of the Parties according to the substantive laws of the State of Texas (excluding conflicts of law principles) as though acting as a court of the State of Texas.

12.10 **Governing Arbitration Law**. The law applicable to the validity of the arbitration clause, the conduct of the arbitration, including any resort to a court for provisional remedies, the enforcement of any award and any other question of arbitration law or procedure shall be the Federal Arbitration Act.

12.11 **Governing Convention**. The Parties elect to have the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958 (instead of the inter-American New York Convention on international Commercial Arbitration of August 15, 1990) govern any and all disputes that may be the subject of arbitration pursuant to this Agreement.

12.12 **Preliminary Issues of Law**. The arbitrator(s) shall hear and determine any preliminary issue of law asserted by a Party to be dispositive of any claim, in whole or part, in the manner of a court hearing a motion to dismiss for failure to state a claim or for summary judgment, pursuant to such terms and procedures as the arbitrator(s) deems appropriate.

12.13 **Confidentiality**. The Parties and the arbitrator(s) shall treat all aspects of the arbitration proceedings, including without limitation discovery, testimony and other evidence, briefs and the award, as strictly confidential. Further, except as may be required by law, neither Party nor the arbitrator(s) may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both Parties.

12.14 **Place of Arbitration**. The seat of arbitration shall be Houston, Texas, USA.

12.15 **Language**. The arbitration shall be conducted in the English language. All submissions shall be made in English or with an English translation. Witnesses may provide testimony in a language other than English, provided that a simultaneous English translation is provided. Each Party shall bear its own translation costs.

12.16 **Punitive Damages Prohibited**. The Parties hereby waive any claim to any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages, and the arbitrator(s) is/are specially divested of any power to award any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages.

12.17 **Costs**. The Party prevailing on substantially all of its claims shall be entitled to recover its costs, including attorneys' fees, for the arbitration proceedings, as well as for any ancillary proceeding, including a proceeding to compel or enjoin arbitration, to request interim measures or to confirm or set aside an award.

12.18 **Survival**. The provisions of this Section 12 shall survive expiration or termination of this Agreement

13. ADDRESSES

13.1 **Baylor Payment Address**. All certificates of common stock shall be sent to the address below, and shall reference the applicable OTA numbers listed on the front page of the Agreement.

BAYLOR Tax ID #: 74-1613878
Director, Baylor Licensing Group
Baylor College of Medicine
One Baylor Plaza, BCM210-600D
Houston, TX 77030

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg@bcm.tmc.edu

13.2 **Bellicum Contact Address**. For questions about stock certificates, BAYLOR can contact BELLICUM at the address below:

Thomas J. Farrell, CEO
Bellicum Pharmaceuticals, Inc.
Twelve Greenway Plaza, Suite 1380
Houston, TX 77046

Telephone No. (512) 542-0010
Facsimile No. (512) 542-0062
E-Mail: tfarrell@bellicum.com

13.3 **Address for Notices**. All notices, reports or other communication pursuant to this Agreement shall be sent to such Party via (i) United States Postal Service postage prepaid, (ii) overnight courier, or (iii) facsimile transmission, addressed to it at its address set forth below or as it shall designate by written notice given to the other Party. Notice shall be sufficiently made, or given and received (a) on the date of mailing or (b) when a facsimile printer reflects transmission.

In the case of BAYLOR:
Patrick Turley
Associate General Counsel
Baylor College of Medicine
One Baylor Plaza, BCM210-600D
Houston, TX 77030

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg@bcm,tmc.edu

In the case of BELLICUM:
Thomas J. Farrell, CEO
Bellicum Pharmaceuticals, Inc.
Twelve Greenway Plaza, Suite 1380
Houston, TX 77046

Telephone No. (512) 542-0010
Facsimile No. (512) 542-0062
E-Mail: tfarrell@bellicum.com

14.4 **Baylor Reference Number**. Each such report, notice or other communication shall include the applicable Baylor reference numbers listed on the front page of the Agreement.

15. REPRESENTATIONS, INDEMNITY & INSURANCE

15.1 **BELLICUM Representations**. BELLICUM hereby represents and certifies that:

(i) it is a corporation duly organized and in good standing under the laws of the State of Delaware;

(ii) it is qualified to do business and in good standing in the State of Texas and elsewhere as the nature of its business and properties so require;

(iii) the execution, delivery and performance of this Agreement by BELLICUM and the consideration provided for herein has been duly authorized by corporate action;

(iv) it has the full power and authority to enter into and carry out its obligations under this Agreement; and

(v) the Common Stock to be issued pursuant to this Agreement has been duly authorized and upon issuance, pursuant to the terms hereof and for the consideration herein set forth, will be validly issued, fully paid and non-assessable.

BELLICUM agrees to indemnify and hold BAYLOR and its officers, trustees, faculty, employees, agents and representatives, harmless from any liabilities, costs and expenses (including attorneys' fees and expenses), obligations or causes of action arising out of or related to any breach of the representations and certifications made by BELLICUM in this Section 15.1.

15.2 **BAYLOR Representations**. BAYLOR represents and certifies it controls the entire right, title and interest in the Patent Rights and the Subject Technology BAYLOR owns and is fully authorized to make the grant in Section 2.1 of the Agreement.

15.3 **GENERAL INDEMNITY**.

(I) EACH PARTY SHALL NOTIFY THE OTHER OF ANY CLAIM, LAWSUIT OR OTHER PROCEEDING RELATED TO THE SUBJECT TECHNOLOGY AND PATENT RIGHTS. BELLICUM AGREES THAT IT WILL DEFEND, INDEMNIFY AND HOLD HARMLESS BAYLOR, ITS FACULTY MEMBERS, SCIENTISTS, RESEARCHERS, EMPLOYEES, OFFICERS, TRUSTEES AND AGENTS AND EACH OF THEM (THE "INDEMNIFIED PARTIES"), FROM AND AGAINST ANY AND ALL CLAIMS, CAUSES OF ACTION, LAWSUITS OR OTHER PROCEEDINGS (THE "BAYLOR CLAIMS") FILED OR OTHERWISE INSTITUTED AGAINST ANY OF THE INDEMNIFIED PARTIES ARISING OUT OF THE DESIGN, PROCESS, MANUFACTURE OR USE BY BELLICUM OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS, OR LICENSED PRODUCTS; PROVIDED, HOWEVER, THAT SUCH INDEMNITY SHALL NOT APPLY TO ANY CLAIMS ARISING FROM THE NEGLIGENCE OR INTENTIONAL MISCONDUCT OF ANY INDEMNIFIED PARTY. BELLICUM WILL ALSO ASSUME RESPONSIBILITY FOR ALL COSTS AND EXPENSES RELATED TO SUCH CLAIMS FOR WHICH IT IS OBLIGATED TO INDEMNIFY THE INDEMNIFIED PARTIES PURSUANT TO THIS PARAGRAPH 15.3, INCLUDING, BUT NOT LIMITED TO, THE PAYMENT OF ALL REASONABLE ATTORNEYS' FEES AND COSTS OF LITIGATION OR OTHER DEFENSE.

(II) BELLICUM FURTHER AGREES NOT TO SETTLE ANY CLAIM AGAINST A BAYLOR INDEMNITEE WITHOUT THE INDEMNITEE'S WRITTEN CONSENT WHICH CONSENT SHALL NOT BE UNREASONABLY WITHHELD. BELLICUM FURTHER AGREES TO KEEP BAYLOR INDEMNITEES FULLY APPRISED OF THE BAYLOR CLAIMS.

15.4 **Insurance**.

(i) BELLICUM shall, for so long as BELLICUM manufactures, uses or sells any Licensed Product(s) for research applications, maintain in full force and effect policies of (a) general liability insurance with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]) and (b) products liability insurance, with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]).

(ii) BELLICUM shall provide to BAYLOR copies of certificates of insurance or copies of the policies of insurance within [...***...] days after BELLICUM receives a request from BAYLOR for such copies. It is the intention of the Parties hereto that BELLICUM shall, throughout the term of this Agreement, continuously and without interruption, maintain in force the required insurance coverages set forth in this Paragraph 15.4.

(iii) BAYLOR reserves the right to request additional policies of insurance where appropriate and reasonable in light of BELLICUM's business operations and availability of coverage.

15.5 **DISCLAIMER OF WARRANTY**. BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS OTHER THAN THOSE MADE ABOVE, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS OR MERCHANTABILITY, REGARDING OR WITH RESPECT TO THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS AND BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, OF THE PATENTABILITY OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS OR OF THE ENFORCEABILITY OF ANY PATENTS ISSUING THEREUPON, IF ANY, OR THAT THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS ARE OR SHALL BE FREE FROM INFRINGEMENT OF ANY PATENT OR OTHER RIGHTS OF THIRD PARTIES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS CONFERRING BY IMPLICATION, ESTOPPEL OR OTHERWISE ANY LICENSE OR RIGHTS UNDER ANY PATENTS OF BAYLOR OTHER THAN THE PATENT RIGHTS, REGARDLESS OF WHETHER SUCH PATENTS ARE DOMINANT OR SUBORDINATE TO THE PATENT RIGHTS.

16. ADDITIONAL PROVISIONS

16.1 **Use of BAYLOR Name**. BAYLOR agrees that BELLICUM may publicly disclose the existence of this Agreement, the name "Baylor College of Medicine" and the names of scientists and researchers at BAYLOR associated with the Patent Rights and Technology Rights. BELLICUM will not disclose it has an affiliation with BAYLOR that does not exist at the time the name "Baylor College of Medicine" is publicly disclosed.

16.2 **Confidentiality**.

(i) Confidential Information will be marked "CONFIDENTIAL." The recipient of Confidential Information ("Recipient") agrees to retain in confidence and to prevent the disclosure of the Confidential Information from the discloser ("Discloser") to any third party without the prior written consent of the Discloser; provided, however, the Recipient may disclose Confidential Information to its officers, directors, employees, partners, investors, shareholders, lawyers, accountants, and consultants (collectively, the "Representatives") on a need-to-know basis only for the purpose of assisting the Recipient in evaluating the Confidential Information or in the discharge of its obligations under this Agreement. The Recipient will use the same degree of care with respect to the Confidential Information as it would with its own proprietary and confidential information, and in no event use less than a reasonable degree of care. The Recipient will use reasonable efforts to notify its Representatives about the Recipient's duties under this Agreement and to promote Representatives' maintenance of the confidentiality of the Confidential Information as if the Representatives were themselves parties to this Agreement. BELLICUM may disclose Confidential Information to potential licensees, purchasers, investors, joint venturers and the like so long as BELLICUM uses commercially reasonable efforts to make such disclosures subject to a confidentiality agreement. The Recipient agrees to retain in confidence and to prevent the disclosure of any document prepared by or for the Recipient that includes Discloser's Confidential Information, including without limitation any document that analyzes or summarizes Discloser's Confidential Information, to any third party without the prior written consent of the Discloser.

(ii) This Agreement imposes no obligations upon the Recipient with respect to any Confidential Information which (a) was in the Recipient's possession before receipt of such information from the Discloser, as evidenced by competent written proof; (b) is or becomes a matter of public knowledge through no fault or violation of this Agreement by the Recipient or its Representatives; (c) is rightfully received by the Recipient from a third party who, to the Recipient's knowledge, is not under a duty of confidentiality; (d) is approved in writing for release by the Discloser prior to such release; (e) is independently developed by the Recipient as evidenced by Recipient's written records without any use of or reference to Confidential Information of the Discloser; or (f) is orally disclosed and not confirmed in a writing to the Recipient within thirty (30) days after its initial disclosure by the Discloser. Notwithstanding any other provision of this Agreement, the Recipient may disclose Confidential Information which is required to be disclosed by law, rule, regulation, administrative, or legal process ("Compelled Request"); provided, however, the Recipient will give prompt written notice of any Compelled Request for such information to the Discloser and agrees to cooperate with the Discloser, at the Discloser's expense, to challenge the request or limit the scope of disclosure of such information, as the Discloser may request and deem appropriate.

(iii) Each Party agrees to notify the other Party in writing of any misuse or misappropriation of the other Party's Confidential Information that may come to its attention. The Parties hereby acknowledge and agree that in the event of any breach of this Section 16.2, including, without limitation, the actual or threatened disclosure or unauthorized use of Confidential Information without the prior express written consent of the Discloser, the Discloser would suffer an irreparable injury such that no remedy at law would adequately protect or appropriately compensate the disclosing party for such injury. Accordingly, the Parties agree that the Discloser will have the right to enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without bond and without prejudice to any other rights and remedies that the Discloser may have for a breach of this Section 16.2.

16.3 **No Additional Rights**. BELLICUM acknowledges that, other than the specific rights granted hereunder, it is not entitled to any rights to any current or future technology, research or developments made at or owned by BAYLOR,

16.4 **BAYLOR's Disclaimers**. Neither BAYLOR, nor any of its faculty members, scientists, researchers, employees, officers, trustees or agents assume any responsibility for the manufacture, product specifications, sale or use of the Subject Technology or the Licensed Products which are manufactured by or sold by BELLICUM.

16.5 **Independent Contractors**. The Parties hereby acknowledge and agree that each is an independent contractor and that neither Party shall be considered to be the agent, representative, master or servant of the other Party for any purpose whatsoever, and that neither Party has any authority to enter into a contract, to assume any obligation or to give warranties or representations on behalf of the other Party. Nothing in this relationship shall be construed to create a relationship of joint venture, partnership, fiduciary or other similar relationship between the Parties.

16.6 **Non-Waiver**. The Parties covenant and agree that if a Party fails or neglects for any reason to take advantage of any of the terms provided for the termination of this Agreement or if a Party, having the right to declare this Agreement terminated, shall fail to do so, any such failure or neglect by such Party shall not be a waiver or be deemed or be construed to be a waiver of any cause for the termination of this Agreement subsequently arising, or as a waiver of any of the terms, covenants or conditions of this Agreement or of the performance thereof. None of the terms, covenants and conditions of this Agreement may be waived by a Party except by its written consent.

16.7 **Reformation**. The Parties hereby agree that neither Party intends to violate any public policy, statutory or common law, rule, regulation, treaty or decision of any government agency or executive body thereof of any country or community or association of countries, and that if any word, sentence, paragraph or clause or combination thereof of this Agreement is found, by a court or executive body with judicial powers having jurisdiction over this Agreement or any of the Parties hereto, in a final, unappealable order to be in violation of any such provision in any country or community or association of countries, such words, sentences, paragraphs or clauses or combination shall be inoperative in such country or community or association of countries, and the remainder of this Agreement shall remain binding upon the Parties hereto.

16.8 **Force Majeure**. No liability hereunder shall result to a Party by reason of delay in performance caused by force majeure, that is circumstances beyond the reasonable control of the Party, including, without limitation, acts of God, fire, flood, war, terrorism, civil unrest, labor unrest, or shortage of or inability to obtain material or equipment.

16.9 **Informed Review**. Each Party acknowledges that it and its counsel have received and reviewed this Agreement and that normal rules of construction, to the effect that ambiguities are to be resolved against the drafting Party, shall not apply to this Agreement or to any amendments, modifications, exhibits or attachments to this Agreement.

16.10 **Entire Agreement**. The terms and conditions herein constitute the entire agreement between the Parties and shall supersede all previous agreements, either oral or written, between the Parties hereto with respect to the subject matter hereof. No agreement of understanding bearing on this Agreement shall be binding upon either Party hereto unless it shall be in writing and signed by the duly authorized officer or representative of each of the Parties and shall expressly refer to this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement in multiple originals by their duly authorized officers and representatives on the respective dates shown below, but effective as of the Agreement Date.

BELLICUM PHARMACEUTICALS, INC	BAYLOR COLLEGE OF MEDICINE
Name: /s/ Thomas J. Farrell	Name: /s/ Cyndi M. Bailey
Thomas J. Farrell	Cyndi M. Bailey
Title: Chief Executive Officer	Title: Senior Vice President & General Counsel
Date: 3/20/08	Date: 3/8/08

Appendix A

Subject Technology Supplied by Baylor to Bellicum:

Exhibit 10.4

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY […*…], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM IF PUBLICLY DISCLOSED.**

EXCLUSIVE LICENSE AGREEMENT
BAYLOR COLLEGE OF MEDICINE
BELLICUM PHARMACEUTICALS, INC.

RE: BLG 06-028, "Inducible Toll-like Receptors and Composite Costimulatory Receptors for Unified, Broadly Applicable Immunotherapy", developed by David M. Spencer, Kevin M. Slawin, Natalia Lapteva, and Priyadharshini Narayanan. Disclosed to BCM on [...***...].

This Exclusive License Agreement (hereinafter called "Agreement"), to be effective as of the 27th day of June, 2010 (hereinafter called "Agreement Date"), is by and between Baylor College of Medicine (hereinafter called "BAYLOR"), a Texas nonprofit corporation having its principal place of business at One Baylor Plaza, Houston, Texas 77030, and Bellicum Pharmaceuticals, Inc., a corporation organized under the laws of Delaware and having a principal place of business at 6400 Fannin Street, Suite 2300 Houston, TX 77030, and its Affiliates (hereinafter, collectively referred to as "BELLICUM").

WITNESSETH:

WHEREAS, BAYLOR, by virtue of its relationship with its faculty, staff and students and conveyances with the Developers (as defined below) and under and pursuant to the terms and provisions of its Policy on Inventions and Patents, is the owner of certain right, title and interest in and to the Subject Technology and Patent Rights (as defined below); and

WHEREAS, BAYLOR granted certain rights in the Subject Technology and Patent Rights to [...***...] under the terms of the Material Transfer Agreement between Baylor College of Medicine and [...***...], dated [...***...]; and

WHEREAS, BAYLOR is willing to grant a worldwide, exclusive license to all of the right, title and interest owned by BAYLOR as of the Agreement Date in the Subject Technology and Patent Rights to BELLICUM on the terms set forth herein; and

WHEREAS, BELLICUM desires to obtain said exclusive license under the Subject Technology and Patent Rights; and

NOW, THEREFORE, for and in consideration of the foregoing and rights and obligations hereafter, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto expressly agree as follows:

1. DEFINITIONS AS USED HEREIN

1.1 "**Affiliates**" shall mean any corporation, partnership, joint venture or other entity of which the common stock or other equity ownership thereof is 50% or more owned by BELLICUM.

1.2 "**Confidential Information**" shall mean any proprietary and secret ideas, proprietary technical information, know-how and proprietary commercial information or other similar proprietary information.

1.3 "**Developers**" shall mean David M. Spencer, Kevin M. Slawin, Natalia Lapteva, and Priyadharshini Narayanan, employees of BAYLOR at the time the invention was disclosed.

1.4 "**Field**" shall mean all fields of use.

1.5 "**Legal Costs**" shall mean all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses related to prosecuting, obtaining and maintaining patent protection on the Patent Rights in the United States and foreign countries.

1.6 "**Licensed Product(s)"** will mean (i) any product that the manufacture, use or sale of which would constitute, but for the license granted to BELLICUM, or sublicense granted to a sublicensee, under this Agreement, an infringement of any Valid Claim of the Patent Rights; and/or (ii) any method the practice of which would constitute, but for the license granted to BELLICUM, or sublicense granted to a sublicensee, under this Agreement, an infringement of any Valid Claim of the Patent Rights.

1.7 "**Net Sales**" shall mean the gross sales price invoiced to or received (whichever occurs first) from customers, who are not Affiliates, of Licensed Product by BELLICUM or sublicensees, less:

(i) [...***...];

(ii) [...***...];

(iii) [...***...];

(iv) [...***...]; and

(v) [...***...];

The term “Net Sales” in the case of non-cash sales, shall mean the fair market value of all equivalent or other consideration received by BELLICUM or sublicensees for the sale, lease or transfer of Licensed Product.

1.8 “**Party**” shall mean either BELLICUM or BAYLOR, and the “Parties” shall mean BELLICUM and BAYLOR.

1.9 “**Patent Rights**” shall mean all right, title and interest owned by BAYLOR as of the Agreement Date in patent applications filed before, on or after the Agreement Date, that pertain to the Subject Technology, including:

(a) PCT Patent Application No. PCT/US2007/081963, “Methods and Compositions for Generating an Immune Response by Inducing CD40 and Pattern Recognition Receptors and Adaptors Thereof”,” naming David M. Spencer and Natalia Lapteva as inventors, and filed 10/19/2007, which claims priority to U.S. Provisional Patent Application No. 60/862,211, filed 10/19/2006; U.S. Provisional Patent Application No. 60/895,088, filed 03/15/2007; United States Patent Application No. 12/445,939, International filing date 10/19/2007; Australian Patent Application No. 2007310946, International filing date 10/19/2007; Canadian Patent Application No. 2,666,667, International filing date 10/19/2007; European Patent Convention Application No. 07844466.8, International filing date 10/19/2007; and Hong Kong Patent Application No. 10100140.7, International filing date 10/19/2008;

(b) United States Patent Application No. 12/563,991, “Methods and Compositions for Generating an Immune Response by Inducing CD40 and Pattern Recognition Receptor Adapters,” naming David Spencer and Priyadharshini Narayanan as inventors, and filed 9/21/09. Claims priority to U.S. Provisional Patent Application No. 61/099,163, filed 9/22/08, U.S. Provisional Patent Application No. 61/153,562, filed 2/18/09, and U.S. Provisional Patent Application No. 61/181,572, filed 5/27/09;

(c) PCT Patent Application No. PCT/US2009/057738, “Methods and Compositions for Generating an Immune Response by Inducing CD40 and Pattern Recognition Receptor Adapters,” naming David Spencer and Priyadharshini Narayan as inventors, and filed 9/21/09, which claims priority to U.S. Provisional Patent Application No. 61/099,163, filed 9/22/08, U.S. Provisional Patent Application No. 61/153,562, filed 2/18/09, and U.S. Provisional Patent Application No. 61/181,572, filed 5/27/09;

(d) United States Provisional Application No. 61/325,127, entitled “Method for Treating Solid Tumors,” naming Kevin Slawin, David Spencer and Natalia Lapteva as inventors, and filed April 16, 2010, subject to limitations described in Section 1.9(f); and

(e) (e) (i) all United States counterparts and foreign counterparts of patent applications listed in the foregoing clauses (a) to (d); (ii) all other patents and patent applications in any country that claim, cover or describe the Subject Technology and/or subject matter disclosed in patent applications of (a) to (d) and (e)(i) and are owned or controlled by BAYLOR; (iii) all pending patent applications anywhere in the world that claim common priority with any patent or patent application of the foregoing clauses (a) to (d), (e)(i) and

(e) (ii); (iv) all patents that have issued or in the future issue from any of the patent applications described in the foregoing clauses (a) to (d) and (e)(i)-(iii), including without limitation, utility models, design patents and certificates of invention; and (v) all divisionals, continuations, continuations-in-part, reissues, reexaminations, renewals, extensions or additions to the patents and patent application listed and described in the foregoing clauses (a) to (d) and (e)(i)-(iv). As used herein, the phrase "pending patent applications" shall be construed to include provisional applications.

(f) Patent Rights provided in Section 1.9(d), and Sections 1.9(e)(i)-(v) as they pertain to Section 1.9(d), extend only to products containing a MyD88 nucleotide sequence or MyD88 amino acid sequence, compositions that include such products, and methods for making and using such compositions and products.

1.10 "**Subject Technology**" shall mean and include all right, title and interest owned by BAYLOR as of the Agreement Date in any technology, biological materials, methods, documents, materials, tests, know-how and all confidential information existing as of the Agreement Date pertaining to the following technology disclosures:

BLG 06-028, "Inducible Toll-like Receptors and Composite Costimulatory Receptors for Unified, Broadly Applicable Immunotherapy", developed by David M. Spencer, Kevin M. Slawin, Natalia Lapteva, and Priyadharshini Narayanan. Disclosed to BCM on [...***...].

1.11 "**Sublicensing Revenue**" shall mean all cash and non-cash items not earmarked for a specific purpose, paid to BELLICUM which constitute advance considerations for sublicensing rights to Licensed Product(s) granted by BELLICUM, but exclude any amounts (i) [...***...], or (ii) [...***...], (iii) [...***...], (iv) [...***...], and (v) [...***...].

1.12 "**Valid Claim**" means a claim of an issued and unexpired patent within the Patent Rights that has not been held revoked, unenforceable, unpatentable or invalid by a final decision of a court of competent jurisdiction or by a final decision of a patent office and that has not been admitted to be invalid or unenforceable through reissue, reexamination, disclaimer or otherwise.

GRANT OF LICENSE

2.1 **Grant**. Subject to the reservations of rights set forth in Paragraph 2.2, BAYLOR hereby grants to BELLICUM, and BELLICUM hereby accepts, an exclusive, worldwide, sublicensable, fee-bearing and royalty-bearing license under the Patent Rights and Subject Technology, to make, have made, use, import, export, distribute, research, develop, obtain regulatory approval, manufacture, have manufactured, offer for sale and sell Licensed Products.

2.2 Restrictions. The grant in Paragraph 2.1 shall be further subject to, restricted by and non-exclusive with respect to;

(i) the making or use of the Subject Technology and Patent Rights by BAYLOR for non-commercial research, patient care, teaching and other educationally related purposes;

(ii) any non-exclusive license of the Subject Technology and/or Patent Rights that BAYLOR grants to other academic or research institutions for non-commercial research purposes; and

(iii) any non-exclusive license of the Subject Technology and/or Patent Rights that BAYLOR is required by law or regulation to grant to the United States of America or to a foreign state pursuant to an existing or future treaty with the United States of America; and

(iv) the non-exclusive, worldwide, paid-up license granted to [...***...] under the terms of the Material Transfer Agreement between Baylor College of Medicine and [...***...], dated [...***...].

2.3 Government Reservation. Rights under this Agreement are subject to rights required to be granted to the Government of the United States of America pursuant to 35 USC Section 200-212, including a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject inventions throughout the world.

DILIGENCE

BELLICUM shall:

(i) Supply to BAYLOR an Annual Report within [...***...] of January 1st of each year during the Term of the Agreement documenting Bellicum's progress and activities related to research and development, securing regulatory approvals, manufacturing, sublicensing, marketing and sales of Licensed Product;

(ii) File an investigational new drug (IND) application on a Licensed Product within [...***...] of the Agreement Date;

(iii) Initiate a Phase III Clinical Trial on a Licensed Product within [...***...] of the Agreement Date;

BAYLOR may [...***...] if BELLICUM does not perform (i), (ii) or (iii) in this section, subject to the Term and Termination section (Section 10) herein.

PAYMENTS

4.1 License Execution Fee. As partial consideration for the rights conveyed by BAYLOR under this Agreement, BELLICUM shall pay BAYLOR a license fee of thirty thousand dollars ($30,000). Such payment shall be delivered to BAYLOR in installments according to the following schedule:

(i) [...***...] dollars ($[...***...]) upon execution of this Agreement;

(ii) [...***...] dollars ($[...***...]) due [...***...] from the Agreement Date; and

(iii) [...***...] dollars ($[...***...]) due on [...***...].

4.2 Annual Maintenance Fee. BELLICUM shall pay to BAYLOR an annual maintenance fee of [...***...] dollars ($[...***...]) due upon each anniversary of the Agreement Date, beginning on the second anniversary of the Agreement Date and continuing until introduction of a Licensed Product.

4.3 Royalty on Net Sales. BELLICUM will pay to BAYLOR a royalty of [...***...] percent ([...***...]%) of Net Sales of Licensed Product. Collectively the royalty payments that are the subject of this Paragraph 4.3 are termed “Royalties” for purposes of this Agreement and shall be payable as provided in Section 5.

4.4 Minimum Royalties. Beginning with the calendar year following the first commercial sale of a Licensed Product, BELLICUM shall pay to BAYLOR an amount such that the amount payable shall be the greater of: (i) the actual royalties on Net Sales of Licensed Products during the calendar year, or (ii) the following minimum royalties:

(a) [...***...] dollars the first calendar year following the first commercial sale of a Licensed Product;

(b) [...***...] dollars the second calendar year following the first commercial sale of a Licensed Product;

(c) [...***...] dollars the third calendar year following the first commercial sale of a Licensed Product and thereafter.

4.5 Milestones. BELLICUM shall also pay BAYLOR the following milestone payments set forth below:

For the first (1st) clinical indication:

Phase I Clinical Trial Initiation [...***...] ($[...***...])

Phase II Clinical Trial Initiation [...***...] dollars ($[...***...])

For the first two (2) clinical indications:

Phase III Clinical Trial Initiation [...***...] dollars ($[...***...])

First Regulatory Agency-Approved

Commercial Sale [...***...] dollars ($[...***...]).

BELLICUM shall notify BAYLOR in writing within [...***...] days upon the achievement of each milestone, such notice to be accompanied by payment of the appropriate milestone payment. Milestones are to be paid regardless of whether BELLICUM or BELLICUM's sublicensee attains such milestone.

4.6 Sublicense Revenue Sharing. In the event BELLICUM sublicenses the Subject Technology and Patent Rights under this Agreement, BELLICUM agrees to pay to BAYLOR:

(i) [...***...] percent ([...***...]%) of Sublicense Revenue if the sublicense agreement is executed on or before the [...***...].

(ii) [...***...] percent ([...***...]%) of Sublicense Revenue shall be payable to Baylor if the sublicense agreement is executed after the [...***...].

4.7 Legal Costs. BELLICUM will be responsible for payment of all Legal Costs, which BELLICUM will pay directly to each legal service provider on invoices for such legal costs received by BELLICUM.

4.8 Failure to Make Payment. Should BELLICUM fail to make any payment whatsoever due and payable to BAYLOR hereunder, BAYLOR may, at its sole option, terminate this Agreement as provided in Section 10.

REPORTING

5.1 Notification of Sale of Licensed Products. BELLICUM shall notify BAYLOR the date on which BELLICUM and/or its sublicensee(s) make a first sale of Licensed Products in each country in which it occurs within [...***...] days of occurrence.

5.2 Royalty Reports. BELLICUM shall submit to BAYLOR within [...***...] after March 31, June 30, September 30 and December 31, a written report on a form provided by BAYLOR (a current version of which is attached as Appendix A) setting forth for such calendar quarter at least the following information:

(i) the number of Licensed Products sold by BELLICUM and sublicensees in each country;

(ii) total billings for such Licensed Products;

(iii) the gross amount of monies or cash equivalent or other consideration which is received for sales, leases, licenses or other modes of transfer of Licensed Products by BELLICUM;

(iv) the identity of that consideration which is received instead of money for sales, leases, licenses or other modes of transfer of Licensed Products by BELLICUM;

(v) allowed deductions from the gross amount as per Definition 1.7, under which BELLICUM shall determine the amount of Net Sales thereof;

(vi) the amount of Royalties due thereon, or, if no Royalties are due to BAYLOR for any reporting period, the statement that no Royalties are due;

(vii) the amount of Sublicensing Revenue received by BELLICUM; and

(viii) the amount of other payments due BAYLOR, including but not limited to, milestone payments, minimum royalty payments and maintenance fee payments.

The royalty report shall be certified as correct by an officer of BELLICUM. After termination or expiration of this Agreement, BELLICUM will continue to submit royalty reports and payments to BAYLOR until all Licensed Products made, used, marketed, leased or imported under the Agreement have been sold.

5.3 **Payment to Accompany Royalty Report**. BELLICUM shall pay to BAYLOR with each such royalty report the amount of Royalties and other payments due with respect to such calendar quarter. If multiple technologies are covered by the license granted hereunder, BELLICUM shall specify which Subject Technology and Patent Rights are utilized for each Licensed Product included in the royalty report by citing the applicable **BLG number** listed on the front page of the Agreement.

5.4 **Payment Terms**. All payments due hereunder are payable by check or wire transfer in United States dollars and shall be deemed received when the complete payment is credited to BAYLOR's bank account. Until all funds are received by BAYLOR, the payment by BELLICUM is not considered to be complete. For sales of Licensed Products in currencies other than the United States, BELLICUM shall use exchange rates published in [...***...] on the last business day of the calendar quarter that such payment is due. No transfer, exchange, collection or other charges, **including any wire transfer fees**, shall be deducted from such payments.

5.5 **Late Payments**. Late payments shall be subject to a charge of [...***...] percent ([...***...]%) per [...***...], the interest being compounded annually, or [...***...]

dollars ($[...***...]), whichever is greater. BELLICUM shall calculate the correct late payment charge, and shall add it to each such late payment. Said late payment charge and the payment and acceptance thereof shall not negate or waive the right of BAYLOR to seek any other remedy, legal or equitable, to which it may be entitled because of the delinquency of any payment. [...***...].

5.6 **Payment Address**: If payments are sent by check, they shall be sent to the address listed in Paragraph 14.1. If payments are sent by wire transfer, they shall be sent using the wiring instructions sent by BAYLOR.

5.7 **Notification of Merger or Acquisition**. In the event of acquisition, merger, change of corporate name, or change of make-up, organization, or identity, BELLICUM shall notify BAYLOR in writing within [...***...] days of such event.

5.8 **Small Entity Status Notification**. If BELLICUM or sublicensee does not qualify as a "small entity" as provided by the United States Patent and Trademark Office, BELLICUM will notify BAYLOR within [...***...] days of BELLICUM becoming aware of such entity status change.

6. RECORDS AND INSPECTION

6.1 **Obligation to Maintain Accounting Records**. BELLICUM shall maintain, and shall cause its sublicensees to maintain, complete and accurate records relating to the rights and obligations under this Agreement and any amounts payable to BAYLOR in relation to this Agreement, which records shall contain sufficient information to permit BAYLOR to confirm the accuracy of any reports delivered to BAYLOR and compliance in other respects with this Agreement. The relevant party shall retain such records for at least five (5) years following the end of the calendar year to which they pertain.

6.2 **BAYLOR Right to Conduct Audit**. During the Term of this Agreement as defined below and for a period of [...***...] thereafter, an independent certified public accountant, selected by BAYLOR and reasonably acceptable to BELLICUM (said acceptance shall not be unreasonably withheld, delayed, or denied), shall have the right to inspect the books and records of BELLICUM in conjunction with the performance of BELLICUM's obligations under the terms and conditions of this Agreement. BAYLOR will ensure that the accountant will conduct the inspection in accordance with duties or confidentiality and non-use no less stringent than such provisions of this Agreement. Such inspection will pertain only to BELLICUM's Sublicensing Revenue, Net Sales and calculation of Royalties within the [...***...] period immediately preceding the start of the inspection, and BAYLOR's accountant shall be granted access to records or documents required to determine the accuracy of any Sublicensing Revenue payment, Net Sales calculation or Royalty payment. BELLICUM agrees to provide the accountant reasonable access to the records and documents, and shall cooperate reasonably with the accountant in support of its inspection and audit activities during BELLICUM's

normal business hours. The accountant will issue a report specifying the findings of its inspection and audit, and BAYLOR will immediately issue a copy of the report to BELLICUM. If either Party disagrees with results of such report, BELLICUM and BAYLOR will use their good faith best efforts to resolve the disagreement.

6.3 **Resolution of a Payment Deficiency**. If a payment deficiency is determined, BELLICUM and its sublicensee(s), as applicable, shall pay the outstanding amounts within [...***...] days of receiving written notice thereof, plus interest on such outstanding amounts as described in Section 5.

6.4 **Responsibility for Audit Expenses**. BAYLOR will pay for any audit done under Paragraph 6.2. However, in the event that the audit reveals an underpayment of Royalties or fees by more than [...***...] percent ([...***...]%) for the period being audited, the cost of the audit shall be paid by BELLICUM. If the underpayment is less than [...***...] percent ([...***...]%) but more than [...***...] percent ([...***...]%) for the period being audited, BELLICUM and BAYLOR shall [...***...]

7. SUBLICENSES

All sublicenses granted by BELLICUM of its rights hereunder shall have terms and conditions no less restrictive than those in this Agreement. BELLICUM shall be responsible for its sublicensees and shall not grant any rights which are inconsistent with the rights granted to and obligations of BELLICUM hereunder. Should BELLICUM become aware of an act or omission of a sublicensee that would be a material breach of this Agreement, BELLICUM shall use reasonable business efforts to cause the sublicensee to cure the breach. No such sublicense agreement shall contain a provision that illegally extends the term of Patent Rights under this Agreement. BELLICUM shall give BAYLOR prompt notification of the identity and address of each sublicensee with whom it concludes a sublicense agreement and shall supply BAYLOR with a copy of each such sublicense agreement.

8. PATENTS AND INFRINGEMENT

8.1 **Patent Prosecution Responsibility**. From the Agreement Date and for the term of this Agreement, BELLICUM shall have primary responsibility, at its sole cost, to use patent counsel of its choice that is reasonably acceptable to BAYLOR for filing, prosecuting and maintaining all patent applications and patents included in the Patent Rights and Subject Technology licensed hereunder, except that BAYLOR may assume responsibility at its sole expense for pursuing any protection which BELLICUM declines to prosecute pursuant to Paragraph 8.2 of this Agreement.

8.2 **Notification of Intent Not to Pursue.** In the event that BELLICUM decides not to pay for the costs associated with either: (i) the prosecution of patent applications in the Patent Rights or (ii) maintenance of any United States or foreign issued patent in the Patent Rights, BELLICUM shall provide BAYLOR [...***...] days written notice thereof. BELLICUM’s right under this Agreement to practice an invention

validly claimed in an issued patent not pursued under this Section 8.2 shall terminate [...***...] days after such notice in the jurisdiction of the patent not pursued.

8.3 Obligation to Inform. BELLICUM agrees to keep BAYLOR reasonably informed, at [...***...]'s expense, of prosecution and other actions pursuant to this Section 8, including submitting to BAYLOR copies of all official actions and responses thereto.

8.4 Obligation to Cooperate. BAYLOR agrees to reasonably cooperate with BELLICUM to whatever extent is reasonably necessary to provide BELLICUM the full benefit of the license granted herein.

8.5 Infringement Procedures. During the term of this Agreement, each Party shall promptly inform the other of any suspected infringement of any claims in the Patent Rights or the misuse, misappropriation, theft or breach of confidence of other proprietary rights in the Subject Technology and/or Patent Rights by a third party, and with respect to such activities as are suspected. Any action or proceeding against such third party shall be instituted as follows:

(i) BAYLOR and BELLICUM may agree to jointly institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. Such joint action shall be brought in the names of both BAYLOR and BELLICUM. If BAYLOR or BELLICUM decide to jointly prosecute an action or proceeding after it has been instituted by one Party, the action shall be continued in the name or names they both agree is expedient for efficient prosecution of such action. BELLICUM and BAYLOR shall agree to the manner in which they shall exercise control over any joint action or proceeding, providing however that if they cannot agree BAYLOR shall have the right to unilaterally decide on control. In such joint action or proceeding, the out-of-pocket costs shall be borne equally, and any recovery or settlement shall be shared equally.

(ii) If BELLICUM does not agree to participate in a joint action or proceeding then BAYLOR shall have the right, but not the obligation, to institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party. If BAYLOR elects to institute action, it does so at its own cost. If BAYLOR fails to bring such an action or proceeding within a period of three (3) months after receiving notice or otherwise having knowledge of such infringement, then BELLICUM shall have the right, but not the obligation, to prosecute the same at its own expense. If BELLICUM elects to institute action and action is not jointly instituted as described in Section 8.5(i), BELLICUM does so at its own cost and BAYLOR agrees to be named in the action and reasonably cooperate with costs of such actions by BAYLOR being paid by BELLICUM. Should either BAYLOR or BELLICUM commence action under the provisions of this Paragraph 8.5 and thereafter elect to abandon the same, it shall give timely notice to the other Party who may, if it so desires, continue prosecution of such action or proceeding. All recoveries, whether by

judgment, award, decree or settlement, from infringement or misuse of Subject Technology and/or Patent Rights shall be apportioned as follows: (a) the Party bringing the action or proceeding shall first recover an amount equal the costs and expenses incurred by such Party directly related to the prosecution of such action or proceeding, (b) the Party cooperating in such action or proceeding shall then recover costs and expenses incurred by such Party directly related to its cooperation in the prosecution of such action or proceeding and (c) the remainder will be divided proportionately between BAYLOR and BELLICUM according to the fraction of the costs and expenses incurred by each Party.

8.6 **Consent to Settle**. Neither BAYLOR nor BELLICUM shall settle any action covered by Paragraph 8.5 without first obtaining the consent of the other Party, which consent will not be unreasonably withheld.

8.7 **Liability for Losses**. BAYLOR shall not be liable for any losses incurred as the result of an action for infringement brought against BELLICUM as the result of BELLICUM's exercise of any right granted under this Agreement. The decision to defend or not defend shall be in BELLICUM's sole discretion.

9. TERM AND EXPIRATION

Unless sooner terminated as otherwise provided in Section 10, the license to employ Patent Rights and Subject Technology granted herein as part of Section 2 shall expire on a country-by-country basis, on the date of expiration of the last of the Patent Rights to expire. After such expiration, BELLICUM shall have a perpetual, paid-in-full (i.e., royalty free) license in such country,

10. TERMINATION

10.1 **Termination by Baylor: Breach**. In the event of default or failure by BELLICUM to perform any of the terms, covenants or provisions of this Agreement, BELLICUM shall have ninety (90) days after the receipt by BELLICUM of written notice of such default by BAYLOR to correct such default. If such default is not corrected within the said ninety (90) day period, BAYLOR shall have the right, at its option, to cancel and terminate this Agreement. The Parties may mutually agree, in writing, to extend the cure period for a default if BELLICUM has demonstrated good faith efforts to cure said default. However, BAYLOR is not obligated to grant such an extension. The failure of BAYLOR to exercise such right of termination shall not be deemed to be a waiver of any right BAYLOR might have, nor shall such failure preclude BAYLOR from exercising or enforcing said right upon any subsequent failure by BELLICUM.

10.2 **Termination by Baylor: Insolvency**. BAYLOR shall have the right, at its option, to cancel and terminate this Agreement in the event that BELLICUM shall (i) become involved in insolvency, dissolution, bankruptcy or receivership proceedings affecting the operation of its business or (ii) make an assignment of all or substantially all of its assets for the benefit of creditors, or in the event that (iii) a receiver or trustee is appointed for BELLICUM and BELLICUM shall, after the expiration of thirty (30) days following any of the events enumerated above, have been unable to secure a dismissal, stay or other suspension of such proceedings.

10.3 **Termination by Bellicum**. BELLICUM, upon sixty (60) days prior written notice to BAYLOR, may terminate this Agreement with or without cause.

10.4 **Effects of Termination**. In the event of termination of this Agreement, all rights to the Subject Technology and Patent Rights shall revert to BAYLOR.

10.5 **Termination: Sublicenses**. Effective on the date of termination of this Agreement for any reason prior to expiration, BELLICUM hereby assigns to BAYLOR, and BAYLOR hereby accepts as a successor to BELLICUM, each authorized sublicense agreement that is in effect on the date of termination. BELLICUM will notify, in writing, each sublicensee of such assignment within ten (10) days after the date of termination of this Agreement. BAYLOR will accept the assignment of each sublicense agreement from BELLICUM when the sublicensee agrees in writing to be bound directly to BAYLOR by provisions of the sublicensing agreement. BELLICUM will include notification of this provision in this Section 10.5 in each sublicense it grants under this Agreement.

10.6 **No Refund**. In the event this Agreement is terminated pursuant to this Section 10, BAYLOR is under no obligation to refund any consideration made by BELLICUM to BAYLOR, as set forth in Section 4, prior to the effective date of such termination or expiration.

10.7 **Survival of Termination**. No termination of this Agreement shall constitute a termination or a waiver of any rights of either Party against the other Party accruing at or prior to the time of such termination. The obligations of Sections 4, 5, 6, 10, 12, 13, 14, 15, and 16 shall survive termination of this Agreement.

11. ASSIGNMENT

BELLICUM may assign this Agreement to a third party without BAYLOR's approval or consent as part of:

(i) sale or other transfer of BELLICUM's entire business; or

(ii) A sale or other transfer of that part of BELLICUM's business to which the license granted hereby relates;

BELLICUM shall give BAYLOR [...***...] days prior written notice of such assignment, including the new contact information of assignee. In circumstances other than (i) and (ii) of this Article 11, BELLICUM may assign this Agreement to a third party with the prior written consent of BAYLOR, which consent will not be unreasonably withheld, and BAYLOR will accept such assignment when the assignee has agreed in writing to be

bound by terms of this Agreement. Upon such assignment of this Agreement by such assignee, the term "BELLICUM" as used herein (i) will include the name of the assignee should BELLICUM assign a partial right and/or interest hereunder to the assignee, or (ii) will be replaced by the name of the assignee should BELLICUM assign its full right and interest hereunder to the assignee.

12. GOVERNMENTAL COMPLIANCE

12.1 Compliance with Laws. BELLICUM shall, during the term of this Agreement and for so long as it shall use the Subject Technology or Patent Rights or sell Licensed Products, comply with and cause its sublicensees to comply with all laws that may control the import, export, manufacture, use, sale, marketing, distribution and other commercial exploitation of the Subject Technology, Patent Rights, Licensed Products or any other activity undertaken pursuant to this Agreement.

12.2 Export Control Regulations. The Subject Technology is subject to, and BELLICUM agrees to use commercially reasonable efforts to comply with, U.S. law including but not limited to U.S. export controls under the Export Administration Regulations (15 C.F.R. Part 734 et seq.) and U.S. economic sanctions and embargoes codified in 31 C.F.R. Chapter V. BELLICUM agrees that BELLICUM bears sole responsibility for understanding and complying with current U.S. trade controls laws and regulations as applicable to its activities subject to this Agreement. Without limitation on the general agreement to comply set forth in the first sentence of this Paragraph 12.2, BELLICUM agrees not to sell any goods, services, or technologies subject to this Agreement, or to re-export the same: (1) to any destination prohibited by U.S. law, including any destination subject to U.S. economic embargo; (2) to any end-user prohibited by U.S. law, including any person or entity listed on the U.S. government's Specially Designated Nationals list, Denied Parties List, Debarred Persons List, Unverified List, or Entities List. Furthermore, any transfer of Patent Rights from BAYLOR to BELLICUM under this Agreement may be subject to U.S. export license authorization under U.S. law, and BAYLOR agrees to comply with applicable laws for such transfer.

12.3 Requirement for U.S. Manufacture. BAYLOR represents and certifies that research giving rise to the Patent Rights was partially funded by Federal funds, and that such Federal funds were solely from the National Institutes of Health (NIH). BELLICUM agrees that Licensed Products developed as a result of such Federal funds and are leased or sold in the United States shall be manufactured substantially in the United States, unless a written waiver is obtained from the NIH. At the request of BELLICUM, BAYLOR agrees to the best of its abilities to assist BELLICUM should BELLICUM seek such a waiver.

13. DISPUTE RESOLUTION

13.1 **Amicable Resolution**. The parties shall attempt to settle any controversy between them amicably. To this end, a senior executive from each Party shall consult and negotiate to reach a solution. The Parties agree that the period of amicable resolution shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing mediation if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that these amicable resolution negotiations have commenced.

13.2 **Mediation**. If a controversy arises out of or relates to this agreement, or the breach thereof, and if the controversy cannot be settled through amicable resolution, the Parties agree to try in good faith to settle the controversy by mediation before resorting to final and binding arbitration. The Party seeking mediation shall propose five mediators, each of whom shall be a lawyer licensed to practice by the state of Texas, having practiced actively in the field of commercial law for at least 15 years, to the other Party who shall select the mediator from the list. The Parties shall split the cost of the mediator equally. The Parties agree that the period of mediation shall toll any otherwise applicable statute of limitations. However, nothing in this clause shall preclude any Party from commencing arbitration if said negotiations do not result in a signed written settlement agreement within [...***...] days after written notice that amicable resolution negotiations have commenced.

13.3 **Arbitration**. Any dispute, controversy, or claim arising out of or relating to this Agreement, or the breach, termination or invalidity thereof, including claims for tortious interference or other tortious or statutory claims arising before, during or after termination, providing only that such claim touches upon matters covered by this Agreement shall be finally settled by arbitration administered by the American Arbitration Association pursuant to the Commercial Arbitration Rules in force at the time of the commencement of the arbitration, except as modified by the specific provisions of this Agreement. It is the specific intent of the Parties that this arbitration provision is intended to be the broadest form allowed by law.

13.4 **Parties to Arbitration**. This agreement to arbitrate is intended to be binding upon the signatories hereto, their principals, successors, assigns, subsidiaries and affiliates. This agreement to arbitrate is also intended to include any disputes, controversy or claims against any Party's employees, agents, representatives, or outside legal counsel arising out of or relating to matters covered by this Agreement or any agreement in which this Agreement is incorporated.

13.5 **Consolidation Permitted**. The Parties expressly agree that any court with jurisdiction may order the consolidation of any arbitrable controversy under this Agreement with any related arbitrable controversy not arising under this Agreement, as the court may deem necessary in the interests of justice or efficiency or on such other grounds as the court may deem appropriate.

13.6 **Entry of Judgment**. The Parties agree that a final judgment on the arbitration award may be entered by any court having jurisdiction thereof.

13.7 **Appointing Arbitrators**. The American Arbitration Association shall appoint the arbitrator(s) from its Large, Complex Claims Panel. If such appointment cannot be made from the Large, Complex Claims Panel, then from its Commercial Panel. The Parties hereby agree to and acquiesce in any appointment of an arbitrator or arbitrators that may be made by such appointing authority.

13.8 **Qualifications of the Arbitrator(s)**. The arbitrator(s) must be a lawyer, having practiced actively in the field of commercial law for at least 15 years.

13.9 **Governing Substantive Law**. The arbitrator(s) shall determine the rights and obligations of the Parties according to the substantive laws of the State of Texas (excluding conflicts of law principles) as though acting as a court of the State of Texas.

13.10 **Governing Arbitration Law**. The law applicable to the validity of the arbitration clause, the conduct of the arbitration, including any resort to a court for provisional remedies, the enforcement of any award and any other question of arbitration law or procedure shall be the Federal Arbitration Act.

13.11 **Governing Convention**. The Parties elect to have the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958 (instead of the Inter-American New York Convention on International Commercial Arbitration of August 15, 1990) govern any and all disputes that may be the subject of arbitration pursuant to this Agreement.

13.12 **Preliminary Issues of Law**. The arbitrator(s) shall hear and determine any preliminary issue of law asserted by a Party to be dispositive of any claim, in whole or part, in the manner of a court hearing a motion to dismiss for failure to state a claim or for summary judgment, pursuant to such terms and procedures as the arbitrator(s) deems appropriate.

13.13 **Confidentiality**. The Parties and the arbitrator(s) shall treat all aspects of the arbitration proceedings, including without limitation discovery, testimony and other evidence, briefs and the award, as strictly confidential. Further, except as may be required by law, neither Party nor the arbitrator(s) may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both Parties.

13.14 **Place of Arbitration**. The seat of arbitration shall be Houston, Texas, USA.

13.15 **Language**. The arbitration shall be conducted in the English language. All submissions shall be made in English or with an English translation. Witnesses may provide testimony in a language other than English, provided that a simultaneous English translation is provided. Each Party shall bear its own translation costs.

13.16 **Punitive Damages Prohibited**. The Parties hereby waive any claim to any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages, and the arbitrator(s) is/are specially divested of any power to award any damages in the nature of punitive, exemplary, or statutory damages in excess of compensatory damages, or any form of damages in excess of compensatory damages.

13.17 **Costs**. The Party prevailing on substantially all of its claims shall be entitled to recover its costs, including attorneys' fees, for the arbitration proceedings, as well as for any ancillary proceeding, including a proceeding to compel or enjoin arbitration, to request interim measures or to confirm or set aside an award.

13.18 **Survival**. The provisions of this Section 13 shall survive expiration or termination of this Agreement.

14. ADDRESSES

14.1 **Baylor Payment Address**. All certificates of common stock shall be sent to the address below, and shall reference the applicable **OTA numbers** listed on the front page of the Agreement.

BAYLOR Tax ID #: 74-1613878
Baylor College of Medicine
Licensing Group
P.O. Box 203710
Houston, TX 77216-3710

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg@bcm.tmc.edu

14.2 **Bellicum Payment Address**. For questions about payments, BAYLOR can contact BELLICUM at the address below:

Tom Farrell CEO
Bellicum Pharmaceuticals, Inc.
6400 Fannin Street, Suite 2300
Houston, TX 77030

(713) 341-6472 direct
(713) 335-1446 fax
(512) 507-0003 mobile
tfarrell@bellicum.com

14.3 **Address for Notices**. All notices, reports or other communication pursuant to this Agreement shall be sent to such Party via (i) United States Postal Service postage prepaid, (ii) overnight courier, or (iii) facsimile transmission, addressed

to it at its address set forth below or as it shall designate by written notice given to the other Party. Notice shall be sufficiently made, or given and received (a) on the date of mailing or (b) when a facsimile printer reflects transmission.

In the case of BAYLOR:
Patrick Turley
Associate General Counsel
Baylor College of Medicine
One Baylor Plaza, BCM210-600D
Houston, TX 77030

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg©bcm.tmc.edu

In the case of BELLICUM:
Tom Farrell CEO
Bellicum Pharmaceuticals, Inc.
6400 Fannin Street, Suite 2300
Houston, TX 77030

(713) 341-6472 direct
(713) 335-1446 fax
(512) 507-0003 mobile
tfarrell©bellicum.com

14.4 **Baylor Reference Number**. Each such report, notice or other communication shall include the applicable Baylor reference numbers listed on the front page of the Agreement.

15. ***REPRESENTATIONS, INDEMNITY & INSURANCE***

15.1 ***BELLICUM Representations***. BELLICUM hereby represents and certifies that:

(i) it is a corporation duly organized and in good standing under the laws of the State of Delaware;

(ii) it is qualified to do business and in good standing in the State of Texas and elsewhere as the nature of its business and properties so require;

(iii) the execution, delivery and performance of this Agreement by BELLICUM and the consideration provided for herein has been duly authorized by corporate action; and

(iv) it has the full power and authority to enter into and carry out its obligations under this Agreement.

BELLICUM agrees to indemnify and hold BAYLOR and its officers, trustees, faculty, employees, agents and representatives, harmless from any liabilities, costs and expenses (including attorneys' fees and expenses), obligations or causes of action arising out of or related to any breach of the representations and certifications made by BELLICUM in this Section 15.1.

15.2 BAYLOR Representations. BAYLOR represents and certifies that:

(i) it is qualified to do business and is in good standing in the State of Texas and elsewhere as the nature of its business and properties so require;

(ii) the execution, delivery and performance of this Agreement by BAYLOR and the consideration provided for herein has been duly authorized;

(iii) it has the full power and authority to enter into and carry out its obligations under this Agreement; and

(iv) it controls the entire right, title and interest in the Patent Rights and the Subject Technology BAYLOR owns and is fully authorized to make the grant in Section 2.1 of the Agreement.

15.3 GENERAL INDEMNITY.

(I) EACH PARTY SHALL NOTIFY THE OTHER OF ANY CLAIM, LAWSUIT OR OTHER PROCEEDING RELATED TO THE SUBJECT TECHNOLOGY AND PATENT RIGHTS. BELLICUM AGREES THAT IT WILL DEFEND, INDEMNIFY AND HOLD HARMLESS BAYLOR, ITS FACULTY MEMBERS, SCIENTISTS, RESEARCHERS, EMPLOYEES, OFFICERS, TRUSTEES AND AGENTS AND EACH OF THEM (THE "INDEMNIFIED PARTIES"), FROM AND AGAINST ANY AND ALL CLAIMS, CAUSES OF ACTION, LAWSUITS OR OTHER PROCEEDINGS (THE "BAYLOR CLAIMS") FILED OR OTHERWISE INSTITUTED AGAINST ANY OF THE INDEMNIFIED PARTIES ARISING OUT OF THE DESIGN, PROCESS, MANUFACTURE OR USE BY BELLICUM OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS, OR LICENSED PRODUCTS; PROVIDED, HOWEVER, THAT SUCH INDEMNITY SHALL NOT APPLY TO ANY CLAIMS ARISING FROM THE NEGLIGENCE OR INTENTIONAL MISCONDUCT OF ANY INDEMNIFIED PARTY. BELLICUM WILL ALSO ASSUME RESPONSIBILITY FOR ALL COSTS AND EXPENSES RELATED TO SUCH CLAIMS FOR WHICH IT IS OBLIGATED TO INDEMNIFY THE INDEMNIFIED PARTIES PURSUANT TO THIS PARAGRAPH 15.3, INCLUDING, BUT NOT LIMITED TO, THE PAYMENT OF ALL REASONABLE ATTORNEYS' FEES AND COSTS OF LITIGATION OR OTHER DEFENSE.

(II) BELLICUM FURTHER AGREES NOT TO SETTLE ANY CLAIM AGAINST A BAYLOR INDEMNITEE WITHOUT THE INDEMNITEE'S WRITTEN CONSENT WHICH CONSENT SHALL NOT BE UNREASONABLY WITHHELD. BELLICUM FURTHER AGREES TO KEEP BAYLOR INDEMNITEES FULLY APPRISED OF THE BAYLOR CLAIMS.

15.4 Insurance.

(i) BELLICUM shall, for so long as BELLICUM manufactures, uses or sells any Licensed Product(s) for research applications, maintain in full force and effect policies of (a) general liability insurance with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]) and (b) products liability insurance, with limits of not less than [...***...] dollars ($[...***...]) per occurrence with an annual aggregate of [...***...] dollars ($[...***...]).

(ii) BELLICUM shall provide to BAYLOR copies of certificates of insurance or copies of the policies of insurance within [...***...] days after BELLICUM receives a request from BAYLOR for such copies. It is the intention of the Parties hereto that BELLICUM shall, throughout the term of this Agreement, continuously and without interruption, maintain in force the required insurance coverages set forth in this Paragraph 15.4.

(iii) BAYLOR reserves the right to request additional policies of insurance where appropriate and reasonable in light of BELLICUM's business operations and availability of coverage.

15.5 DISCLAIMER OF WARRANTY. BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS OTHER THAN THOSE MADE ABOVE, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS OR MERCHANTABILITY, REGARDING OR WITH RESPECT TO THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS AND BAYLOR MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, OF THE PATENTABILITY OF THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS OR OF THE ENFORCEABILITY OF ANY PATENTS ISSUING THEREUPON, IF ANY, OR THAT THE SUBJECT TECHNOLOGY, PATENT RIGHTS OR LICENSED PRODUCTS ARE OR SHALL BE FREE FROM INFRINGEMENT OF ANY PATENT OR OTHER RIGHTS OF THIRD PARTIES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS CONFERRING BY IMPLICATION, ESTOPPEL OR OTHERWISE ANY LICENSE OR RIGHTS UNDER ANY PATENTS OF BAYLOR OTHER THAN THE PATENT RIGHTS, REGARDLESS OF WHETHER SUCH PATENTS ARE DOMINANT OR SUBORDINATE TO THE PATENT RIGHTS.

16 ADDITIONAL PROVISIONS

16.1 Use of BAYLOR Name. BAYLOR agrees that BELLICUM may publicly disclose the existence of this Agreement, the name "Baylor College of Medicine" and the names of scientists and researchers at BAYLOR associated with the Patent Rights and Technology Rights. BELLICUM will not disclose it has an affiliation with BAYLOR that does not exist at the time the name "Baylor College of Medicine" is publicly disclosed.

16.2 Confidentiality.

(i) Confidential Information will be marked "CONFIDENTIAL." The recipient of Confidential Information ("Recipient") agrees to retain in confidence and to prevent the disclosure of the Confidential Information from the discloser ("Discloser") to any third party without the prior written consent of the Discloser; provided, however, the Recipient may disclose Confidential Information to its officers, directors, employees, partners, investors, shareholders, lawyers, accountants, and consultants (collectively, the "Representatives") on a need-to-know basis only for the purpose of assisting the Recipient in evaluating the Confidential Information or in the discharge of its obligations under this Agreement. The Recipient will use the same degree of care with respect to the Confidential Information as it would with its own proprietary and confidential information, and in no event use less than a reasonable degree of care. The Recipient will use reasonable efforts to notify its Representatives about the Recipient's duties under this Agreement and to promote Representatives' maintenance of the confidentiality of the Confidential Information as if the Representatives were themselves parties to this Agreement. BELLICUM may disclose Confidential Information to potential licensees, purchasers, investors, joint venturers and the like so long as BELLICUM uses commercially reasonable efforts to make such disclosures subject to a confidentiality agreement. The Recipient agrees to retain in confidence and to prevent the disclosure of any document prepared by or for the Recipient that includes Discloser's Confidential Information, including without limitation any document that analyzes or summarizes Discloser's Confidential Information, to any third party without the prior written consent of the Discloser.

(ii) This Agreement imposes no obligations upon the Recipient with respect to any Confidential Information which (a) was in the Recipient's possession before receipt of such information from the Discloser, as evidenced by competent written proof; (b) is or becomes a matter of public knowledge through no fault or violation of this Agreement by the Recipient or its Representatives; (c) is rightfully received by the Recipient from a third party who, to the Recipient's knowledge, is not under a duty of confidentiality; (d) is approved in writing for release by the Discloser prior to such release; (e) is independently developed by the Recipient as evidenced by Recipient's written records without any use of or reference to Confidential Information of the Discloser; or (f) is disclosed in an intangible medium (e.g., visual, oral) and not confirmed in a writing to the Recipient within thirty (30) days after its initial disclosure by the Discloser. Notwithstanding any other provision of this Agreement, the Recipient may disclose Confidential Information which is required to be disclosed by law, rule, regulation, administrative, or legal process ("Compelled Request"); provided, however, the Recipient will give prompt written notice of any Compelled Request for such information to the Discloser and agrees to cooperate with the Discloser, at the Discloser's expense, to challenge the request or limit the scope of disclosure of such information, as the Discloser may request and deem appropriate.

(iii) Each Party agrees to notify the other Party in writing of any misuse or misappropriation of the other Party's Confidential Information that may come to its attention. The Parties hereby acknowledge and agree that in the event of any breach of this Section 16.2, including, without limitation, the actual or threatened disclosure or unauthorized use of Confidential Information without the prior express written consent of the Discloser, the Discloser would suffer an irreparable injury such that no remedy at law would adequately protect or appropriately compensate the disclosing party for such injury. Accordingly, the Parties agree that the Discloser will have the right to enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without bond or further showing and without prejudice to any other rights and remedies that the Discloser may have for a breach of this Section 16.2.

16.3 No Additional Rights. BELLICUM acknowledges that, other than the specific rights granted hereunder, it is not entitled to any rights to any current or future technology, research or developments made at or owned by BAYLOR.

16.4 BAYLOR's Disclaimers. Neither BAYLOR, nor any of its faculty members, scientists, researchers, employees, officers, trustees or agents assume any responsibility for the manufacture, product specifications, sale or use of the Subject Technology or the Licensed Products which are manufactured by or sold by BELLICUM.

16.5 Independent Contractors. The Parties hereby acknowledge and agree that each is an independent contractor and that neither Party shall be considered to be the agent, representative, master or servant of the other Party for any purpose whatsoever, and that neither Party has any authority to enter into a contract, to assume any obligation or to give warranties or representations on behalf of the other Party. Nothing in this relationship shall be construed to create a relationship of joint venture, partnership, fiduciary or other similar relationship between the Parties.

16.6 **Non-Waiver**. The Parties covenant and agree that if a Party fails or neglects for any reason to take advantage of any of the terms provided for the termination of this Agreement or if a Party, having the right to declare this Agreement terminated, shall fail to do so, any such failure or neglect by such Party shall not be a waiver or be deemed or be construed to be a waiver of any cause for the termination of this Agreement subsequently arising, or as a waiver of any of the terms, covenants or conditions of this Agreement or of the performance thereof. None of the terms, covenants and conditions of this Agreement may be waived by a Party except by its written consent.

16.7 **Reformation**. The Parties hereby agree that neither Party intends to violate any public policy, statutory or common law, rule, regulation, treaty or decision of any government agency or executive body thereof of any country or community or association of countries, and that if any word, sentence, paragraph or clause or combination thereof of this Agreement is found, by a court or executive body with judicial powers having jurisdiction over this Agreement or any of the Parties hereto, in a final, unappealable order to be in violation of any such provision in any country or

community or association of countries, such words, sentences, paragraphs or clauses or combination shall be inoperative in such country or community or association of countries, and the remainder of this Agreement shall remain binding upon the Parties hereto.

16.8 Force Majeure. No liability hereunder shall result to a Party by reason of delay in performance caused by force majeure, that is circumstances beyond the reasonable control of the Party, including, without limitation, acts of God, fire, flood, war, terrorism, civil unrest, labor unrest, or shortage of or inability to obtain material or equipment.

16.9 Informed Review. Each Party acknowledges that it and its counsel have received and reviewed this Agreement and that normal rules of construction, to the effect that ambiguities are to be resolved against the drafting Party, shall not apply to this Agreement or to any amendments, modifications, exhibits or attachments to this Agreement.

16.10 Section Headings. The section headings used in this Agreement are intended for purposes of reference and convenience only, and shall not enter into any interpretation of this Agreement.

16.11 Entire Agreement. The terms and conditions herein constitute the entire agreement between the Parties and shall supersede all previous agreements, either oral or written, between the Parties hereto with respect to the subject matter hereof. No agreement of understanding bearing on this Agreement shall be binding upon either Party hereto unless it shall be in writing and signed by the duly authorized officer or representative of each of the Parties and shall expressly refer to this Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement in multiple originals by their duly authorized officers and representatives on the respective dates shown below, but effective as of the Agreement Date.

BELLICUM PHARMACEUTICALS, INC.	BAYLOR COLLEGE OF MEDICINE
Name: /s/ Thomas J. Farrell Thomas J. Farrell	Name: /s/ Illegible
Title: Chief Executive Officer	Title: Sr. VP and Dean of Research
Date: June 27, 2010	Date: June 22, 2010

APPROVED AS TO FORM
Office of the General Counsel
Baylor College of Medicine
By: /s/ 6/17/10

Appendix A
Royalty Report

BLG #: _____

Licensee: _____

Reporting Period: _____

Prepared By _____ Date: _____

Approved By _____ Date: _____

Please prepare a separate report for each product line. Then combine all product lines into a summary report.

Product Line Code (SKU): _____

Country	Units Sold	Exchange Rate	Total Billings (USD)	Gross Sales (USD)	Less Deductions* (USD)	Net Sales (USD)	Royalty Rate	Royalty Amount
USA								
Canada								
Europe:								
Japan								
Other:								
Total								**$**
Third Party Royalty Payments (USD)								**$**
Net Royalty Payable (USD)								**$**
Sublicensing Revenue (USD)								**$**
Other Payments- Milestones, Minimum Royalties, Maintenance Fees (USD)								**$**
Total Payment Due (USD)								**$**

* Deduction Description:

Exhibit 10.5

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY […*…], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM IF PUBLICLY DISCLOSED.**

CANCER PREVENTION &
RESEARCH INSTITUTE OF TEXAS

STATE OF TEXAS
COUNTY OF TRAVIS

This **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") is by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**"), hereinafter referred to as the "**INSTITUTE**", acting through its Executive Director, and **Bellicum Pharmaceuticals, Inc.**, hereinafter referred to as the "**RECIPIENT**", acting through its authorized signing official.

RECITALS

WHEREAS, pursuant to TEX. HEALTH & SAFETY CODE, Ch. 102, the INSTITUTE may make grants to public and private persons in this state for research into the causes and cures for all types of cancer in humans; facilities for use in research into the causes and cures for cancer; research to develop therapies, protocols, medical pharmaceuticals, or procedures for the cure or substantial mitigation of all types of cancer; and cancer prevention and control programs.

WHEREAS, Article III, Section 67 of the Texas Constitution expressly authorizes the State of Texas to sell general obligation bonds on behalf of the INSTITUTE and for the INSTITUTE to use the proceeds from the sale of the bonds for the purposes of cancer research and prevention programs in this state.

WHEREAS, the INSTITUTE issued a request for applications for RFA R-11-COMP-1: Company Commercialization Awards on or about July 2010.

WHEREAS, pursuant to TEX. HEALTH & SAFETY CODE § 102.251, and after a review by the INSTITUTE's scientific research and prevention program committees, the INSTITUTE's Executive Director has approved a Grant (defined below) to be awarded to the RECIPIENT.

WHEREAS, to ensure that the Grant provided to the RECIPIENT pursuant to this Contract is utilized in a manner consistent with Tex. Const. Article III, Section 67 and other laws, and in exchange for receiving such Grant, the RECIPIENT agrees to comply with certain conditions and deliver certain performance.

WHEREAS, the RECIPIENT and the INSTITUTE desire to set forth herein the provisions relating to the awarding of such monies and the disbursement thereof to the RECIPIENT.

IN CONSIDERATION of the Grant and the premises, covenants, agreements, and provisions contained in this Contract, the parties agree to the following terms and conditions:

Article I
DEFINITIONS

The following terms shall have the following meaning throughout this Contract and any Attachments and amendments. Other terms may be defined elsewhere in this Contract.

(1) **Collaborator** – any entity other than the RECIPIENT having one or more personnel participating in the Project and (a) designated as a collaborator in the application submitted by the RECIPIENT requesting the Grant funds awarded by the INSTITUTE, or (b) otherwise approved in writing as a collaborator by the INSTITUTE.

(2) **Contractor** – any person or entity, other than a Collaborator or the RECIPIENT (or their respective personnel), who is contracted by the RECIPIENT to perform activities for the Project.

(3) **Equipment** – an article of tangible, nonexpendable personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.

(4) **Grant** – the funding assistance authorized by TEX. HEALTH & SAFETY CODE, Ch. 102 in the amount specified in Section 2.01 and awarded by the INSTITUTE to the RECIPIENT to carry out the Project pursuant to the terms and conditions of this Contract.

(5) **Indirect Costs** – the expenses of doing business that are not readily identified with a particular grant, contract, project, function or activity, but are necessary for the general operation of the organization or the performance of the organization's activities.

(6) **Institute-Funded Activity** - all aspects of work conducted on or as part of the Project.

(7) **Non-Profit Organization** – a university or other institution of higher education or an organization of the type described in 501(c)(3) of the Internal Revenue Code of 1986, as amended (26 U.S.C. 501 (c)(3)) and exempt from taxation under 501 (a) of the Internal Revenue Code (26 U.S.C. 501 (a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(8) **Principal Investigator/Program Director** – the individual designated by the RECIPIENT to direct the Project who is principally responsible and accountable to the RECIPIENT and the INSTITUTE for the proper conduct of the Project. References herein to "Principal Investigator/Program Director" include Co-Principal Investigators or Co-Program Directors as well. The Principal Investigator/Program Director and Co-Principal Investigators or Co-Program Directors are set forth on Attachment A.

(9) **Project** – the activities specified or generally described in the Scope of Work or otherwise in this Contract (including without limitation any of the Attachments to the Contract) that are approved by the INSTITUTE for funding, regardless of whether the INSTITUTE funding constitutes all or only a portion of the financial support necessary to carry them out.

(10) **Recipient Personnel** – The RECIPIENT's Principal Investigator/Program Director and RECIPIENT's employees and consultants working on the Project.

Article II
GRANT AWARD

Section 2.01 Award of Monies. In accordance with the provisions of this Contract, the INSTITUTE shall disburse the proceeds of the Grant to the RECIPIENT in an amount not to exceed **$5,680,310** to be used solely for the Project. This award is subject to compliance with the Scope of Work and demonstration of progress towards achievement of the milestones set forth in Section 2.02. The INSTITUTE, in its sole discretion, may award supplemental funding not to exceed ten percent (10%) of the total Grant amount based upon progress made by the RECIPIENT pursuant to the Scope of Work. This Grant is not intended to be a loan of money.

Section 2.02 Scope of Work and Milestones. The RECIPIENT shall perform the Project in accordance with this Agreement and as outlined in Application **RP110508** submitted by the RECIPIENT and approved by the INSTITUTE. The RECIPIENT shall conduct the Project within the State of Texas with Texas-based employees, Contractors and/or Collaborators unless otherwise specified in the Scope of Work or the Approved Budget. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment A in their entirety, incorporate them as if fully set forth herein, and agree that the Project description, goals, timeline and milestones included as Attachment A accurately reflect the Scope of Work of the Project to be undertaken by the RECIPIENT (the "**Scope of Work**") and the milestones expected to be achieved. RECIPENT and the INSTITUTE mutually agree that the outcome of scientific research is unpredictable and cannot be guaranteed. The RECIPIENT shall use commercially reasonable efforts to complete the goals of the Project pursuant to the timeline reflected in Attachment A and shall timely notify the INSTITUTE if circumstances occur that materially and adversely affect completion thereof. Modifications, if any, to the Scope of Work must be agreed to in writing by both parties as set forth in Section 2.06 "Amendments and Modifications" herein. Material changes to the Scope of Work include, but are not limited to, changes in key personnel involved with the Project, the site of the Project, and the milestones expected to be achieved.

Section 2.03 Contract Term. The Contract shall be effective as of **June 1, 2011** (the "**Effective Date**") and terminate on **May 31, 2013** or in accordance with the Contract termination provisions set forth in Article VIII herein, whichever shall occur first (the "**Termination Date**"). Unless otherwise approved by the INSTITUTE as evidenced by written communication from the INSTITUTE to the RECIPIENT and appended to the Contract, Grant funds distributed pursuant to the Contract shall be expended no earlier than the Effective Date or subsequent to the Termination Date. If, as of the Termination Date, the RECIPIENT has not used Grant money awarded by the INSTITUTE for permissible services, expenses, or costs related to the Project and has not received approval from the INSTITUTE for a no cost extension to the contract term pursuant to Section 3.11 "Carry Forward of Unspent Funds and No Cost Extension" herein, then the RECIPIENT shall not be entitled to retain such unused Grant funds from the INSTITUTE. Certain obligations as set forth in Section 9.09 of this Contract shall extend beyond the Termination Date.

Section 2.04 Contract Documentation. The Contract between the INSTITUTE and the RECIPIENT shall consist of this final, executed Contract, including the following Attachments to the Contract, all of which are hereby incorporated by reference:

(a) Attachment A – Project Description, Goals and Timeline

(b) Attachment B – Approved Budget, including changes approved by the INSTITUTE subsequent to execution of the Contract.

(c) Attachment C – Assurances and Certifications

(d) Attachment D – Intellectual Property and Revenue Sharing

(e) Attachment E – Reporting Requirements

(f) Attachment F – Approved Amendments to Contract, excluding budget amendments reflected in Attachment B.

Section 2.05 Entire Agreement. All agreements, covenants, representations, certifications and understandings between the parties hereto concerning this Contract have been merged into this written Contract. No prior or contemporaneous representation, agreement or understanding, express or implied, oral or otherwise, of the parties or their agents that may have related to the subject matter hereof in any way shall be valid or enforceable unless embodied in this Contract.

Section 2.06 Amendments and Modifications. Requested amendments and modifications to the Contract must be submitted in writing to the INSTITUTE for review and approval (such approval shall not be unreasonably withheld.) Amendments and modifications (including alterations, additions, deletions, assignments and extensions) to the terms of this Contract shall be made solely in writing and shall be executed by both parties. The approved amendment shall be reflected in Attachment A if it is change to the Scope of Work, or as part of Attachment B if it is a budget amendment, or as part of Attachment F for all other changes. No handwritten changes to this Contract shall be effective unless initialed and dated by authorized signatories of both parties.

Section 2.07 Relationship of the Parties. The RECIPIENT shall be responsible for the conduct of the Project that is the subject of this Contract and shall direct the activities and at all times be responsible for the performance of Recipient Personnel, Collaborators, Contractors and other agents. The INSTITUTE does not assume responsibility for the conduct of the Project or any Institute-Funded Activity that is the subject of this Contract. The INSTITUTE and the RECIPIENT shall perform their respective obligations under this Contract as independent contractors and not as agents, employees, partners, joint venturers, or representatives of the other party. Neither party is permitted to make representations or commitments that bind the other party.

Section 2.08 Subcontracting. Any and all subcontracts entered into by the RECIPIENT in relation to the performance of activities under the Project shall be in writing and shall be subject to the requirements of this Contract. Without in any way limiting the foregoing, the RECIPIENT shall enter into and maintain a written agreement with each such permitted Contractor with terms and conditions sufficient to ensure the RECIPIENT fully complies with the terms of this Contract, including without limitation the terms set forth in Attachments C, D, and E. The RECIPIENT agrees that it shall be responsible to the INSTITUTE for the performance of and payment to any Contractor. Any reimbursements made by the RECIPIENT to a Contractor shall be made in accordance with the applicable provisions of TEX. GOV'T. CODE, Ch. 2251.

Section 2.09 Transfer or Assignment by the Recipient. This Contract is not transferable or otherwise assignable by the RECIPIENT, whether by operation of law or otherwise, without the prior written consent of the INSTITUTE, except as provided in this Section 2.09. Any such attempted transfer or assignment without the prior written consent of the INSTITUTE (except as provided in this Section 2.09) shall be null, void and of no effect. For purposes of this section, an assignment or transfer of this Contract by the RECIPIENT in connection with a merger, transfer or sale of all or substantially all of the RECIPIENT's assets or business related to this Contract or a consolidation, change of control or similar transaction involving the RECIPIENT shall not be deemed to constitute a transfer or assignment, so long as such action does not impair or otherwise negatively impact the revenue sharing terms in Attachment D. Nothing herein shall be interpreted as superseding the requirement that the Project be undertaken in Texas with Texas-based employees.

If the Principal Investigator leaves the employment of the RECIPIENT or is replaced by the RECIPIENT for any reason during the course of the Grant with someone who is not already designated a co-Principal Investigator in Attachment A, the RECIPIENT shall notify the INSTITUTE prior to replacing the Principal Investigator. Written approval by the INSTITUTE is required for the replacement of the Principal Investigator with someone who is not already a co-Principal Investigator in Attachment A, which approval shall not be unreasonably withheld, conditioned or delayed.

Section 2.10 Representations and Certifications. The RECIPIENT represents and certifies to the best of its knowledge and belief to the INSTITUTE as follows:

(a) It has legal authority to enter into, execute, and deliver this Contract, and all documents referred to herein, and it has taken all corporate actions necessary to its execution and delivery of such documents;

(b) It will comply with all of the terms, conditions, provisions, covenants, requirements, and certifications in this Contract, and all other documents incorporated herein by reference;

(c) It has made no material false statement or misstatement of fact in connection with this Contract and its receipt of the Grant, and all of the information it previously submitted to the INSTITUTE or that it is required under this Contract to submit to the INSTITUTE relating to the Grant or the disbursement of any of the Grant is and will be true and correct at the time such statement is made;

(d) It is in compliance in all material respects with provisions of its charter and of the laws of the State of Texas, and of the laws of the jurisdiction in which it was formed, and (i) there are no actions, suits, or proceedings pending, or threatened, before any judicial body or governmental authority against or affecting its ability to enter into this Contract, or any document referred to herein, or to perform any of the material acts required of it in such documents and (ii) it is not in default with respect to any order, writ, injunction, decree, or demand of any court or any governmental authority which would impair its ability to enter into this Contract, or any document referred to herein, or to perform any of the material acts required of it in such documents;

(e) Neither the execution and delivery of this Contract or any document referred to herein, nor compliance with any of the terms, conditions, requirements, or provisions contained in this Contract or any documents referred to herein, is prevented by, is a breach of, or will result in a breach of, any term, condition, or provision of any agreement or document to which it is now a party or by which it is bound; and

(f) It shall furnish such satisfactory evidence regarding the representations and certifications described herein as may be required and requested by the INSTITUTE from time to time.

Section 2.11 Reliance upon Representations. By awarding the Grant and executing this Contract, the INSTITUTE is relying, and will continue to rely throughout the term of this Contract, upon the truthfulness, accuracy, and completeness of the RECIPIENT's written assurances, certifications and representations. Moreover, the INSTITUTE would not have entered into this Contract with the RECIPIENT but for such written assurances, certifications and representations. The RECIPIENT acknowledges that the INSTITUTE is relying upon such assurances, certifications and representations and acknowledges their materiality and significance.

Section 2.12 Contingent upon Availability of Grant Funds. This Contract is contingent upon funding being available for the term of the Contract and the RECIPIENT shall have no right of action against the INSTITUTE in the event that the INSTITUTE is unable to perform its obligations under this Contract as a result of the suspension, termination, withdrawal, or failure of funding to the INSTITUTE or lack of sufficient funding of the INSTITUTE for this Contract. If funds become unavailable to the INSTITUTE during the term of the Contract, Section 8.01(c) shall apply. For the sake of clarity, and except as otherwise provided by this Contract, if this Contract is not funded, then both parties are relieved of all of their obligations under this Contract. The INSTITUTE acknowledges and agrees that the Project is a multiyear project subject to Tex. Health & Safety Code, Chr. 102, Section 102.257.

Section 2.13 Confidentiality of Documents and Information. In connection with work contemplated for the Project or pursuant to complying with various provisions of this Contract, the RECIPIENT may disclose its confidential business, financial, technical, scientific information and other information to the INSTITUTE ("Confidential Information"). To assist the INSTITUTE in identifying such information, the RECIPIENT shall mark or designate the information as "confidential," provided however that the failure to so designate does not operate as a waiver to protections provided by applicable law or this Contract. The INSTITUTE shall use no less than reasonable care to protect the confidentiality of the Confidential Information to the fullest extent permissible under the Texas Public Information Act, Texas Government Code, Chapter 552 (the "**TPIA**"), and, except as otherwise provided in the TPIA to prevent the disclosure of the Confidential Information to third parties for a period of time equal to three (3) years from the termination of the contract, unless the INSTITUTE and the RECIPIENT agree in writing to extend such time period, provided that this obligation shall not apply to information that:

(a) was in the public domain at the time of disclosure or later became part of the public domain through no act or omission of the INSTITUTE in breach of this Contract;

(b) was lawfully disclosed to the INSTITUTE by a third party having the right to disclose it without an obligation of confidentiality;

(c) was already lawfully known to the INSTITUTE without an obligation of confidentiality at the time of disclosure;

(d) was independently developed by the INSTITUTE without using or referring to the RECIPIENT's Confidential Information; or

(e) is required by law or regulation to be disclosed.

The INSTITUTE shall hold the Confidential Information in confidence, shall not use such Confidential Information except as provided by the terms of this Contract, and shall not disclose such Confidential Information to third parties without the prior written approval of the RECIPIENT or as otherwise allowed by the terms of the Contract. Subject in all respects to the terms of this Contract and the TPIA, the INSTITUTE has the right to use and disclose the Confidential Information reasonably in connection with the exercise of its rights under the Contract.

In the event that the INSTITUTE is requested or required (by oral questions, interrogatories, requests for information or documents in legal proceedings, subpoena, civil investigative demand or other similar process by a court of competent jurisdiction or by any administrative, legislative, regulatory or self-regulatory authority or entity) to disclose any Confidential Information, the INSTITUTE shall provide the RECIPIENT with prompt written notice of any such request or requirement so that the RECIPIENT may seek a protective order or other appropriate remedy. If, in the absence of a protective order or other remedy, the INSTITUTE is nonetheless legally compelled to make any such disclosure of Confidential Information to any person, the INSTITUTE may, without liability hereunder, disclose only that portion of the Confidential Information that is legally required to be disclosed, provided that the INSTITUTE will use reasonable efforts to assist the RECIPIENT, at the RECIPIENT's expense, in obtaining an appropriate protective order or other reliable assurance that confidential treatment will be accorded the Confidential Information. To the extent that such Confidential Information does not become part of the public domain by virtue of such disclosure, it shall remain Confidential Information hereunder.

Article III
DISBURSEMENT OF GRANT AWARD PROCEEDS

Section 3.01 Payment of Grant Award Proceeds. The INSTITUTE will advance Grant award proceeds upon request by the RECIPIENT, consistent with the amounts and schedule as provided in Attachment B. If the RECIPIENT does not request advancement of funds for some or all of the Grant award proceeds, disbursement of Grant award proceeds for services performed and allowable expenses and costs incurred pursuant to the Scope of Work will be on a reimbursement basis.

Section 3.02 Requests for Reimbursement and Quarterly Financial Status Reports. If the RECIPIENT does not elect to receive an advance disbursement of Grant proceeds, the RECIPIENT's requests for reimbursement shall be made on INSTITUTE Form 269a (Financial Status Report). If the RECIPIENT has elected to receive an advance disbursement of Grant proceeds, RECIPIENT shall submit INSTITUTE Form 269a (Financial Status Report) to document all costs and allowable expenses paid with Grant proceeds. The RECIPIENT shall submit the INSTITUTE Form 269a quarterly to the INSTITUTE within 90 days following the end of the quarter covered by the bill. A final INSTITUTE Form 269a shall be submitted by RECIPIENT not later than 90 days after the Termination Date. An extension of time for submission deadlines specified herein must be expressly authorized in writing by the INSTITUTE.

Section 3.03 Actual Costs and Allowable Expenses. Because the Approved budget for the Project(s) as set forth in Attachment B is only an estimate, the parties agree that the RECIPIENT's billings under this Contract will reflect the actual costs and expenses incurred in performing the Project(s), regardless of the Approved Budget, up to the total contracted amount specified in Section 2.01 "Award of Monies." The RECIPIENT shall use Grant proceeds only for allowable expenses consistent with state law and agency administrative rules. Allowable expenses for the Project(s) shall be only as outlined in the Approved Budget and any modifications to same.

Section 3.04 Travel Expenses. Reimbursement for travel expenditures shall be in accordance with the Approved Budget. Prior written approval from the INSTITUTE must be obtained before travel that exceeds the amount included in the Approved Budget commences. Failure to obtain such prior written approval shall result in such excess travel costs constituting expenses that may not be taken into account for the purposes of calculating expenditure of Grant funds under this Contract.

Section 3.05 Budget Modifications. The total Approved Budget and the assignment of costs may be adjusted based on implementation of the Scope of Work, spending patterns, and unexpended funds, but only by an amendment to the Approved Budget. In no event shall an amendment to the Approved Budget result in payments in excess of the aggregate amount specified in Section 2.01 "Award of Monies" or in approved supplemental funding for the Project, if any. The RECIPIENT may make transfers between or among lines within budget categories without prior written approval provided that:

(a) The total dollar amount of all changes of any single line item within budget categories (individually and in the aggregate) is less than [...***...]% of the total Approved Budget;

(b) The transfer will not increase or decrease the total Approved Budget;

(c) The transfer will not materially change the nature, performance level, or Scope of Work of the Project; and

(d) The RECIPIENT submits a revised copy of the Approved Budget including a narrative justification of the changes prior to incurring costs in the new category.

All other budget changes or transfers require the INSTITUTE's express prior written approval. Transfer of funds between categories in the Project's Approved Budget may be allowed if requests are in writing, fit within the Scope of Work and the total Approved Budget, are beneficial to the achievement of the objectives of the Project, and appear to be an efficient, effective use of the INSTITUTE's funds.

Section 3.06 Withholding Payment. The INSTITUTE may withhold Grant award proceeds from the RECIPIENT if required Financial Status Reports (Form 269a) are not on file for previous quarters or for the final period, if material program requirements are not met and remain uncured after a reasonable time period to cure, if the RECIPIENT is in breach of any material term of this Contract, or in accordance with provisions of this Contract as well as applicable state or federal laws, regulations or administrative rules, and the breach remains uncured after a reasonable time period to cure. The INSTITUTE shall have the right to withhold all or part of any future payments to the RECIPIENT to offset any prior advance payments made to the RECIPIENT for ineligible expenditures that have not been refunded to the INSTITUTE by the RECIPIENT

Section 3.07 Grant Funds as Supplement to Budget. The RECIPIENT shall use the Grant proceeds awarded pursuant to this Contract to supplement its overall budget. These funds will in no event supplant existing funds currently available to the RECIPIENT that have been previously budgeted and set aside for the Project. The RECIPIENT will not bill the INSTITUTE for any costs under this Contract that also have been billed or should have been billed to any other funding source.

Section 3.08 Buy Texas. The RECIPIENT shall apply good faith efforts to purchase goods and services from suppliers in Texas to the extent reasonably possible, to achieve a goal of more than 50 percent of such purchases from suppliers in Texas.

Section 3.09 Historically Underutilized Businesses. The RECIPIENT shall use reasonable efforts to purchase materials, supplies or services from a Historically Underutilized Business (HUB). The Texas Procurement and Support Services website will assist in finding HUB vendors (http://www.window.state.tx.us/procurement.) The RECIPIENT shall complete a HUB report with each annual report submitted to the INSTITUTE in accordance with Attachment E.

Section 3.10 Limitation on Use of Grant Award Proceeds to Pay Indirect Costs. The RECIPIENT shall not spend more than five percent of the Grant award proceeds for Indirect Costs.

Section 3.11 Carry Forward of Unspent Funds and No Cost Extension. RECIPIENT may request to carry forward unspent funds into the budget for the next year. Carryover of unspent funds must be specifically approved by the INSTITUTE. The INSTITUTE may approve a no cost extension for the Contract for a period not to exceed six (6) months after the Termination Date if additional time beyond the Termination date is required to ensure adequate completion of the approved project. The Contract must be in good fiscal and programmatic standing. All terms and conditions of the Contract shall continue during any extension period and if such extension is approved, notwithstanding Section 2.03, all references to the "Termination Date" shall be deemed to mean the date of expiration of such extension period.

Article IV
AUDITS AND INSPECTIONS

Section 4.01 Record Keeping. The RECIPIENT, each Collaborator and each Contractor whose costs are funded in all or in part by the Grant shall maintain or cause to be maintained books, records, documents and other evidence (electronic or otherwise) pertaining in any way to its performance under and compliance with the terms and conditions of this Contract ("**Records**"). The RECIPIENT, each Collaborator and each Contractor shall use, or shall cause the entity which is maintaining such Records to use generally accepted accounting principles in the maintenance of such Records, and shall retain or require to be retained all of such Records for a period of four (4) years from the Termination Date of the Contract.

Section 4.02 Audits. Upon request and with reasonable notice, the RECIPIENT, each Collaborator and each Contractor whose costs are charged to the Project shall allow, or shall cause the entity which is maintaining such items to allow, the INSTITUTE, or auditors working on behalf of the INSTITUTE, including the State Auditor and/or the Comptroller of Public Accounts for the State of Texas, to review, inspect, audit, copy or abstract all of its Records during regular working hours. Acceptance of funds directly under the Contract or indirectly through a subcontract under the Contract constitutes acceptance of the authority of the INSTITUTE, or auditors working on behalf of the INSTITUTE, including the State Auditor and/or the Comptroller of Public Accounts, to conduct an audit or investigation in connection with those funds for a period of four (4) years from the Termination Date of the Contract.

Notwithstanding the foregoing, any RECIPIENT expending $[...***...] or more in federal or state awards during its fiscal year shall obtain either an annual single audit or a program specific audit. A RECIPIENT expending funds from only one federal program (as listed in the Catalog of Federal Domestic Assistance (CFDA) or one state program may elect to obtain a program specific audit in accordance with Office of Management and Budget (OMB) Circular A-133 or with the State of Texas Uniform Grant Management Standards (UGMS). A single audit is required if funds from more than one federal or state program are spent by the RECIPIENT. The audited time period is the RECIPIENT's fiscal year, not the INSTITUTE funding period.

Section 4.03 Inspections. In addition to the audit rights specified in Section 4.02 "Audits", the INSTITUTE shall have the right to conduct periodic onsite inspections within normal working hours and on a day and a time mutually agreed to by the parties, to evaluate the Institute-Funded Activity. The RECIPIENT shall fully participate and cooperate in any such evaluation efforts.

Section 4.04 On-going Obligation to Submit Requested Information. The RECIPIENT shall, submit other information related to the Grant to the INSTITUTE as may be reasonably requested from time-to-time by the INSTITUTE, by the Legislature or by any other funding or regulatory bodies covering the RECIPIENT's activities under this Contract.

Section 4.05 Duty to Resolve Deficiencies. If an audit and/or inspection under this Article IV finds there are deficiencies that should be remedied, then the RECIPIENT shall resolve and/or cure such deficiencies within a reasonable time frame specified by the INSTITUTE. Failure to do so shall constitute an Event of Default pursuant to Section 8.03 "Event of Default." Upon the RECIPIENT'S request, the parties agree to negotiate in good faith, specific extensions so that the RECIPIENT can cure such deficiencies.

Section 4.06 Repayment of Grant Proceeds for Improper Use. In no event shall RECIPIENT retain Grant funds that have not been used by the RECIPIENT for purposes for which the Grant was intended or in violation of the terms of this Contract. The RECIPIENT shall repay any portion of Grant proceeds used by the RECIPIENT for purposes for which the Grant was not intended, as determined by the final results of an audit conducted pursuant to the provisions of this Contract. Unless otherwise expressly provided for in writing and appended to this Contract, the repayment shall be made to the INSTITUTE no later than [...***...] upon a written request by the INSTITUTE specifying the amount to be repaid and detailing the basis upon which such request is being made and the amount shall include interest calculated at an amount not to exceed five percent (5%) annually. The RECIPIENT may request that the INSTITUTE waive the interest, subject in all cases to the INSTITUTE'S sole discretion.

Section 4.07 Repayment of Grant Proceeds for Relocation Outside of Texas. The RECIPIENT shall repay the INSTITUTE all Grant proceeds disbursed to RECIPIENT in the event that RECIPIENT relocates its principal place of business outside of the State during the Contract term or within 3 years after the final payment of the Grant funds is made by the INSTITUTE.

Article V
ASSURANCES AND CERTIFICATIONS

Adoption of Attachment C. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment C in their entirety, incorporate them as if fully set forth herein, and agree to perform and be bound by all such terms.

Article VI
INTELLECTUAL PROPERTY AND REVENUE SHARING

Adoption of Attachment D. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment D in their entirety, incorporate them as if fully set forth herein, and agree to perform and be bound by all such terms.

Article VII
REPORTING

Adoption of Attachment E. The INSTITUTE and the RECIPIENT hereby adopt the terms of Attachment E in their entirety, incorporate them as if fully set forth herein, and agree to perform and be bound by all such terms.

Article VIII
EARLY TERMINATION AND EVENT OF DEFAULT

Section 8.01 Early Termination of Contract. This Contract may be terminated prior to the Termination Date specified in Section 2.03 “Contract Term” by:

(a) Mutual written consent of all parties to this Contract; or

(b) The INSTITUTE for an Event of Default (defined in Section 8.03) by the RECIPIENT; or

(c) The INSTITUTE if allocated funds should become legally unavailable during the Contract period and the INSTITUTE is unable to obtain additional funds for such purposes; or

(d) The RECIPIENT for convenience.

Section 8.02 Repayment of Grant Proceeds upon Early Termination. The INSTITUTE may require the RECIPIENT to repay any unused portion of the disbursed Grant proceeds in the event of early termination under 8.01 (d) above or under Section 8.01(b) above, to the extent such Event of Default resulted from Grant funds being expended in violation of this Contract. To the extent that the INSTITUTE exercises this option, the INSTITUTE shall provide written notice to the RECIPIENT stating the amount to be repaid, applicable interest calculated not to exceed five percent (5%) annually, and the schedule for such repayment. The RECIPIENT may request that the INSTITUTE waive the interest, subject in all cases to the INSTITUTE’S sole discretion. In no event shall the RECIPIENT retain Grant funds that have not been used by the RECIPIENT for purposes for which the Grant was intended.

Section 8.03 Event of Default. The following events shall, unless expressly waived in writing by the INSTITUTE or fully cured by the RECIPIENT pursuant to the provisions herein, constitute an event of default (each, an "**Event of Default**"):

(a) The RECIPIENT's failure, in any material respect, to conduct the Project in accordance with the approved Scope of Work and to demonstrate progress towards achieving the milestones set forth in Section 2.02;

(b) The RECIPIENT's failure to conduct the Project within the State of Texas to the extent required under this Contract unless as otherwise specified in the application, Scope of Work or Approved Budget;

(c) The RECIPIENT's failure to fully comply, in any material respect, with any provision, term, condition, covenant, representation, certification, or warranty contained in this Contract or any other document incorporated herein by reference;

(d) The RECIPIENT's failure to comply with any applicable federal or state law, administrative rule, regulation or policy with regard to the conduct of the Project;

(e) The RECIPIENT's material misrepresentation or false covenant, representation, certification, or warranty made by the RECIPIENT herein, in the Grant application, or in any other document furnished by the RECIPIENT pursuant to this Contract that was false or misleading at the time that it was made; or

(f) The RECIPIENT ceases its business operations, has a receiver appointed for all or substantially all of its assets, makes a general assignment for the benefit of creditors, is declared insolvent by a court of competent jurisdiction or becomes the subject, as a debtor, of a proceeding under the federal bankruptcy code, which such proceedings are not dismissed within ninety (90) days after filing.

Section 8.04 Notice Required. If the RECIPIENT intends to terminate pursuant to Section 8.01(d) "Early Termination of Contract", it shall provide written notice to the INSTITUTE pursuant to the notice provisions of Section 9.21 "Notices" no later than thirty (30) days prior to the intended date of termination.

If the INSTITUTE intends to terminate for an Event of Default under Section 8.01(b) by the RECIPIENT, as described in Section 8.03 "Event of Default", the INSTITUTE shall provide written notice to the RECIPIENT pursuant to Section 9.21 "Notices" and shall include a reasonable description of the Event of Default and, if applicable, the steps necessary to cure such Event of Default. Upon receiving notice from the INSTITUTE, the RECIPIENT shall have thirty (30) days beginning on the day following the receipt of notice to cure the Event of Default. Upon request, the INSTITUTE may provide an extension of time to cure the Event of Default(s) beyond the thirty (30) day period specified herein so long as the RECIPIENT is using reasonable efforts to cure and is making reasonable progress in curing such Event(s) of Default. The extension shall be in writing and appended to the Contract. If the RECIPIENT is unable or fails to timely cure an Event of Default, unless expressly waived in writing by the INSTITUTE, this Contract shall immediately terminate as of the close of business on the final day of the allotted cure period without any further notice or action by the INSTITUTE required. **In addition, and notwithstanding the foregoing, the INSTITUTE and the RECIPIENT agree that certain events that cannot be cured shall, unless expressly waived in writing by the INSTITUTE, constitute a final Event of Default under this Contract and this Contract shall terminate immediately upon the INSTITUTE giving the RECIPIENT written "Notice of Event of Default and FINAL TERMINATION."**

In the event that the INSTITUTE terminates the Contract under Section 8.01(c) above because allocated funds become legally unavailable during the Contract period, the INSTITUTE shall immediately provide written notification to the RECIPIENT of such fact pursuant to Section 9.21 “Notices.” The Contract is terminated upon the RECIPIENT’s receipt of that notification, subject to Section 9.09 “Survival of Terms.”

Section 8.05 Duty to Report Event of Default. The RECIPIENT shall notify the INSTITUTE in writing pursuant to Section 9.21 “Notices”, promptly and in no event more than (30) days after it obtains knowledge of the occurrence of any Event of Default. The RECIPIENT shall include a statement setting forth reasonable details of each Event of Default and the action which the RECIPIENT proposes to take with respect thereto.

Section 8.06 Obligations/Liabilities Affected by Early Termination. The RECIPIENT shall not incur new obligations that otherwise would have been paid for using Grant funds after the receipt of notice as provided by Section 8.04 “Notice Required”, unless expressly permitted by the INSTITUTE in writing, and shall cancel as many outstanding obligations as possible. The INSTITUTE shall not owe any fee, penalty or other amount for exercising its right to terminate the Contract in accordance with Section 8.01. In no event shall the INSTITUTE be liable for any services performed, or costs or expenses incurred, after the Termination Date of the Contract. Early termination by either party shall not nullify obligations already incurred, including the RECIPIENT’s revenue sharing obligations as set forth in Attachment D, or the performance or failure to perform obligations prior to the Termination Date.

Section 8.07 Interim Remedies. Upon receipt by the RECIPIENT of a notice of Event of Default, and at any time thereafter until such Event of Default is cured to the satisfaction of the INSTITUTE or this Contract is terminated, the INSTITUTE may enforce any or all of the following remedies (such rights and remedies being in addition to and not in lieu of any rights or remedies set forth herein):

(a) The INSTITUTE may refrain from disbursing any amount of the Grant funds not previously disbursed; provided, however, the INSTITUTE may make such a disbursement after the occurrence of an Event of Default without thereby waiving its rights and remedies hereunder;

(b) The INSTITUTE may enforce any additional remedies it has in law or equity.

The rights and remedies herein specified are cumulative and not exclusive of any rights or remedies that the INSTITUTE would otherwise possess.

Article IX
MISCELLANEOUS

Section 9.01 Uniform Grant Management Standards. Unless otherwise provided herein, the RECIPIENT agrees that the Uniform Grant Management Standards (UGMS), developed by the Governor’s Budget and Planning Office as directed under the Uniform Grant Management Act of 1981, TEX. GOVT. CODE, Ch. 783, apply as additional terms and conditions of this Contract and that the standards are adopted by reference in their entirety. If there is a conflict between the provisions of this Contract and UGMS, the provisions of this Contract will prevail unless expressly stated otherwise.

Section 9.02 Management and Disposition of Equipment. During the term of this Contract, the RECIPIENT may use Grant funds to purchase Equipment to be used for the authorized purpose of the Project, subject to the conditions set forth below. Unless otherwise provided herein, title to Equipment shall vest in the RECIPIENT upon termination of the Contract.

(a) The INSTITUTE must authorize the acquisition in advance and in writing but an acquisition is deemed authorized if included in the Approved Budget for the Project;

(b) Equipment purchased with Grant funds must stay within the State of Texas;

(c) Equipment purchased with Grant funds must be materially deployed to the uses and purposes related to the Project;

(d) In the event the RECIPIENT is indemnified, reimbursed or otherwise compensated for any loss of, destruction of, or damage to the Equipment purchased using Grant funds, it shall use the proceeds to repair or replace said Equipment;

(e) Equipment may be exchanged (trade-in) or sold without the prior written approval of the INSTITUTE if the proceeds thereof shall be applied to the acquisition cost of replacement Equipment;

(d) The RECIPIENT may use its own property management standards and procedures provided that it observes the terms of UGMS, A-102, in all material respects;

(e) The title or ownership of the Equipment shall not be encumbered for purposes other than the Project nor or transferred other than to a permitted assignee of this Contract without the prior written approval of the INSTITUTE;

(f) If the original or replacement Equipment is no longer needed for the originally authorized purpose or for other activities supported by the INSTITUTE, the RECIPIENT shall request disposition instructions from the INSTITUTE and, upon receipt, shall fully comply therewith; and

(g) If this Contract is terminated early pursuant to Section 8.01(b),(d), (e) or (f) above, the INSTITUTE shall determine the final disposition of Equipment purchased with Grant award money.

Section 9.03 Supplies and Other Expendable Property. The RECIPIENT shall classify as materials, supplies and other expendable property the allowable unit acquisition cost of such property under $5,000 necessary to carry out the Project. Title to supplies and other expendable property shall vest in the RECIPIENT upon acquisition.

Section 9.04 Acknowledgement of Grant Funding and Publicity. The parties agree to the following terms and conditions regarding acknowledging Grant funding and publicity:

(a) The parties agree to fully cooperate and coordinate with each other in connection with all press releases and publications regarding the award of the Grant, the execution of the Contract and the Institute-Funded Activities.

(b) The RECIPIENT shall notify the INSTITUTE's Information Specialist or similar personnel at least three business days prior to any press releases, advertising, publicity, use of CPRIT logo, or other promotional activities that pertain to the Project or any Institute-Funded Activity. In the event that the INSTITUTE wishes to participate in a joint press release, the RECIPIENT shall coordinate and cooperate with the INSTITUTE's Information Specialist or similar personnel to develop a mutually agreeable joint press release.

(c) Consistent with the goal of encouraging development of scientific breakthroughs and dissemination of knowledge, publication or presentation of scholarly materials is expected and encouraged. The RECIPIENT may publish in scholarly journals or other peer-reviewed journals (including graduate theses and dissertations) and may make presentations at scientific meetings without prior notice to or consent of the INSTITUTE, except as may otherwise be set forth in this Contract. The RECIPIENT shall promptly notify the INSTITUTE when any scholarly presentations or publications have been accepted for public disclosure and shall provide the INSTITUTE with final copies of all such accepted presentations and publications. The RECIPIENT shall acknowledge receipt of the INSTITUTE funding in all publications, presentations, press releases and other materials regarding the work associated with the Institute-Funded Activities. The RECIPIENT shall promptly submit an electronic version of all published manuscripts to PubMed Central in accordance with Section 9.05 "Public Access to Research Results."

(d) When grant funds are used to prepare print or visual materials for educational or promotional purposes for the general public (e.g., patients), and excluding presentations and publications discussed above in subsection (c), the RECIPIENT shall provide a copy of such materials to the INSTITUTE at least ten (10) days prior to printing. The RECIPIENT shall also acknowledge receipt of the INSTITUTE funding on all such materials including, but not limited to, brochures, pamphlets, booklets, training fliers, project websites, videos and DVDs, manuals and reports, as well as on the labels and cases for audiovisual or videotape/DVD presentations.

Section 9.05 Public Access to Results of Institute-Funded Activities. The RECIPIENT shall submit an electronic version of its final peer-reviewed journal manuscripts that arise from Grant funds to the digital archive National Library of Medicine's PubMed Central upon acceptance for publication. These papers must be accessible to the public on PubMed no later than 12 months after publication. This policy is subject to the terms of Attachment D and does not supplant applicable copyright law. For clarity, this policy is not intended to require the RECIPIENT to make a disclosure at a time or in any manner that would cause the RECIPIENT to abandon, waive or disclaim any intellectual property rights that it is obligated to protect pursuant to the terms of Attachment D.

Section 9.06 Work to be Conducted in State. The RECIPIENT agrees that it will use reasonable efforts to direct that any new or expanded preclinical testing, clinical trials, commercialization or manufacturing that is part of or relating to any Institute-Funded Activities take place in the State of Texas, including the establishment of facilities to meet this purpose. If the RECIPIENT decides not to conduct such work in the State of Texas, the RECIPIENT shall provide a prior written explanation to the INSTITUTE detailing the RECIPIENT's reasons for conducting the work outside of the State of Texas and the RECIPIENT's efforts made to conduct the work in the State of Texas

Section 9.07 Duty to Notify. During the term of this Contract and for a period of [...***...] thereafter, the RECIPIENT is under a continuing obligation to notify the INSTITUTE's executive director at the same time it is required to notify any Federal or State entity of any unexpected adverse event

or condition that materially impacts the performance or general public perception of the conduct or results of the Project and the Institute-Funded Activities, including any impact to the Scope of Work included in the Contract and events or results that have a serious adverse impact on human health, safety or welfare. By way of example only, if clinical testing of the results of the Institute-Funded Activities reveal an unexpected risk of developing serious health conditions or death, then the RECIPIENT shall, at the same time it notifies any Federal or State entity, promptly so notify the INSTITUTE's executive director even if such results are not available until after the term of this Contract. Notice required under this section shall be made as promptly as reasonably possible and shall follow the procedures set forth in Section 9.21 "Notices."

Section 9.08 Severability. If any provision of this Contract is construed to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or enforceability shall not affect any other provisions hereof. The invalid, illegal or unenforceable provision shall be deemed stricken and deleted to the same extent and effect as if never incorporated herein. All other provisions shall continue as provided in this Contract.

Section 9.09 Survival of Terms. Termination or expiration of this Contract for any reason will not release either party from any liabilities or obligations set forth in this Contract that: (1) the Parties have expressly agreed shall survive any such termination or expiration; or (2) remain to be performed or by their nature would be intended to be applicable following any such termination or expiration. Such surviving terms include, but are not limited to, Sections 2.13, 4.01, 4.02, 4.05, 4.06, 8.02, 8.06, 9.04, 9.05, 9.06, 9.07, 9.09, 9.14, 9.15, 9.16, 9.17, 9.18, and Attachment D.

Section 9.10 Binding Effect and Assignment or Modification. This Contract and all terms, provisions and obligations set forth herein shall be binding upon and shall inure to the benefit of the parties and their successors and permitted assigns, including all other state agencies and any other agencies, departments, divisions, governmental entities, public corporations or other entities which shall be successors to either of the parties or which shall succeed to or become obligated to perform or become bound by any of the covenants, agreements or obligations hereunder of either of the parties hereto. Upon a permitted assignment of this Contract by RECIPIENT, all references to "the RECIPIENT" herein shall be deemed to refer to such permitted assignee.

Section 9.11 No Waiver of Contract Terms. Neither the failure by the RECIPIENT or the INSTITUTE, in any one or more instances, to insist upon the complete and total observance or performance of any term or provision hereof, nor the failure of the RECIPIENT or the INSTITUTE to exercise any right, privilege or remedy conferred hereunder or afforded by law, shall be construed as waiving any breach of such term or provision or the right to exercise such right, privilege or remedy thereafter. In addition, no delay on the part of either the RECIPIENT or the INSTITUTE, in exercising any right or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right or remedy preclude other or further exercise thereof or the exercise of any other right or remedy.

Section 9.12 No Waiver of Sovereign Immunity. No provision of this Contract is in any way intended to constitute a waiver by the INSTITUTE, the RECIPIENT (if applicable), or the State of Texas of any immunities from suit or from liability that the INSTITUTE, the RECIPIENT, or the State of Texas may have by operation of law.

Section 9.13 Force Majeure. Neither the INSTITUTE nor the RECIPIENT will be liable for any failure or delay in performing its obligations under the Contract if such failure or delay is due to any cause beyond the reasonable control of such party, including, but not limited to, unusually severe weather, strikes, natural disasters, fire, civil disturbance, epidemic, war, court order or acts of God. The existence of such causes of delay or failure will extend the period of performance in the exercise of reasonable diligence until after the causes of delay or failure have been removed. Each party must inform the other in accordance with Section 9.21 "Notices" within five (5) business days, or as soon as it is practical, of the existence of a force majeure event or otherwise waive this right as a defense.

Section 9.14 Disclaimer of Damages. IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, SPECIAL, PUNITIVE, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES. THIS LIMITATION WILL APPLY REGARDLESS OF WHETHER OR NOT THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Section 9.15 Indemnification and Hold Harmless. Except as provided herein, the RECIPIENT agrees to fully indemnify and hold the INSTITUTE and the State of Texas harmless from and against any and all claims, demands, costs, expenses, liabilities, causes of action and damages of every kind and character (including reasonable attorneys fees) which may be asserted by any third party in any way related or incident to, arising out of, or in connection with (1) the RECIPIENT's negligent, intentional or wrongful performance or failure to perform under this Contract, (2) the RECIPIENT's receipt or use of Grant funds, or (3) any negligent, intentional or wrongful act or omission committed by the RECIPIENT as part of an Institute-Funded Activity or during the Project. In addition, the RECIPIENT agrees to fully indemnify and hold the INSTITUTE and the State of Texas harmless from and against any and all costs and expenses of every kind and character (including reasonable attorneys fees, costs of court and expert fees) that are incurred by the INSTITUTE or the State of Texas arising out of or related to a third party claim of the type specified in the preceding sentence. Notwithstanding the preceding, such indemnification shall not apply in the event of the sole or gross negligence of the INSTITUTE. If the RECIPIENT is a State of Texas agency or institution of higher education, then this Section 9.15 is subject to the extent authorized by the Texas Constitution and the laws of the State of Texas.

The RECIPIENT acknowledges and agrees that this indemnification shall apply to, but is not limited to, employment matters, taxes, personal injury, and negligence.

It is understood and agreed that it is not the intent of the parties to expand or increase the liability of the State of Texas under this Article. This provision is intended to prevent the RECIPIENT, the INSTITUTE and the State of Texas from attempting or appearing to assume liability it does not have the statutory or legal power to assume.

Section 9.16 Alternative Dispute Resolution. If applicable, the dispute resolution process provided for in TEX. GOVT. CODE, Ch. 2260 shall be used, as further described herein, to resolve any claim for breach of contract made against the INSTITUTE (excluding any uncured Event of Default). The submission, processing and resolution of a party's claim are governed by the published rules adopted by the Attorney General pursuant to TEX. GOVT. CODE, Ch. 2260, as currently effective, hereafter enacted or subsequently amended.

Section 9.17 Applicable Law and Venue. This Contract shall be construed and all disputes shall be considered in accordance with the laws of the State of Texas, without regard to its principles governing the conflict of laws. Provided that the RECIPIENT first complies with procedures set forth in Section 9.16 "Alternative Dispute Resolution," exclusive venue and jurisdiction for the resolution of claims arising from or related to this Contract shall be in the federal and state courts in Travis County, Texas.

Section 9.18 Attorneys' Fees. In the event of any litigation, appeal or other legal action to enforce any provision of the Contract, the RECIPIENT shall pay all expenses of such action, including attorneys' fees and costs, if the INSTITUTE is the prevailing party. If the RECIPIENT is a State of Texas agency or institution of higher education, then this Section 9.18 is subject to the extent authorized by the Texas Constitution and the laws of the State of Texas.

Section 9.19 Counterparts. This Contract may be executed in any number of counterparts, each of which when so executed and delivered shall be an original, but such counterparts shall together constitute one and the same instrument.

Section 9.20 Construction of Terms. The headings used in this Contract are inserted only as a matter of convenience and for reference and shall not affect the construction or interpretation of this Contract. Where context so indicates, a word in the singular form shall include the plural, a word in the masculine form the feminine, and vice-versa. The word "including" and similar constructions (such as "includes", "included", "for example", "such as", and "e.g.") shall mean "including, without limitation" throughout this Contract. The words "and" and "or" are not intended to convey exclusivity or nonexclusivity except where expressly indicated or where the context so indicates in order to give effect to the intent of the parties.

Section 9.21 Notices. All notices, requests, demands and other communications will be in writing and will be deemed given on the date received as demonstrated by (i) a courier's receipt or registered or certified mail return receipt signed by the party to whom such notice was sent, provided that such notice was sent to the address provided in the signature block of this Contract, or (ii) a fax confirmation page showing that such fax was successfully transmitted to the fax number provided in the signature block of this Contract. Notices shall be sent to the parties at the addresses or fax numbers specified herein or as may be updated from time to time by the applicable party in a writing delivered to the other party pursuant to the terms of this Section.

IN WITNESS THEREOF, THE PARTIES HAVE SIGNED AND EXECUTED IN DUPLICATE COUNTERPARTS ON THE DATES INDICATED.

RECIPIENT

By /s/ Thomas J. Farrell, CEO
(Signature of Person Authorized to Sign Contracts)
Name: Thomas J. Farrell, CEO
Date: 7/27/11

RECIPIENT Mailing Address:
BELLICUM PHARMACEUTICALS, INC.

6400 Fannin st., Suite 2300, Houston, TX 77030

Physical Address: (If idfferent from above)

Phone: (713) 341-6472
Fax: (13) 335-1446

INSTITUTE

By /s/ William Gimson

Name: William Gimson
Date: July 27, 2011

INSTITUTE Mailing Address:
Cancer Prevention and Research Institute of TX
Grant Compliance
P.O. Box 12097
Austin, TX 78711

INSTITUTE Physical Address:
211 E. 7th Street, Suite 300
Austin, TX 78701

Phone: (512) 463-3190

Fax: (512) 475-2563

ATTACHMENT A

Project Description Summary

The project encompasses preparation for and execution of a Phase 2 clinical trial, protocol number BP- HM-001, currently entitled “[...***...]”. The Principal Investigator will be Dr. Richard Champlin, Chairman, Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas M.D. Anderson Cancer Center, which will also be the primary clinical trial site. Up to [...***...] additional sites will be recruited to participate in the trial, including other sites in Texas.

Preparation activities include the following:

- [...***...]

Activities during the clinical trial include the following:

- [...***...]

Project Goals and Timelines

The primary project goals are to [...***...]. The timeline is summarized by quarter as follows:

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The primary milestone to be achieved in Year 1, which will be the milestone for Year 2 funding, is [...***...] in the clinical trial. This milestone depends on the achievement of earlier milestones, including [...***...]. This primary milestone is expected to occur approximately [...***...].

The primary milestone to be achieved in Year 2, which will be the milestone for Year 3 funding, is [...***...]. Because [...***...].

The primary milestone to be achieved in Year 3, and for the project as a whole, is [...***...]

ATTACHMENT B

DETAILED BUDGET FORM

BUDGET CATEGORY	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
a. PERSONNEL	[...***...]	[...***...]	[...***...]			[...***...]
b. FRINGE BENEFITS	[...***...]	[...***...]	[...***...]			[...***...]
c. TRAVEL	[...***...]	[...***...]	[...***...]			[...***...]
d. EQUIPMENT	[...***...]	[...***...]	[...***...]			[...***...]
e. SUPPLIES	[...***...]	[...***...]	[...***...]			[...***...]
f. CONTRACTUAL						
Process Development	[...***...]	[...***...]	[...***...]			[...***...]
Clinical Lot Manufacturing	[...***...]	[...***...]	[...***...]			[...***...]
Data Management	[...***...]	[...***...]	[...***...]			[...***...]
Research-Related Subject C	[...***...]	[...***...]	[...***...]			[...***...]
g. OTHER	[...***...]	[...***...]	[...***...]			[...***...]
h. Total Direct Charges	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]
i. Indirect Charges	[...***...]	[...***...]	[...***...]			[...***...]
Grand TOTAL	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]	[...***...]

Texas/Federal Vendor ID#:	12014502004000
Fiscal contact:	Thomas Farrell
Address:	6400 Fannin St., Suite 2300
Address 2:	Houston, TX 77030
Phone:	(713) 341-6472
Fax:	(713) 335-1446
Email:	tfarrell@bellicum.com

For questions regarding this form, please contact Alfonso Royal at (512) 305-8488 or oroyal@cprit.state.tx.us.

ATTACHMENT C

ASSURANCES AND CERTIFICATIONS

This Attachment C is hereby incorporated into and made a part of that certain **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**" or the "INSTITUTE") and the RECIPIENT. A capitalized term used in this Attachment shall have the meaning given to term in the Contract or in the Attachments to the Contract, unless otherwise defined herein. In the event of a conflict between the provisions of this Attachment and the provisions of the Contract, this Attachment shall control. Notwithstanding any other provision of this Attachment C, each reference to "compliance" in the foregoing certifications and assurances shall mean "compliance in all material respects" and the RECIPENT shall be deemed to be in compliance with a law, regulation or policy identified in a particular certification or assurance specified in this Attachment C if the RECIPIENT is in compliance in all materials respects with such law, regulation or policy, as applicable.

By signing this Contract, RECIPIENT certifies compliance with the following assurances and certifications required by the INSTITUTE (listed below). RECIPIENT further acknowledges that its obligations pursuant to the following assurances and certifications are ongoing.

Section C1.01 Demonstration of Matching Funds. Pursuant to TEX. HEALTH & SAFETY CODE § 102.255(d) and T.A.C. § 703.11, RECIPIENT has an amount of funds equal to one-half of the amount of the Grant to be disbursed each fiscal year of the Contract term dedicated to the same area of cancer research that is the subject of the Grant as demonstrated by the form incorporated herein to Attachment C. The RECIPIENT shall update the matching funds certification annually for each fiscal year that Grant funds are disbursed. The update must be on or before the anniversary of the Effective Date.

Section C1.02 Payment of Taxes. RECIPIENT's payment of franchise taxes is current or, if the RECIPIENT is exempt from payment of franchise taxes, that it is not subject to the State of Texas franchise tax. If franchise tax payments become delinquent during the Contract term, payments under this Contract may, upon delivery of written notice by the INSTITUTE to the RECIPIENT be withheld until the RECIPIENT's delinquent franchise tax is paid in full. The RECIPIENT also acknowledges that it is not otherwise exempt from state sales or occupancy tax as a result of this Contract.

Section C1.03 Compliance with Confidentiality Guidelines Relating to Personal and Medical Information. RECIPIENT complies with all applicable laws, rules and regulations relating to personal and medical information. Without in any way limiting the foregoing, RECIPIENT maintains and enforces, to the extent applicable to RECIPIENT, appropriate facility and information technology access rules and procedures to protect against inappropriate disclosure of patient records and all other documents containing patient personal and medical information deemed confidential by law, which are maintained in connection with the Project and Institute-Funded Activities, including provisions that comply with the requirements of the INSTITUTE's rules, 25 T.A.C. Section 703.14. Upon request from the INSTITUTE, RECIPIENT will timely furnish a copy of the RECIPIENT's facility and information technology access rules and procedures, as well as any other applicable confidentiality guidelines.

If RECIPIENT, including any Collaborators or Contractors, works directly with patients or otherwise has access to or maintains patient personal and medical information, RECIPIENT specifically addresses Health Insurance Portability and Accountability Act of 1996 regulations concerning confidentiality of personal and medical information. Any disclosure of patient confidential information in any way related to the Project (including information that may be required by reports and inspections) must be in accordance with all applicable laws.

Section C1.04 Conduct of Research or Service Provided. RECIPIENT understands that the Project must be conducted with full consideration for the ethical and medical implications of the research performed or services delivered and comply with all applicable federal and state laws regarding the conduct of the research or service.

Section C1.05 Regulatory Certificates, Licenses and Permits. All of the RECIPIENT's personnel, facilities and equipment involved or to be involved in the Project are certified, licensed, permitted, registered or approved by the appropriate regulating agency, where applicable. Any revocation, surrender, expiration, non-renewal, inactivation or suspension of any such certification, license, permit, registration or approval shall constitute grounds for Contract termination if the same is not remedied (or alternative personnel, facilities and/or equipment identified, as applicable, for use in the Project) within the applicable cure period specified in Section 8.04.

Section C1.06 Assurances and Certifications in Accordance with the NIH *Grants Policy Statement*:

(a) Civil Rights. Compliance with Title VI of the Civil Rights Act of 1964.

(b) Handicapped Individuals. Compliance with Section 504 of the Rehabilitation Act of 1973 as amended.

(c) Sex Discrimination. Compliance with Section 901 of Title IX of the Education Amendments of 1972 as amended.

(d) Age Discrimination. Compliance with the Age Discrimination Act of 1975, as amended.

(e) Patents, Licenses and Inventions. Compliance with the Standard Patent Rights clauses as specified in 37 CFR, Part 401 or 35 U.S.C. 203, if appropriate and applicable, in a manner that adequately protects the INSTITUTE'S rights in the Project Results.

(f) Human Subjects. Compliance with the requirements of federal policy concerning the safeguarding of the rights and welfare of human subjects who are involved in activities supported by federal funds. Before any funding may be utilized for any portion of the Project involving human subjects, RECIPIENT must receive approval from RECIPIENT's Institutional Review Board (IRB). Upon request, a copy of RECIPIENT's IRB approval must be provided to the INSTITUTE.

(g) Human Biological/Anatomical Material. Compliance with the recommendations of the NIH Office of Human Subject Research Medical Administrative Series (MAS) #MO1-2 entitled "Procurement and Use of Human Biological Materials for Research," and any other applicable federal or state requirements pertaining to the procurement and use of human biological material for research.

(h) Use of Animals. Compliance with applicable portions of the Animal Welfare Act (PL 89-544 as amended) and appropriate Public Health Service Policy on Humane Care and Use of Laboratory Animals regulations. Before any funding may be utilized for any portion of the Project involving animal subjects, RECIPIENT must receive approval from RECIPIENT's Institutional Animal Care and Use Committee (IACUC). Upon request, a copy of RECIPIENT's IACUC approval must be provided to the INSTITUTE.

(i) Debarment and Suspension. RECIPIENT certifies that neither it nor the Principal Investigator/Project Director or any other Recipient Personnel or personnel of any Collaborator or Contractor assigned to work on the Project are debarred, suspended, proposed for debarment, declared ineligible or otherwise excluded from participation in the Project by any federal or state department or agency.

(j) Non-Delinquency on Federal or State Debt. RECIPIENT certifies that neither it, nor, to its knowledge, any person to be paid from funds under this Contract, is delinquent in repaying any Federal debt as defined by OMB Circular A-129 or any debt to the State of Texas.

(k) Eligibility to Receive Payments on State Contracts. RECIPIENT certifies that it and, to its knowledge, the Principal Investigator/Project Director are not ineligible to receive the Grant award under this Contract pursuant to Tex. Fam. Code Ann. Section 231.006 and acknowledges that this Contract may be terminated and payment may be withheld if this certification is inaccurate.

(l) Drug-Free Workplace. Compliance with the Drug-Free Workplace Act of 1988 (45 CFR 82).

(m) Misconduct in Science. Compliance with 42 CFR Part 50, Subpart A, and Final Rule as published at 54 CFR 32446, August 8, 1989.

(n) Objectivity of Research/Conflict of Interest. Compliance with the NIH requirement to maintain a written standard of conduct and comply with 42 CFR Part 50, Subpart F, Responsibility of Applicants for Promoting Objectivity in Research. RECIPIENT must notify the INSTITUTE of any conflicting financial interests pertaining to the performance of the Project and assure that such conflict of interest has been appropriately managed, reduced or eliminated.

(o) Trafficking in Persons. Compliance with the NIH regulations on trafficking in persons as published at http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-055.html.

(p) Criminal Misconduct. RECIPIENT shall promptly report to the INSTITUTE issues involving potential civil or criminal fraud related in any way to the Project, the Institute-Funded Activity or this Contract, such as false claims or misappropriation of federal or state funds.

ATTACHMENT C

CPRIT Matching Requirement Certification Form

FOR:	Entity/Institution Name: Bellicum Pharmaceuticals, Inc.														
	Project Number(s): RP110508														
	Award Year #1			Award Year #2			Award Year #3			Award Year #4			Award Year #5		
For purposes of the certification use the following research categories to classify encumbered funds that are dedicated to cancer research:	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended	Total CPRIT Awards	Entity's/ Institution's Dedicated Funds	Actual "Non CPRIT" Funds Expended
(1) Cancer biology and genetics, including oncogenesis and collection and characterization of tumors (genomics, proteomics, other "omics");															
(2) Cancer immunology, including vaccines;															
(3) Cancer imaging and diagnostics;															
(4) Cancer epidemiology and outcomes research; and															
(5) Cancer treatment, including drug discovery and development and clinical trials.	$2,779,167.00	$1,400,000.00													
Total	$2,779,167.00	$1,400,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total non-state funds leveraged as a match for award.		$1,400,000.00						$			$			$	

The information above is the entity/institution's demonstration of encumbered available funds pursuant to its certification in Attachment C

This certification is on an annual basis and can be made on an entity/institutional level or project by project. The entity/institutional level requires the match to reflect all research grant awards received by the entity/institution, including any FY2010 CPRIT research awards.

To clarify, encumbered funds may include but are not necessarily limited to: (1) Federal funds (including American Recovery and Reinvestment Act of 2009 funds, and the fair market value of drug development support provided to the recipient by the National Cancer Institute (NCI) or other similar programs); (2) State of Texas funds (Non-CPRIT); (3) Other States' funds; (4) Non-governmental funds (including private funds, foundation grants, gifts and donations); and (5) Unrecovered indirect costs not to exceed 10 percent of the grant award amount, subject to the following conditions: (A) These costs are not otherwise charged against the grant as the five percent indirect funds (B) The institution or recipient must have a documented federal indirect cost rate or an indirect cost rate certified by an independent accounting firm; and (C) The allowance for unrecovered indirect costs must be specifically approved by the Executive Director.

The following items do not qualify as encumbered funds:

(1) In-kind costs; (2) Volunteer services furnished to the grant recipient; (3) Noncash contributions; (4) Income earned not available at the time of award; (5) Pre-existing real estate including building, facilities and land; (6) Deferred giving such as a charitable remainder annuity trust, a charitable remainder unitrust, or a pooled income fund; or (7) Other items as may be determined by the Oversight Committee.

For questions regarding this form, please contact Alfonso Royal at (512) 305-8488 or by email at aroyal@cprit.state.tx.us

ATTACHMENT D

INTELLECTUAL PROPERTY AND REVENUE SHARING

This Attachment D is hereby incorporated into and made a part of that certain **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**" or the "**INSTITUTE**") and the RECIPIENT. A capitalized term used in this Attachment shall have the meaning given the term in the Contract or in the Attachments to the Contract, unless otherwise defined herein. In the event of a conflict between the provisions of this Attachment and the provisions of the Contract, this Attachment shall control.

PART 1
OWNERSHIP AND INTELLECTUAL PROPERTY PROTECTION

Section D1.01 Ownership of Project Results. RECIPIENT and its Collaborators shall retain ownership of the Institute-Funded Technology and the Institute-Funded IPR, subject to the terms of the Contract.

Section D1.02 Transfer or Assignment of Rights to a Third Party. RECIPIENT shall notify the INSTITUTE of any proposed transfer or assignment of rights in any Institute-Funded IPR to a third party. RECIPIENT shall ensure that, in any assignment or transfer of Institute-Funded IPR, the transferee or assignee agrees in writing to (i) recognize that the Institute-Funded IPR is transferred or assigned subject to the licenses, interests and other rights in such Institute-Funded IPR provided to the INSTITUTE in the Contract and any applicable law or regulation, and (ii) take all actions necessary to protect all such licenses, interests and other rights.

Section D1.03 Protection of Institute-Funded IPR. Subject to Section D5.01RECIPIENT shall use commercially reasonable efforts to appropriately protect the Institute-Funded IPR, including without limitation, diligently seeking registration of patents and copyrights covering the Institute-Funded Technology, as appropriate. If RECIPIENT elects to abandon Institute-Funded IPR (including any partial abandonment of Institute-Funded IPR in specific territories), RECIPIENT shall provide the INSTITUTE with prior written notice of such election, with sufficient time (but no less than 30 days) for the INSTITUTE to exercise its rights in Section D5.01 in relation to the subject Institute-Funded IPR.

Section D1.04 Cost of Protection. The INSTITUTE shall not be responsible for, and no Grant funds may be used to pay for, any costs or expenses associated with RECIPIENT's efforts to protect the Institute-Funded IPR.

Section D1.05 Inventions.

(a) **Disclosures.** RECIPIENT shall notify INSTITUTE of each Institute-Funded Invention by delivering a copy of the invention disclosure form (or similar document) within [...***...] after RECIPIENT receives the form from its Inventor. In the event that the invention disclosure form is revised or updated, RECIPIENT shall provide the INSTITUTE with the revised/updated invention disclosure form as part of the RECIPIENT's annual written report.

(b) **Patent Prosecution and Maintenance**. For all Institute-Funded Inventions for which patent protection is pursued, RECIPIENT shall provide an annual written report to the INSTITUTE regarding the status of pending applications and issued patents .

Section D1.06 Required Agreements with Recipient Personnel and Contractors. The RECIPIENT shall have, maintain and enforce written policies or agreements applicable to Recipient Personnel and

Contractors with terms sufficient to enable RECIPIENT to fully comply with all terms and conditions of this Contract. RECIPIENT shall promptly report to INSTITUTE any material breach of such policies or agreements relating to or affecting any of the material provisions of this Contract.

Section D1.07 Agreements with Collaborators. All agreements between RECIPIENT and a Collaborator relating to or affecting joint ownership of any Project Result shall recognize the licenses, interests and other rights provided to the INSTITUTE in the Contract. RECIPIENT shall provide to the INSTITUTE a copy of each such agreement affecting joint ownership of any Project Result.

PART 2
NON-COMMERCIAL LICENSES

Section D2.01 RECIPIENT License. In granting an Exclusive License to any Project Result, RECIPIENT shall retain the right to Exploit all Project Results (including material embodiments thereof) for education, research and other non-commercial purposes, and the right to grant the licenses pursuant to Section D2.02 below.

Section D2.02 INSTITUTE License. RECIPIENT agrees to grant, and does hereby grant, to the INSTITUTE a non-exclusive, irrevocable, royalty-free, perpetual, worldwide license under the Institute-Funded IPR to Exploit all Project Results (including material embodiments thereof) for or on behalf of the INSTITUTE and other governmental entities and agencies of the State of Texas for education, research and other non-commercial purposes only. RECIPIENT shall make the Institute-Funded Technology available by reasonable means to the INSTITUTE in order for the INSTITUTE to exercise its rights under this Section. The INSTITUTE may not transfer or sublicense the licenses granted under this Section, except to the State of Texas or other Texas agency.

Section D2.03 No Implied Licenses. No implied licenses are granted under this Agreement including any license to any Intellectual Property Rights owned or controlled by RECIPIENT outside of the Institute-Funded IPR. Nothing in this Agreement shall be construed to impose an obligation on RECIPIENT to license or otherwise make available any of its Intellectual Property Rights or other resources owned or controlled by it except as expressly provided in this Agreement with respect any Institute Funded IPR.

PART 3
COMMERCIALIZATION OF PROJECT RESULTS

Section D3.01 Commercialization Strategy. RECIPIENT shall be under a continuing obligation throughout the term of this Contract to enhance and improve the commercial development plan submitted with the Application and to provide an annual written report to the INSTITUTE regarding the RECIPIENT's efforts to commercialize or otherwise bring to practical application Project Results. The INSTITUTE may, at its option and at any time, provide RECIPIENT with comments regarding the RECIPIENT's commercial development plan and strategy, in which case RECIPIENT shall consider in good faith and use reasonable efforts to account for and incorporate the INSTITUTE's input into such commercial development plan and strategy.

Section D3.02 Commercialization Efforts. The RECIPIENT shall, whether through its own efforts or the efforts of a licensee under a License Agreement allowed by the terms of this Attachment, use diligent and commercially reasonable efforts to commercialize or otherwise bring to practical application the Project Results in accordance with the commercial development plan described in Section D3.01.

Section D3.03 Licensing of Project Results. Each License Agreement entered into by the RECIPIENT shall include an acknowledgement by the licensee that (i) such License Agreement is subject to the INSTITUTE's licenses, interests and other rights under this Contract, and (ii) to the extent that there is a conflict between the terms of the License Agreement and the terms of this Contract, the terms of this

Contract shall prevail. In addition, all License Agreements shall include terms obligating the licensee to report to the RECIPIENT such information as is required for the RECIPIENT to fully comply with the terms of the Contract, including without limitation the reporting obligations set forth in Attachment E, and to allow RECIPIENT to make the grants specified in Sections D2.02. The RECIPIENT shall monitor the performance of its licensees and such licensees' compliance with the terms of the License Agreements and shall take commercially reasonable actions to enforce the terms of all License Agreements. The RECIPIENT shall promptly report to the INSTITUTE any material breach of a License Agreement relating to or affecting any of the material provisions of this Contract.

Section D3.04 Cost of Licensing Activities. The INSTITUTE shall not be responsible for, and no Grant funds may be used to pay for, any costs or expenses associated with the RECIPIENT's Licensing Activities.

Section D3.05 Survival. The licenses, rights and obligations set forth in this Attachment D shall survive any termination of this Contract, including any termination for convenience by RECIPIENT, except in the event that RECIPIENT pays the Buyout Amount as set forth in Part 4, in which case the licenses, rights and obligations set forth in this Attachment D shall automatically terminate.

Section D3.06 Recipient Opt-Out. RECIPIENT may, after diligently attempting to comply with the terms of Section D3.02, notify the INSTITUTE in writing that it is electing to cease its efforts, either directly or through a licensee, to commercialize or otherwise bring to practical application any particular Project Results. Such written notice must identify the applicable Project Results, provide a reasonable explanation of the reasons for RECIPIENT's election, including any feasibility studies, trial results, regulatory impediments, financial analyses or similar assessments, and must identify any deadlines in relation to the applicable Project Results that then exist. Upon receipt of such notice, the INSTITUTE shall have the option, but not the obligation, to exercise its rights in Section 5.01 in relation to the subject Project Results at the INSTITUTE's expense. The INSTITUTE shall notify the RECIPIENT in writing within thirty (30) days of its receipt of the RECIPIENT's notice if the INSTITUTE elects to exercise its rights in relation to the subject Project Results. In the event that the INSTITUTE exercises its option under this section, the RECIPIENT shall fully cooperate with the INSTITUTE's efforts, in commercializing or otherwise bringing to practical application the applicable Project Results.

PART 4
REVENUE SHARING

Section D4.01 Revenue Sharing; Buyout.

(a) RECIPIENT shall pay to INSTITUTE royalties as follows:

(i) [...***...]% of all Revenues until the aggregate amount of royalties paid to INSTITUTE pursuant to this Section D4.01(a)(i) equals [...***...]% of Net Grant Award Proceeds; and

(ii) [...***...] % of all Revenues thereafter.

(b) Notwithstanding anything to the contrary in this Section D4.01, upon RECIPIENT's written notice of the Buyout Notice Trigger Event to INSTITUTE at any time after the Termination Date (the "**Buyout Notice**"), RECIPIENT may, in lieu of paying any additional royalties to INSTITUTE pursuant to Section D4.01(a), pay to INSTITUTE the dollar amount set forth in the following table opposite the applicable period in which such Buyout Notice is delivered (the applicable dollar amount being referred to as the "**Buyout Amount**"):

Period in Which Buyout Notice is Delivered	Buyout Amount
On or prior to the fifth anniversary of the Termination Date	[...***...]% of Net Grant Award Proceeds less the aggregate amount of all royalties paid to INSTITUTE pursuant to Section D4.01(a) as of the date of the Buyout Notice.
After the fifth anniversary of the Termination Date but on or prior to the tenth anniversary of the Termination Date	[...***...]% of Net Grant Award Proceeds less the aggregate amount of all royalties paid to INSTITUTE pursuant to Section D4.01(a) as of the date of the Buyout Notice.
After the tenth anniversary of the Termination Date	[...***...]% of Net Grant Award Proceeds less the aggregate amount of all royalties paid to INSTITUTE pursuant to Section D4.01(a) as of the date of the Buyout Notice.

After satisfaction of its obligations under this Section D4.01(b), RECIPIENT shall have no further obligation under this Section D4.01.

(d) "**Net Grant Award Proceeds**" means the aggregate amount of Grant award proceeds advanced to RECIPIENT, net of any Grant award proceeds repaid by RECIPIENT to INSTITUTE, including, without limitation, pursuant to Section 4.07 of the Contract.

Section D4.02 Adjustments. If any funding sources other than the INSTITUTE (but excluding RECIPIENT) contribute funds, directly or indirectly, to the research yielding any particular Project Result(s) and such funding sources are legally or contractually entitled to receive royalty based compensation with respect to such Project Result(s) (hereinafter a "**Participating Funding Source**"), then the royalty percentages in Section D4.01(a) in effect at any time shall be reduced in proportion to the aggregate amount of funds provided by the INSTITUTE under this Contract in comparison to the aggregate amount of funds provided by all Participating Funding Sources that contributed to the Project Result and by the INSTITUTE. For the sake of clarity, Participating Funding Sources do not include equity or quasi-equity financing funding sources or debt arrangements. In calculating such reduced rate, funds from Participating Funding Sources used for Indirect Costs or for any costs of product development, manufacturing, marketing, sales, regulatory approval or similar commercialization activities shall not be included. In addition, for clarity, the rate shall not be reduced as a result of any funds received from funding sources where such funding sources are not legally or contractually entitled to receive a share of the Revenue with respect to such Project Result(s).

Section D4.03 Statements and Timing of Payments. All payments owed pursuant to this Part 4 shall be made to the Cancer Prevention and Research Institute of Texas, and are payable on or before the thirtieth day following the end of the calendar quarter in which RECIPIENT receives the Revenue or, in the case of Section D4.04, receives the monetary recovery. For each payment specified in Section D4.01, the payment shall be accompanied by a statement specifying: (i) the Grant to which the payment relates, (ii) the identities of and amounts funded by all Participating Funding Sources, (iii) the License

Agreements to which the payment relates, (iv) the quantity of all Sales of each Commercial Product and Commercial Service since the last payment, if Sales are applicable to the current payment, (v) the gross consideration from all such License Agreements and Sales, if Sales are applicable to the current payment, and (vi) the amount of the payment to the Cancer Prevention and Research Institute of Texas.

Section D4.04 Recoveries in Enforcement Actions. In the event that RECIPIENT receives any monetary recovery from its enforcement of Institute-Funded IPR against infringement by a third party, then it shall pay to the State of Texas a share of such monetary recovery, including any punitive damages, less the documented fees and expenses that are directly associated with such enforcement and are paid by RECIPIENT to third parties, at the same rate and in the same manner as it shares Revenue pursuant to Section D4.01 (including any adjustments allowed by Section D4.02). For clarity, if the enforcement action is resolved by way of the execution of a License Agreement with the infringing third party, such License Agreement is consistent with the Section D4.01, then this Section D4.04 is not intended to apply to such License Agreement or the consideration specified therein.

Section D4.05 Revenue-Related Records. In addition to satisfying the requirements of Article IV of the Contract and Section E1.03 of Attachment E, the RECIPIENT shall keep complete and accurate Revenue-related Records until the fourth anniversary of the date of the payment of the last royalty payment owed hereunder, in sufficient detail to permit the INSTITUTE to confirm the accuracy of the statements delivered to the INSTITUTE under Section D4.03 and the calculation of the royalties owed hereunder.

Section D4.06 Audit of Revenue-Related Records. Upon at least [...***...] advance written notice, the RECIPIENT shall permit the INSTITUTE or its representatives or agents, at the INSTITUTE's expense, to examine the Revenue-related Records of the RECIPIENT pursuant to Section D4.05 at least once per calendar year during regular business hours for the purpose of and to the extent necessary to verify the RECIPIENT's compliance with this Part 4. The rights of the INSTITUTE under this Section D4.06 shall terminate on the fourth anniversary of the date of the payment of the last royalty payment owed hereunder. In the event that any such examination reveals an underpayment to the INSTITUTE of greater than [...***...] percent ([...***...]%) of the amounts previously paid by the RECIPIENT to the INSTITUTE, then the RECIPIENT shall reimburse the INSTITUTE for the cost of such examination.

PART 5
OPT-OUT AND DEFAULT

Section D5.01 RECIPIENT Opt-Out. Upon receipt of RECIPIENT's notice of its election (i) under Section D1.03 to abandon any Institute-Funded IPR or (ii) under Section 3.06 to cease its efforts to commercialize or otherwise bring to practical application any particular Project Results, the INSTITUTE shall have the option, but not the obligation, to pursue protection of the applicable Institute-Funded IPR, including directing the filing, prosecution and maintenance of patents covering the applicable Institute-Funded Inventions and/or to commercialize or otherwise bring to practical application the applicable Project Results, at its own cost, either directly or through one or more licensees. If the INSTITUTE elects to exercise such option, it shall notify RECIPIENT in writing within thirty (30) days of its receipt of RECIPIENT's notice and RECIPIENT shall thereafter comply with the terms of Section D5.03.

Section D5.02 RECIPIENT Default. In the event that the INSTITUTE notifies RECIPIENT in writing of RECIPIENT's failure to materially comply with its obligations under Sections D1.03 or D3.02 with respect to any particular Project Results, and RECIPIENT fails to cure such failure within thirty (30) days of such notice, then the INSTITUTE shall have the option, but not the obligation, to direct the filing, prosecution and maintenance of patents covering the applicable Institute-Funded Inventions and/or to commercialize or otherwise bring to practical application the applicable Project Results, at its own cost, either directly or through one or more licensees. If the INSTITUTE elects to exercise such option, it shall notify the RECIPIENT in writing of such election and RECIPIENT shall thereafter comply with the terms of Section D5.03.

Section D5.03 RECIPIENT Cooperation upon Opt-Out or Default. In the event that the INSTITUTE exercises its option under Section D5.01 or D5.02, the RECIPIENT shall:

(1) transfer all of its right, title and interest in and to the applicable Project Results to the INSTITUTE or the INSTITUTE's designee, to the maximum extent allowed by law, including where relevant and necessary to facilitate the foregoing transfer, requesting and diligently attempting to obtain any approvals required by law or otherwise in relation to such transfer;

(2) to the extent that RECIPIENT is unable to transfer all of its right, title and interest in and to the applicable Project Results to the INSTITUTE as specified in item (1), and subject to any existing third party rights, RECIPIENT hereby grants to the INSTITUTE an exclusive, royalty-free, perpetual, fully transferable license under the applicable Institute-Funded IPR to Exploit the Project Results for the development, manufacture and sale of Commercial Products and Commercial Services and for all other purposes reasonably related thereto, provided that the INSTITUTE may exercise the foregoing license rights only after exercising its option under Section D5.01 or D5.02;

(3) fully cooperate with the INSTITUTE's efforts, and at the INSTITUTE's cost, in protecting applicable Institute-Funded Inventions and in commercializing or otherwise bringing to practical application the applicable Project Results, including making relevant Recipient Personnel (to the extent still then-employed by RECIPIENT), Contractors, Collaborators, records, papers, information, samples, specimens and other materials related to the applicable Institute-Funded Technology reasonably available for such purposes and executing any documents and taking any further action necessary to fully effectuate the intent of this Section; and

(4) not take any action that would materially impede the INSTITUTE's ability to protect the applicable Institute-Funded Inventions.

If the INSTITUTE exercises its option under Sections D5.01 or D5.02, RECIPIENT shall have no further claim or interest in or to the applicable Project Results (except as set forth in Part 2 of this Attachment, if applicable) and shall not be entitled to any share of Revenue or any other compensation with respect to such Project Results, except to the minimum extent required by law, if any. To the extent that the INSTITUTE has exercised its option under Section D5.01 or D5.02 and RECIPIENT is unable to transfer all of its right, title and interest in and to the applicable Project Results to the INSTITUTE as specified in item (1), then the INSTITUTE's license set forth in item (2) includes the right, but not the obligation, for the INSTITUTE at its cost to: (i) direct the filing, prosecution and maintenance of patents covering the applicable Project Results, and (ii) enforce all applicable Institute-Funded IPR relevant to the Project Results against any infringement by a third party. Subject to the statutory duties of the Texas Attorney General, if any, RECIPIENT shall cooperate fully with the INSTITUTE in any action brought by the INSTITUTE to enforce the Intellectual Property Rights in the applicable Project Results, at the INSTITUTE's cost, including without limitation, joining the enforcement action in name as a party plaintiff after all required approvals are obtained; provided that the INSTITUTE or its designee shall have full control over such enforcement action and shall receive and retain all monetary recoveries resulting from such enforcement actions, including any punitive damages.

PART 6
DEFINITIONS

The following terms shall have the following meaning throughout this Attachment. Other terms may be defined elsewhere in this Attachment.

(1) **Authorized Seller –** RECIPIENT, its Collaborators, or their licensees or any other party authorized by RECIPIENT, its Collaborators or their licensees to make a Sale on their behalf.

(2) **Buyout Trigger Event** – the acquisition, by an independent third party ("the Party"), of substantially all of the assets of RECIPIENT and the Party notifies the RECIPIENT it desires to buy out the Royalty defined by this Contract.

(3) **Commercial Product** – anything that incorporates, is based on, utilizes or is developed from Project Results and is created by human or mechanical effort or by a natural process and that is capable of being sold, licensed, transferred or conveyed to another party or is capable of otherwise being Exploited or disposed of, whether in exchange for consideration or not, including without limitation any drug, chemical or biological compound, gene, nucleic acid or nucleic acid sequence, gene therapy, plant, machine, mechanical device, hardware, tool or computer program.

(4) **Commercial Service** – any service performed that incorporates, is based on, utilizes or is developed from Project Results. For clarity, Commercial Service does not include research and development performed by RECIPIENT or its Collaborators.

(5) **Exclusive License** – a License Agreement under which the specific rights granted to the licensee with respect to the Project Results, including without limitation scope of use and territorial rights, are granted on an exclusive basis.

(6) **Exploit** – make, have made, use, sell, offer to sell, import, export or otherwise dispose of, practice, copy, distribute, create derivative works of, publicly perform or publicly display.

(7) **Institute-Funded IPR** – any and all Intellectual Property Rights in and to Institute-Funded Technology. In no event shall Institute-Funded IPR include any intellectual property rights and/or technology in existence and owned/controlled by the RECIPIENT prior to the receipt of funds from the INSTITUTE, the listing of such IPR and/or technology in existence and owned/controlled by the RECIPIENT prior to the receipt of funds from the INSTITUTE is attached herein.

(8) **Institute-Funded Invention** – an Invention conceived or first reduced to practice by RECIPIENT, Recipient Personnel and/or Collaborator(s) in the performance of Institute-Funded Activity.

(9) **Institute-Funded Technology** – any and all of the following resulting or arising from Institute-Funded Activity during the Contract term: (a) proprietary and confidential information, including but not limited to data, trade secrets and know-how; (b) databases, compilations and collections of data; (c) tools, methods and processes; and (d) works of authorship, excluding all scholarly works, but including, without limitation, computer programs, source code and executable code, whether embodied in software, firmware or otherwise, documentation, files, records, data and mask works; and all instantiations of the foregoing in any form and embodied in any form, including but not limited to therapeutics, drugs, drug delivery systems, drug formulations, devices, diagnostics, biomarkers, reagents and research tools. Institute-Funded Technology includes Institute-Funded Inventions. In no event shall Institute-Funded Technology include items that were conceived of, in existence, or owned/controlled by RECIPIENT prior to receipt of funds from the INSTITUTE (a) proprietary and confidential information, including but not limited to data, trade secrets and know-how; (b) databases, compilations and collections of data; (c) tools, methods and processes; and (d) works of authorship, excluding all scholarly works, but including, without limitation, computer programs, source code and executable code, whether embodied in software, firmware or otherwise, documentation, files, records, data and mask works; and all instantiations of the foregoing in any form and embodied in any form, including but not limited to therapeutics, drugs, drug delivery systems, drug formulations, devices, diagnostics, biomarkers, reagents and research tools,.

(10) **Intellectual Property Rights** – any and all of the following and all rights in, arising out of, or associated therewith: (a) all United States and foreign patents and utility models and applications therefor, and all reissues, divisions, renewals, extensions, provisionals, and continuations and continuations-in part thereof, and equivalent or similar rights anywhere in the world in inventions and discoveries; (b) all trade secrets and rights in know-how and proprietary information; (c) all copyrights, copyright registrations and applications therefor, and all other rights

corresponding thereto throughout the world; (d) all mask works, mask work registrations and applications therefor, and any equivalent or similar rights in semiconductor masks, layouts, architectures or topology; and (e) any similar, corresponding or equivalent rights to any of the foregoing anywhere in the world.

(11) **Invention** – a method, device, process or discovery that is conceived and/or reduced to practice, whether patentable or not.

(12) **License Agreement** – an agreement by which an owner of a Project Result grants any right to Exploit such Project Result to another party in exchange for consideration.

(13) **Licensing Activities** – the efforts of RECIPIENT or its Collaborator to negotiate, execute or enforce a License Agreement.

(14) **Necessary Additional IPR** – any unencumbered Intellectual Property Rights (a) owned by RECIPIENT, and (b) identified by the Institute and agreed to in writing by Recipient, that are not Project Results but are necessary to Exploit the Project Results for the specific purposes set forth in the applicable Section of this Attachment D.

(15) **Non-Exclusive License** – a License Agreement under which the rights granted to the licensee with respect to the Project Results are granted on a non-exclusive basis.

(16) **Project Results** – any and all Institute-Funded Technology and Institute-Funded IPR.

(17) **Revenue** – the gross consideration, whether cash or non-cash (e.g., securities, direct equity interest, indirect equity interest, etc.), received from Sales and License Agreements related to Project Results (including without limitation, any milestone fees, license fees, sublicense fees, assignment fees, product royalties and similar fees and royalties), net of (a) trade or quantity discounts or rebates, credits, allowances or refunds given for rejected or returned Commercial Products or Commercial Services, (b) any sales, value-added or other tax or governmental charge levied on the sale, transportation or delivery of a Commercial Product or Commercial Service (but excluding any income tax owed by the RECIPIENT), and (c) any separately stated charges for freight, postage, shipping and insurance.

(18) **Sale** – means any sale, lease, transfer, conveyance or other exploitation or disposition of a Commercial Product or Commercial Service for which consideration is received by an Authorized Seller.

ATTACHMENT E

REPORTING REQUIREMENTS

This Attachment E is hereby incorporated into and made a part of that certain **CANCER RESEARCH GRANT CONTRACT** ("**Contract**") by and between the Cancer Prevention and Research Institute of Texas ("**CPRIT**" or the "**INSTITUTE**") and the RECIPIENT. A capitalized term used in this Attachment shall have the meaning given to term in the Contract or in the Attachments to the Contract, unless otherwise defined herein. In the event of a conflict between the provisions of this Attachment and the provisions of the Contract, this Attachment shall control.

INSTITUTE and RECIPIENT agree as follows:

ANNUAL REPORTING

Section E1.01 Annual Reports. The RECIPIENT shall submit reports annually to the INSTITUTE within 60 days of the anniversary of the Effective Date of this Contract or at such other time as may be specified herein. The reports shall be submitted by the means and in the form(s) required by the INSTITUTE and shall be signed by the Principal Investigator/Program Director and the RECIPIENT's Authorized Signing Official. To the extent possible, the reports shall only include information that may be shared publicly. However, if it is necessary to submit information in the reports that the RECIPIENT considers confidential in order to fully comply with the terms of this Contract, then the RECIPIENT shall use reasonable efforts to mark such information as "confidential" and shall, to the extent practicable, to segregate such information within the reports to facilitate its redaction should redaction ever be necessary or appropriate.

Section E1.02 Contents of Reports. Each report shall contain a signed verification (electronic signature is acceptable) of RECIPIENT's compliance with each of its obligations as set forth in the Contract and shall include the following for the period covered by such report, as may then be applicable:

(a) Project Data. During the term of the Contract, RECIPIENT shall include in its annual report each of the following (except that the final annual report due under this part (a) shall be due within ninety (90) days after the end of the term of the Contract):

(1) A brief statement of the progress made to under the Scope of Work, including the progress to achieve the Project Goals and Timelines set forth in Attachment A.

(2) A brief statement of the Project Goals for the twelve months following submission of the report.

(3) New jobs created in the preceding twelve month period as a result of the Grant funds awarded to RECIPIENT.

(4) An inventory of the Equipment purchased for the Project using Grant funds.

(5) A HUB report in accordance with Section 3.08 "Historically Underutilized Businesses" of the Contract.

(b) Commercialization Data. During the term of the Contract and continuing thereafter for so long as RECIPIENT has ongoing obligations to the INSTITUTE with respect to protection, development, commercialization and licensing of Project Results pursuant to Attachment D, RECIPIENT shall provide information about commercialization activities in a format specified by the INSTITUTE.

(c) Revenue Sharing Data. During the term of the Contract and continuing thereafter for so long as RECIPIENT has ongoing obligations to the INSTITUTE with respect to revenue sharing pursuant to Attachment D:

(1) A statement of the identities of the funding sources, amounts and dates of funding for all funding sources for the Project.

(3) A brief statement of the RECIPIENT's efforts to secure additional funds to support the Project.

(4) All financial information necessary to verify the calculation of the revenue sharing amounts specified in Attachment D.

(d) Additional Data. In addition to the foregoing, RECIPIENT shall use commercially reasonable efforts to also promptly report any other information required by this Contract or otherwise reasonably requested by the INSTITUTE, the Legislature, or any other funding or regulatory bodies covering the RECIPIENT's activities under this Contract.

Section E1.03 Record Keeping and Audits. The provisions of Article IV of the Contract shall apply fully to all information reported to the INSTITUTE pursuant to this Attachment, except that the right of the State of Texas to audit and the RECIPIENT's obligation to maintain Records shall continue until four years after the date of each such report made by RECIPIENT hereunder.

Section E1.04 Confidentiality of Documents and Information. The provisions of Section 2.13 "Confidentiality of Documents and Information" of the Contract shall apply fully to all Confidential Information reported, delivered or submitted to the INSTITUTE pursuant to this Attachment E.

By their signatures below, parties hereby agree that the effective date of this contract as reflected in Section 2.03 is changed to July 1, 2011and the end date is June 30, 2013.

Further, in accordance with Section 2.03, this amendment serves as specific authorization for RECIPIENT to expend grant funds prior to the effective date of the contract, so long as the expenses are not incurred prior to June 1, 2011.

EXECUTED IN DUPLICATE ORIGINALS ON THE DATES INDICATED.

RECIPIENT

By /s/ Thomas J. Farrell, CEO
(Signature of Person Authorized to Sign Contracts)
Name: Thomas J. Farrell, CEO
Date: August 25, 2011

INSTITUTE

By /s/ William Gimson
(Signature of Person Authorized to Sign Contracts)

Name: William “Bill” Gimson, Executive Director
Date: July 22, 2011

As indicated by the signatures below, the INSTITUTE and the RECIPIENT agree to the following amendments to the CPRIT Contract:

Section 4.03 Inspections.

The first sentence of Section 4.03 is hereby amended to read in its entirety as follows:

"In addition to the audit rights specified in Section 4.02 'Audits', during the term of this Contract, the INSTITUTE shall have the right to conduct periodic onsite inspections within normal working hours and on a day and a time mutually agreed to by the parties, to evaluate the Institute-Funded Activity."

Section 4.07 Repayment of Grant Proceeds for Relocation Outside of Texas.

Section 4.07 is amended by adding the following sentence to the end of the Section:

"The RECIPIENT shall repay the INSTITUTE all Grant proceeds disbursed to RECIPIENT and a preferred return of [...***...]% of the amount disbursed in the event that RECIPIENT relocates its principal place of business outside of the State during the Contract term or within 3 years after the final payment of the Grant funds is made by the INSTITUTE. Upon repayment to the INSTITUTE of all Grant funds disbursed to RECIPIENT and the preferred return of [...***...]% of the amount disbursed, the Contract shall terminate and RECIPIENT shall have no further obligations to the INSTITUTE hereunder."

AMENDMENTS TO ATTACHMENT D

Section D2.02 INSTITUTE License.

Section D2.02 of Attachment D is here by amended by adding the following sentence to the end of the section:

"All other rights are reserved by RECIPIENT."

Section D3.01 Commercialization Strategy.

Section D3.01 of Attachment D is hereby amended by deleting the period in the last sentence and inserting the following language after the word "strategy":

", that RECIPIENT, in its sole business judgment, decides to incorporate."

EXECUTED IN DUPLICATE ORIGINALS ON THE DATES INDICATED.

RECIPIENT

By /s/ Thomas J. Farrell, CEO
(Signature of Person Authorized to Sign Contracts)
Name: Thomas J. Farrell, CEO
Date: August 31, 2011

INSTITUTE

By /s/ William Gimson
(Signature of Person Authorized to Sign Contracts)
Name: William "Bill" Gimson, Executive Director
Date: August 31, 2011

As indicated by the signatures below, the INSTITUTE and the RECIPIENT agree to the following amendments to the CPRIT Contract:

AMENDMENT TO SECTION 2.03

The end date indicated in Section 2.03 of the CPRIT Contract is hereby changed to June 30, 2014.

EXECUTED IN DUPLICATE ORIGINALS ON THE DATES INDICATED.

RECIPIENT

By /s/ Thomas J. Farrell, CEO
(Signature of Person Authorized to Sign Contracts)
Name: Thomas J. Farrell
Date: October 28, 2011

INSTITUTE

By /s/ William Gimson
(Signature of Person Authorized to Sign Contracts)
Name: William “Bill” Gimson, Executive Director
Date: October 24, 2011

CANCER PREVENTION AND RESEARCH INSTITUTE OF TEXAS
REQUEST FOR ADVANCEMENT OF GRANT AWARD

ENTITY:	Bellicum Pharmaceuticals, Inc.		
ADDRESS:	6400 Fannin St, Suite 2300, Houston, TX 77030		
PI:	Kevin M. Slawin, M.D.		
CPRIT GRANT NUMBER:	RP110508		
BUDGET CATEGORIES	**CURRENT YEAR APPROVED BUDGET**	**ADVANCE AMOUNT REQUESTED**	**Percentage of Funds Advanced**
PERSONNEL	[...***...]	[...***...]	
FRINGE BENEFITS	[...***...]	[...***...]	
TRAVEL	[...***...]	[...***...]	
EQUIPMENT	[...***...]	[...***...]	
SUPPLIES	[...***...]	[...***...]	
CONTRACTUAL	[...***...]	[...***...]	
OTHER	[...***...]	[...***...]	
TOTAL	[...***...]	[...***...]	100.00%

Justification for Advancement of Grant Award Funds

funds required to achieve first major project milestone

Acknowledgement, I understand that the advancement of grant funds does not preclude the fiscal requirements (timely submission of financial reports, allowable expenditures, indirect cost less then five percent, etc.) of the grant award.

Signature of Authorized Certifying Official:	Telephone Number	Date
/s/ Thomas J. Farrell	713-341-6472	8/29/2011

Typed or Printed Name and Title of Certifying Official:

Thomas J. Farrell, CEO

Exhibit 10.6

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY […*…], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD LIKELY CAUSE COMPETITIVE HARM IF PUBLICLY DISCLOSED.**

EXCLUSIVE LICENSE AGREEMENT

Re: BCM BLG # 13-040 Entitled "Methods for Inducing Selective Apoptosis"

This Exclusive License Agreement (hereinafter called "Agreement"), to be effective as of the 1st day of November, 2014 (hereinafter called "Agreement Date"), is by and between Baylor College of Medicine (hereinafter called "BCM"), a Texas nonprofit corporation having its principal place of business at One Baylor Plaza, Houston, Texas 77030, and Bellicum Pharmaceuticals, Inc., a corporation organized under the laws of Delaware and having a principal place of business at 2130 West Holcombe Blvd., Suite 850, Houston, TX 77030, and its Affiliates (hereinafter, collectively referred to as "LICENSEE").

WITNESSETH:

WHEREAS, BCM's mission is to advance human health through the integration of education, research, patient care and community service; and

WHEREAS, BCM is the owner of Patent Rights as defined below; and

WHEREAS, BCM is willing to grant a royalty bearing, worldwide, exclusive license to Patent Rights to LICENSEE on the terms set forth herein; and

WHEREAS, LICENSEE desires to obtain said exclusive license under Patent Rights.

NOW, THEREFORE, for and in consideration of the promises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto expressly agree as follows:

1. DEFINITIONS AS USED HEREIN

1.1 The term "Affiliate" shall mean any corporation, firm, limited liability company, partnership or other entity that directly controls or is controlled by or is under common control with LICENSEE. For purposes of this Section 1.1, "control" means the possession, directly or indirectly, of the power to direct or cause the direction of the activities, management or policies of such entity, whether through the ownership of securities, by contract or otherwise. Without limitation, "control" shall be presumed to exist when an entity (i) owns or directly controls fifty percent (50%) or more of the outstanding voting stock or other ownership interest of the other entity; or (ii) possesses directly or indirectly the power to elect or appoint fifty percent (50%) or more of the members of the governing body of the other entity.

1.2 The term "BCM Confidential Information" shall mean any proprietary and secret ideas, proprietary technical information, know-how and proprietary commercial information or other similar proprietary information that are owned by BCM.

1.3 The term "Developers" shall mean [*…***…], employees of BCM.

1.3 The term "Field" shall mean all fields.

1.4 The term "Legal Costs" shall mean all legal fees and expenses, filing or maintenance fees, assessments and all other costs and expenses reasonably incurred by BCM for prosecuting, obtaining and maintaining patent protection on the Patent Rights in the United States and foreign countries.

1.5 The term “Licensed Product(s)” shall mean any product, process or service the manufacture, use, sale, offer for sale or import of which, absent the rights and licenses granted by BCM to LICENSEE hereunder, would infringe a Valid Claim.

1.6 The term “Net Sales” shall mean the gross amount of monies or cash equivalent or other consideration which is received for sales, leases or other modes of transfer (excluding consideration received for the grant of a sublicense hereunder) of Licensed Products by LICENSEE or its sublicensee(s) to third parties (whether end users, wholesaler(s) or distributor(s)), less:

(i) […***…];

(ii) […***…];

(iii) […***…]; and

(iv) […***…].

The term “Net Sales” in the case of non-cash sales, shall mean the fair market value of the non-monetary consideration received by LICENSEE or sublicensees that is attributable to the sale, lease or other mode of transfer of Licensed Products to third parties. A sale of a Licensed Product between LICENSEE and a sublicensee for resale to a third party shall not be considered a “sale” for the purpose of this Section 1.6, but the resale of such Licensed Product by such sublicensee or LICENSEE (as applicable) to a third party shall be a “sale” under this Section 1.6.

1.7 The term “Party” shall mean either LICENSEE or BCM, and “Parties” shall mean LICENSEE and BCM.

1.8 The term “Patent Rights” shall mean United States Patent Application Serial No. 61/347,154, entitled “Methods for Inducing Selective Apoptosis” filed May 21, 2010, and (i) all patent applications (including provisional applications) that claim priority from Serial No. 61/347,154, (ii) any and all divisions, reissues, re-examinations, renewals, continuations, continuations-in-part to the extent the claims are directed to subject matter specifically described in the aforementioned patent applications and are dominated by the claims of the existing Patent Rights, and extensions thereof, (iii) any and all United States patents which issue from the foregoing described patent applications, and all other counterparts, pending or issued, and patents in all other countries. Patent Rights shall specifically include the patents and/or patent applications identified in Appendix A.

1.9 The term “Sublicensing Revenue” shall mean all cash and non-cash consideration, including, but not limited to, sublicensing fees, milestone payments and sublicense maintenance fees, actually received by LICENSEE that is directly attributable to the grant of a sublicense under the license rights granted to LICENSEE hereunder; provided that in the event that LICENSEE receives non-cash consideration, Sublicensing Revenue shall be calculated based on the fair market value of such non-cash consideration, assuming an arm’s length transaction made in the ordinary course of business, but expressly excluding the following payments:

(a) […***…];

(b) […***…];

(c) […***…];

(d) […***…]; and

(e) […***…].

1.10 The term “Territory” shall mean the entire world.

1.11 The term “Valid Claim” shall mean a claim of a pending or an issued patent within the Patent Rights, which claim has not expired, lapsed, been cancelled or become abandoned irrevocably and has not been declared invalid or unenforceable by an un-reversed and un-appealable decision or judgment of a court or other appropriate body of competent jurisdiction, and which has not been admitted to be invalid or unenforceable through reissue, disclaimer or otherwise.

2. GRANT OF LICENSE

2.1 License Grant. Subject to the restrictions set forth in Sections 2.2 and 2.3, BCM hereby grants to LICENSEE an exclusive, worldwide, sublicensable license under the Patent Rights, to make, have made, use, market, sell, offer to sell, lease and import Licensed Products in the Field in the Territory.

2.2 Restrictions on License. The grant in Section 2.1 shall be further subject to, restricted by and non-exclusive with respect to:

(i) the making or use of the Subject Technology and Patent Rights by BCM for non-commercial research, patient care, teaching and other educationally related purposes;

(ii) the making or use of the Subject Technology and Patent Rights by the Developers for non-commercial research purposes at academic or research institutions;

(iii) any non-exclusive license of the Subject Technology and/or Patent Rights that BCM grants to other academic or research institutions for non-commercial research purposes;

(iv) the making or use of the Subject Technology and Patent Rights by academic and research institutions for non-commercial research purposes; and

(v) any non-exclusive license of the Subject Technology and/or Patent Rights that BCM is required by law or regulation to grant to the United States of America or to a foreign state pursuant to an existing or future treaty with the United States of America.

(vi) any non-exclusive license of the Subject Technology and/or Patent Rights that BCM grants to [*…***…] under […***…] existing material transfer agreements with BCM.

2.3 Government Reservation. Rights and licenses granted to LICENSEE under this Agreement are subject to rights required to be granted to the Government of the United States of America pursuant to 35 USC Section 200-212, including a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject inventions throughout the world.

3. DILIGENCE

LICENSEE shall itself use, or shall cause its sublicensees to use, commercially reasonable efforts, consistent with sound and reasonable business practices and judgment, to diligently proceed to introduce at least one Licensed Product into the commercial market. Demonstration of such commercially reasonable efforts shall include, but not be limited to:

(i) Annual report provided to BCM describing LICENSEE's or its sublicensees' progress and activities related to research and development, securing regulatory approvals, manufacturing, sublicensing, marketing, and sales of Licensed Products;

(ii) Initiation of a first Phase II clinical trial of a first Licensed Product within […***…] of the Agreement Date;

(iii) Initiation of a first pivotal clinical trial and/or Phase III clinical trial of a first Licensed Product within […***…] of the Agreement Date; and

(iv) The production of the commercialized Licensed Products and the marketing and support of the commercialized Licensed Products with at least a substantially similar level of effort as LICENSEE employs for comparable products and services marketed by LICENSEE.

Timely achievement of the foregoing items (i-iv) shall be deemed to satisfy and fully discharge LICENSEE's obligations under this Section 3. BCM recognizes that there are many uncertainties associated with the development and commercialization of therapeutic products and the regulatory process required by the FDA (and foreign regulatory authorities that are equivalent to the FDA). Accordingly, in the event that LICENSEE can demonstrate to BCM its commercially reasonable efforts (with reasonable supporting documentation) to fulfill items (ii) and (iii) above, LICENSEE and BCM will negotiate in good faith a reasonable revision to items (ii) and (iii) above; provided that BCM shall not unreasonably withhold such revision. If LICENSEE anticipates that it will not fulfill a revised item (ii) or (iii), LICENSEE may obtain a […***…] extension of time in which to achieve these milestones, by paying to BCM a one-time, […***…] dollars ($[…***…] US) extension fee.

4. PAYMENTS

4.1 License Execution Fee. As partial consideration for the license rights conveyed by BCM under this Agreement, LICENSEE shall pay BCM a non-refundable license fee of TWENTY FIVE

THOUSAND DOLLARS ($25,000.00 USD). Such payment shall be due within five (5) business days after complete execution of this Agreement, and shall be paid and delivered to BCM in accordance with the invoice instructions provided below.

4.2 Annual Maintenance Fee. In addition to the foregoing license execution fee, LICENSEE agrees to pay to BCM, upon receipt of an invoice from BCM, an annual non-refundable maintenance fee of [*…***…] DOLLARS ($[…***…] USD), due upon each anniversary of the Agreement Date, beginning on the second anniversary of the Agreement Date. The annual maintenance fee obligation terminates upon the first commercial sale of a Licensed Product.

4.3 Responsibility for Legal Costs. In addition to the foregoing license execution fee, LICENSEE shall be responsible for all Legal Costs incurred by BCM after the Agreement Date.

4.4 Royalty on Net Sales. In addition to the foregoing payments and responsibilities described in Sections 4.1-4.3, LICENSEE shall pay BCM a royalty of […***…] percent ([…***…]%) of Net Sales. Collectively the royalty payments that are the subject of this Section 4.4 are termed “Royalties” for purposes of this Agreement, and shall be due and payable as provided in Section 5 and shall be delivered to BCM in accordance with the invoice instructions provided below.

4.5 Annual Minimum Royalty. In the event that the Royalties paid in any full calendar year after the first commercial sale of a Licensed Product do not reach the minimum amount set out below for such year, then within […***…] days after the end of such full calendar year LICENSEE shall pay an additional amount for the period ending December 31 of such year, so that the total amount paid to BCM under Section 4.4 and this Section 4.5 for such year shall reach such minimum amount:

(i) […***…] DOLLARS ($[…***…] USD) in the first full calendar year following the first commercial sale of Licensed Product;

(ii) […***…] DOLLARS ($[…***…] USD) in the second full calendar year following the first commercial sale of a Licensed Product; and

(iii) […***…] DOLLARS ($[…***…] USD) in the third full calendar year following the first commercial sale of a Licensed Product and thereafter during the Term of this Agreement for each subsequent full calendar year.

4.6 Milestone Payments. LICENSEE shall also pay BCM the following milestone payments set forth below:

(i) Initiation of a first Phase III clinical trial of a first Licensed Product, […***…] DOLLARS ($[…***…] USD); and

(ii) (ii) First Regulatory Agency – Approved Commercial Sale of a first Licensed Product, […***…] DOLLARS ($[…***…] USD).

LICENSEE shall notify BCM in writing within […***…] days upon the achievement of each milestone, such notice to be accompanied by payment of the appropriate milestone payment. Milestones are to be paid regardless of whether LICENSEE or LICENSEE’s sublicensee attains such milestone.

4.7 Sublicense Revenue Payments. In the event LICENSEE grants a sublicense, grants access to, or allows the use of Patent Rights, under this Agreement, LICENSEE agrees to pay to BCM

(1) […***…] percent ([…***…]%) of all Sublicensing Revenue received by LICENSEE before the date of initiation of the first Phase II clinical trial of a first Licensed Product; and

(2) […***…] percent ([…***…]%) of all Sublicensing Revenue received by LICENSEE on or after the date of initiation of the first Phase II clinical trial of a first Licensed Product.

4.8 Payment Addresses. Payments sent by check are to be made payable to "Baylor College of Medicine" and shall be sent to the address below. If payments are sent by wire transfer, they shall be sent using wiring instructions provided in Appendix C. All payments shall reference **BLG number(s) 13-040** (as listed on the front page of the Agreement).

BCM Tax ID #: 74-1613878
Baylor College of Medicine
Licensing Group
P.O. Box 301503
Dallas, Texas 75303-1503

Telephone No. 713-798-6821
Facsimile No. 713-798-1252
E-Mail blg@bcm.tmc.edu

Payments shall be deemed received only upon confirmation that all funds have been received by the LICENSING GROUP as referenced above. LICENSEE hereby accepts responsibility for ensuring that each payment is addressed correctly.

Licensee Payment Contact. For questions about payments, BCM can contact LICENSEE at the address below:

Title VP IP & Legal Affairs
Name Ken Moseley
Address Bellicum Pharmaceuticals, Inc.
2130 W. Holcombe Blvd.
Suite 850
Houston, TX 77030

Telephone No. 832-384-1107
Facsimile No. 832-384-1150
E-Mail kmoseley@bellicum.com

4.9 Payment Conditions. All payments due hereunder are payable in United States dollars. No transfer, exchange, collection or other charges, **including any wire transfer fees**, shall be deducted from such payments. For sales of Licensed Products in currencies other than the United States, LICENSEE shall use exchange rates published in […***…] on the last business day of the month preceding the calendar quarter for which such payment is due.

4.10 Late Payments. Late payments that are overdue by thirty (30) days or more may be subject to a charge of […***…] percent ([…***…]%) per month on the unpaid, undisputed amount, the interest being compounded annually. LICENSEE shall calculate the correct late payment charge, and shall add it to each such late payment. LICENSEE's payment of a late payment shall not negate or waive the right of BCM to seek any other remedy, legal or equitable, to which it may be entitled because of the delinquency of any payment

5. REPORTING

5.1 Annual Progress Report. No later than […***…] after December 31 of each calendar year, LICENSEE shall provide to BCM a written annual progress report describing progress on all research and development and commercial activities related to Licensed Products, during the most recent twelve (12) month period ending December 31 and plans for the forthcoming year ("Annual Progress Report"). If multiple technologies are covered by the license granted hereunder, the progress report shall provide the information set forth above for each technology. At BCM's request, LICENSEE shall also provide any reasonable additional data BCM requires to evaluate LICENSEE's or its sublicensees' diligence obligations under Section 3.

5.2 Notification of First Sale. LICENSEE shall notify BCM in writing of the date on which LICENSEE or the sublicensees make a first commercial sale of a first Licensed Product, such notification to be delivered within […***…] days of occurrence.

5.3 Royalty Reports; Other Payment Reports. From and after the date of first commercial sale of a Licensed Product, LICENSEE shall submit to BCM within […***…] after March 31, June 30, September 30 and December 31, a written Royalty report on a form provided by BCM (a current version of which is attached as Appendix B) setting forth for such calendar quarter at least the following information:

(i) the number of Licensed Products sold by LICENSEE and sublicensees;

(ii) total gross amount of consideration received from sales of such Licensed Products;

(iii) the identity of non-cash consideration which is received and reported pursuant to the foregoing clause (ii);

(iv) deductions from the gross amount reported pursuant to the foregoing clause (ii), as expressly permitted herein to determine the Net Sales thereof; and

(v) the amount of Royalties due thereon, or, if no Royalties are due to BCM for any reporting period after LICENSEE's Royalty reporting obligation under this Section 5.3 has commenced, the statement that no Royalties are due.

Both before and after the date of first commercial sale of a Licensed Product, LICENSEE shall submit to BCM within […***…] after March 31, June 30, September 30 and December 31, a written report of (a) the amount of Sublicensing Revenue received by LICENSEE, and the amount owed thereon pursuant to Section 4.7; and (b) the amount of other payments that became due to BCM in such calendar quarter, including but not limited to, milestone payments pursuant to Section 4.6, minimum royalty payment (if any) pursuant to Section 4.5, and annual maintenance fee payment (if applicable) pursuant to Section 4.2.

The Royalty report shall be certified as correct by an officer of LICENSEE. After termination or expiration of this Agreement, LICENSEE will continue to submit Royalty reports and payments to BCM until all products that were Licensed Products under the Agreement at the time of expiration or termination have been sold.

5.4 Payment to Accompany Royalty Reports. LICENSEE shall pay to BCM with each such royalty report the amount of Royalties and other unpaid amounts then due with respect to such calendar quarter. LICENSEE shall include in each royalty report the applicable BLG number listed on the front page of the Agreement.

5.5 Notification of Merger or Acquisition. In the event of acquisition, merger, change of corporate name, or change of make-up, organization, or identity, LICENSEE shall notify BCM in writing within […***…] days of such event.

6. ENTITY STATUS

If LICENSEE or any sublicensee does not qualify as a "small entity" as provided by the United States Patent and Trademark Office, LICENSEE must notify BCM promptly of such circumstance.

7. RECORDS AND INSPECTION

7.1 Accounting Records. LICENSEE shall maintain, and shall cause its sublicensees to maintain, complete and accurate records relating to any amounts payable to BCM in relation to this Agreement, which records shall contain sufficient information to permit BCM to confirm the accuracy of any financial reports delivered to BCM. The relevant party (LICENSEE or sublicensee) shall retain such records for at least three (3) years following the end of the calendar year to which they pertain.

7.2 Audit by BCM. During the Term of this Agreement as defined below and for a period of […***…] thereafter, and upon no less than thirty (30) days' advance written notice, LICENSEE will permit a certified public accountant engaged by BCM and reasonable acceptable to LICENSEE, provided such acceptance shall not be unreasonably delayed, denied, or conditioned, to inspect the financial books and records of LICENSEE to confirm the accuracy of any royalty reports delivered to BCM pursuant to Section 5.3. LICENSEE agrees to provide such BCM accountant reasonable access during ordinary working hours to permit inspection of LICENSEE's financial books, records, systems and processes, and shall reasonably cooperate with BCM's accountant in support of his/her inspection activities. If BCM's accountant reasonably determines, after any such inspection of LICENSEE's financial books, records, systems and processes, that the books and records of any sublicensee should be inspected, BCM may request in writing that LICENSEE conduct such inspection of LICENSEE's sublicensee, and LICENSEE shall conduct such inspection within sixty (60) days after LICENSEE receives such written request of BCM, and shall report the results of such inspection to BCM's accountant. BCM's accountant will enter into an appropriate confidentiality agreement with LICENSEE that is satisfactory to LICENSEE. The accountant shall provide a copy of his/her inspection report to BCM and to LICENSEE. The accountant shall not disclose to BCM any information relating to the business of LICENSEE or its sublicensees except that which is necessary to inform BCM of: (i) the accuracy or inaccuracy of LICENSEE's royalty reports and payments under this Agreement; (ii) information concerning any payments owed by LICENSEE for any period, in the case of failure of LICENSEE to report or make payment pursuant to this Agreement; and (iii) the extent of any such inaccuracy or payments owed.

7.3 Payment Deficiency. If a payment deficiency is determined by BCM's accountant pursuant to Section 7.2, and LICENSEE does not dispute such finding of a payment deficiency, LICENSEE shall pay the outstanding deficient amount within […***…] days of receiving written notice thereof, plus (if applicable and invoiced by BCM) interest on such outstanding deficient amount as described in Section 4.10.

7.4 Responsibility for Audit Costs. BCM will pay for any audit done under Section 7.2. However, in the event that the audit reveals an undisputed underpayment of Royalties or fees by more than […***…] percent ([…***…]%) for the period being audited, then the reasonable, out-of-pocket cost of such audit shall be paid by LICENSEE.

8. SUBLICENSES

All sublicenses granted by LICENSEE of its license rights hereunder shall be subject to the terms of this Agreement. LICENSEE shall be responsible for its sublicensees and shall not grant any rights which are inconsistent with the rights granted to and obligations of LICENSEE hereunder. Any act or omission of a sublicensee which would be a breach of this Agreement if performed by LICENSEE shall be deemed to be a breach by LICENSEE of this Agreement. No such sublicense agreement shall contain any provision which would cause it to extend beyond the Term of this Agreement as defined below (except with respect to those terms and conditions which are specifically identified as surviving the termination or expiration of the Agreement). LICENSEE shall give BCM prompt notification of the identity and address of each sublicensee with whom it concludes a sublicense agreement and shall supply BCM with a copy of each such sublicense agreement; provided that LICENSEE may redact portions of such sublicense agreement which do not pertain to a sublicense of LICENSEE's rights and obligations under this Agreement.

9. PATENTS AND INFRINGEMENT

9.1 Patent Prosecution Responsibility. For the Term of this Agreement as defined below, LICENSEE shall be responsible for filing, prosecuting and maintaining all patent applications and patents included in the Patent Rights, and LICENSEE agrees to pay all Legal Costs. BCM will reasonably cooperate with LICENSEE regarding such activities related to the Patent Rights. Should BCM incur any Legal Costs, LICENSEE agrees to pay invoices for such Legal Costs within […***…] days of receipt.

9.2 Notification of Intent Not to Pursue. In the event that LICENSEE decides not to file, prosecute or maintain any patent application or patent within the Patent Rights (a "Discontinued Patent"), LICENSEE shall timely notify BCM in writing thereof. LICENSEE's right under this Agreement to practice the Discontinued Patent shall immediately terminate upon the giving of such notice, and such Discontinued Patent shall be removed from the definition of Patent Rights. Thereafter, BCM may file, prosecute and/or maintain such Discontinued Patent, at its own expense, If LICENSEE fails to notify BCM in reasonably sufficient time for BCM to assume such filing, prosecution and/or maintenance of said Discontinued Patent, LICENSEE shall be considered in default of this Agreement.

9.3 Notification of Patent Prosecution Action. LICENSEE agrees to keep BCM fully informed, at […***…]'s expense, of all prosecutions and other actions pursuant to this Section 9, including submitting to BCM copies of all official actions in patent offices and responses thereto.

9.4 Cooperation. BCM agrees to reasonably cooperate with LICENSEE to whatever extent is reasonably necessary to provide LICENSEE the full benefit of the license granted herein.

9.5 Infringement Procedures. During the Term of this Agreement as defined below, each Party shall promptly inform the other of any suspected infringement of any claims in the Patent Rights or the misuse, misappropriation, theft or breach of confidence of other proprietary rights in Patent Rights by a third party, and with respect to such activities as are suspected. Any action or proceeding against such third party shall be instituted as following:

(i) BCM and LICENSEE may agree to jointly institute an action for infringement, misuse, misappropriation, theft or breach of confidence of the proprietary rights against such third party ("Infringement Action"). Such joint Infringement Action shall be brought in the names of both BCM and LICENSEE. LICENSEE and BCM shall agree to the manner in which they shall exercise control over any joint Infringement Action, providing however that if they cannot agree BCM shall have the right to

unilaterally decide on control (and in such event, LICENSEE may withdraw as a party to such Infringement Action). In such joint Infringement Action, the out-of-pocket costs shall be borne equally, and any recovery or settlement shall be shared equally.

(ii) If LICENSEE does not agree to participate in a joint Infringement Action, then BCM shall have the right, but not the obligation, to institute an Infringement Action on its own and in its own name. If BCM fails to bring such an Infringement Action within a period of three (3) months after receiving notice or otherwise having knowledge of such infringement, then LICENSEE shall have the right, but not the obligation, to prosecute the same at its own expense and in its own name; BCM will reasonably cooperate with LICENSEE in such Infringement Action. In addition, if BCM cooperates in such Infringement Action at LICENSEE's request, such cooperation shall be at LICENSEE's sole expense.

(iii) If BCM does not agree to participate in a joint Infringement Action, then LICENSEE shall have the right, but not the obligation, to institute an Infringement Action on its own and in its own name. If LICENSEE fails to bring such an Infringement Action within a period of three (3) months after receiving notice or otherwise having knowledge of such infringement, then BCM shall have the right, but not the obligation, to prosecute the same at its own expense and in its own name; LICENSEE will reasonably cooperate with BCM in such Infringement Action. In addition, if LICENSEE cooperates in such Infringement Action at BCM's request, such cooperation shall be at BCM's sole expense.

(iv) Should either BCM or LICENSEE commence an Infringement Action under the provisions of this Section 9.5 and thereafter elect to abandon the same, it shall give timely notice to the other Party who may, if it so desires, continue prosecution of such Infringement Action. All recoveries, whether by judgment, award, decree or settlement, from infringement or misuse of Patent Rights shall be apportioned as follows: (a) the Party bringing the Infringement Action shall first recover a reasonable amount equal the costs and expenses incurred by such Party directly related to the prosecution of such Infringement Action, (b) the Party cooperating in such Infringement Action shall then recover reasonable costs and expenses incurred by such Party, if any, directly related to its cooperation in the prosecution of such Infringement Action and (c) the remainder shall be divided equally between LICENSEE and BCM.

9.6 Consent to Settle. Neither BCM nor LICENSEE shall settle any Infringement Action covered by Section 9.5 without first obtaining the consent of the other Party, which consent will not be unreasonably withheld, conditioned or delayed.

9.7 Liability for Losses. BCM shall not be liable for any losses incurred as the result of an action for infringement brought by a third party against LICENSEE as the result of LICENSEE's exercise of any right granted under this Agreement. The decision to defend or not defend such third-party action for infringement shall be in LICENSEE's sole discretion.

9.8 Statement Regarding Patent Rights. To the knowledge of BCM's Licensing Group, (i) BCM owns all right, title and interest in and to the Patent Rights (with the exception of certain retained rights of the United States Government, as described in Section 2.3); (ii) inventors of the Patent Rights have been properly named; (iii) it has the authority to enter into this Agreement and grant the licenses to LICENSEE as set forth hereunder.

10. TERM

Unless sooner terminated as otherwise provided in Section 11, the license to employ Patent Rights granted to LICENSEE herein shall expire on a country-by-country basis, on the date of expiration of the last of the Patent Rights to expire ("Term"). After such expiration, but not termination, LICENSEE shall have a perpetual, paid-in-full (i.e., royalty free) license.

11. TERMINATION

11.1 Termination for Default. In the event of default or failure by LICENSEE to perform any of the terms, covenants or provisions of this Agreement, including failure to make timely payment, LICENSEE shall have thirty (30) days after receipt of written notice from BCM describing such default or failure and demanding its cure in which to correct such default or failure. If such default or failure is not corrected within the said thirty (30) day period, BCM shall have the right, at its option, to cancel and terminate this Agreement by delivery to LICENSEE of a written notice of termination. The failure of BCM to exercise such right of termination, for non-payment of Royalties/ fees or other non-payment, after delivering a notice of default or failure shall not be deemed to be a waiver by BCM of any other right BCM might have, nor shall such failure of BCM to exercise such right of termination preclude BCM from exercising or enforcing said right in accordance with this Section 11.1 upon any subsequent default or failure by LICENSEE.

11.2 Termination for Default of Diligence Obligations. Notwithstanding anything to the contrary in Section 11.1, if LICENSEE materially breaches or fails to perform one or more of its diligence obligations under Section 3, BCM may deliver to LICENSEE a written notice of default (which notice shall specify in reasonable detail the default). The Parties shall thereafter consult concerning the alleged default, and BCM then may provide written notice of BCM's intent to terminate LICENSEE's rights under this Agreement, if the default has not been cured in full within ninety (90) days. In the event of any default which is not reasonably capable of remedy within such ninety (90)-day period, LICENSEE shall provide to BCM a written proposal for such remedy (including a reasonable time period which shall not extend beyond one (1) year for completion thereof), and then if LICENSEE has not commenced or has not diligently pursued such remedy within such reasonable time period, BCM may terminate this Agreement effective immediately upon receipt of written notice.

11.3 Termination for Insolvency. BCM shall have the right, at its option, to cancel and terminate this Agreement in the event that LICENSEE shall (i) become insolvent, undergo dissolution, or initiate bankruptcy or receivership proceedings affecting the operation of its business or (ii) make an assignment of all or substantially all of its assets for the benefit of creditors, or in the event that (iii) a receiver or trustee is appointed for LICENSEE and LICENSEE shall, after the expiration of thirty (30) days following any of the events enumerated above, have been unable to secure a dismissal, stay or other suspension of such proceedings.

11.4 Termination by Licensee. LICENSEE shall have the right in its sole discretion to terminate this Agreement upon sixty (60) days' written notice to BCM.

11.5 Effect of Termination. In the event of termination of this Agreement, all rights to Patent Rights shall revert to BCM. At the date of any termination of this Agreement, LICENSEE shall immediately cease using and exploiting any Valid Claims; provided, however, that LICENSEE and its sublicensees may sell any Licensed Products actually in the possession of LICENSEE or its sublicensees on the date of termination, provided that LICENSEE continues to submit royalty reports to BCM and pays to BCM the Royalties on all such sales in accordance with Section 5.3 with respect thereto and otherwise complying with the terms of this Agreement.

11.6 Effect of Termination on Sublicensees. Notwithstanding Section 11.5 to the contrary, at any time within thirty (30) days following termination of this Agreement, a sublicensee under this Agreement may notify BCM that it wishes to enter into a direct license with BCM (with the same effective date as the date of termination of this Agreement) in order to retain its continuous rights to the Patent Rights granted to it under its sublicense with LICENSEE (such 30-day period following

termination, the "Initial Notice Period"). Following receipt of such notice, BCM and such sublicensee shall enter into a license agreement the terms of which shall be substantially similar to the terms of this Agreement; provided, however, that the scope of such direct license, the licensed territory and/or the duration of the license grant may be more limited than the corresponding terms granted to LICENSEE hereunder (for example, if such sublicense provided for such limited terms and/or if multiple sublicensees seek such direct licenses with BCM); and provided such sublicensee shall provide BCM in writing notification that such sublicensee is in good standing with respect to the sublicensing rights; and further provided that such sublicensee will be granted at least the same scope of rights as it obtained under its sublicense. For the sake of clarity, the financial terms, including without limitation, the royalty rate and milestone payments, shall be identical to the corresponding financial terms set forth in this Agreement; provided, however, that milestone payment amounts that would have been paid by LICENSEE to BCM under this Agreement will be allocated in a pro rata fashion in the event that there are multiple sublicensees.

11.7 No Refund. In the event this Agreement is terminated pursuant to this Section 11, or expires as provided for in Section 10, BCM is under no obligation to refund any payments made by LICENSEE to BCM, or due to BCM, prior to the effective date of such termination or expiration.

11.8 Survival of Termination. No termination of this Agreement shall constitute a termination or a waiver of any rights of either Party against the other Party accruing at or prior to the time of such termination. The obligations of Sections 4 (regarding payment obligations that accrued during the Term), 5.3, 5.4, 7, 11.5, 11.6, 11.7, 11.8, 13, 14, 15, 16, 17 and 18 shall survive expiration or termination of this Agreement.

12. ASSIGNABILITY

Without the prior written approval of BCM, which will not be unreasonably withheld, conditioned or delayed, this Agreement and LICENSEE's rights and obligations hereunder shall not be assigned in whole or in part by LICENSEE to any person or entity whether voluntarily or involuntarily, by operation of law or otherwise. Notwithstanding the foregoing, LICENSEE may assign this Agreement and its rights and obligations hereunder without BCM's consent, (i) in connection with the transfer or sale of all or substantially all of its assets or the business of LICENSEE to which this Agreement relates or (ii) to any Affiliate; so long as LICENSEE gives BCM prompt notice of such action and the successor entity or Affiliate, i.e., the assignee (as the case may be), acknowledges its consent and agreement to the terms of this Agreement in writing within […***…] business days of such assignment; and so long as such assignment is not entered into solely to satisfy creditors of LICENSEE. This Agreement shall be binding upon and shall inure to the benefit of the respective successors, legal representatives and assignees of each of the Parties.

13. GOVERNMENTAL COMPLIANCE

13.1 Compliance with Applicable Laws. LICENSEE shall at all times during the Term of this Agreement and for so long as it shall use Valid Claims of Patent Rights, or sell Licensed Products, comply and cause its sublicensees to comply with all laws that may control the import, export, manufacture, use, sale, marketing, distribution and other commercial exploitation of Patent Rights, Licensed Products or any other activity undertaken pursuant to this Agreement.

13.2 Requirement for U.S. Manufacture. To the extent required by 35 USC § 204 (if applicable), LICENSEE agrees that Licensed Products embodying or produced through the use of an invention that is subject to the rights of the federal government of the United States of America and that are leased or sold in the United States shall be manufactured substantially in the United States (unless a waiver under 35 USC § 204 or equivalent is granted by the appropriate United States government agency); provided that should LICENSEE decide to seek a waiver of this requirement, BCM shall reasonably cooperate with LICENSEE in seeking such waiver.

13.2.1 To the extent LICENSEE requests BCM to cooperate with LICENSEE in seeking such a waiver, upon LICENSEE's written request, and at LICENSEE's expense, BCM shall use reasonable efforts to apply to the applicable United States governmental agency for a waiver to such requirements; provided, however, that all reasonable costs incurred by BCM in the preparation and application of the waiver, including the reasonable costs of any action undertaken by BCM or its counsel that is necessary to satisfy any governmental agency's request regarding such waiver, shall be paid by LICENSEE within thirty (30) days following receipt of BCM's invoice or BCM counsel's invoice for such costs. LICENSEE agrees that it will reasonably cooperate with BCM in such application and provide any information reasonably requested by BCM for such application. LICENSEE understands and agrees that such waivers are not guaranteed to be granted.

13.3 Export Control Regulations. The Patent Rights are subject to, and LICENSEE agrees to comply in all respects with, all applicable U.S. export laws, including but not limited to U.S. export controls under the Export Administration Regulations (15 C.F.R. Part 734 et seq.) and U.S. economic sanctions and embargoes codified in 31 C.F.R. Chapter V. LICENSEE agrees that LICENSEE bears sole responsibility for understanding and complying with current U.S. trade controls laws and regulations as applicable to its activities subject to this Agreement. Without limitation on the general agreement to comply set forth in the first sentence of this Section 13.3, LICENSEE agrees not to sell any goods, services, or technologies subject to this Agreement, or to release or disclose or re-export the same: (i) to any destination prohibited by U.S. law, including any destination subject to U.S. economic embargo; (ii) to any end-user prohibited by U.S. law, including any person or entity listed on the U.S. government's Specially Designated Nationals list, Denied Parties List, Debarred Persons List, Unverified List, or Entities List; (iii) to any foreign national in the U.S. or abroad without prior license if required; or (iv) to any user, for any use, or to any destination without prior license if required by the US Government. Furthermore, LICENSEE agrees that any transfer of Patent Rights from BCM to LICENSEE under this Agreement may be subject to U.S. export license authorization as may be required under U.S. law.

14. DISPUTE RESOLUTION

14.1 Amicable Resolution. The Parties shall attempt to settle any dispute or controversy between them ("Dispute") amicably. To this end, a senior executive from each Party shall consult and negotiate to reach a resolution of such Dispute. The Parties agree that the period of amicable resolution shall toll any otherwise applicable statute of limitations.

14.2 Failure to Amicably Resolve. If the senior executives from each Party fail to meet or if the Dispute remains unresolved for a period of […***…] days after commencing senior executive negotiations, then the Parties may mutually agree to resolve such Dispute through other informal procedural means, including, but not limited to, referral to an independent, neutral third party expert, mediation, arbitration and/or any other procedure(s) upon which the Parties mutually agree. Each Party agrees that, prior to resorting to litigation to resolve any Dispute, it will confer in good faith with the other Party to determine whether other procedures that are less expensive or less time consuming can be adopted to resolve the Dispute.

14.3 Construction and Jurisdiction. This Agreement shall be governed by, and shall be construed and interpreted in accordance with, the laws of the State of Texas.

15. NOTICES

15.1 Addresses for Notices. All notices, reports or other communications pursuant to this Agreement shall be sent to such Party via (i) United States Postal Service first class postage prepaid, return receipt requested, or (ii) overnight courier, or (iii) personal delivery addressed to the addressee Party at its address set forth below or as it shall designate by written notice given to the other Party. Notice shall be sufficiently made or given upon delivery to the addressee Party during normal hours of a business day.

In the case of BCM:
Patrick Turley
Associate General Counsel
Baylor College of Medicine
One Baylor Plaza, BCM210-600D
Houston, TX 77030

Telephone No. 713-798-6821
Facsimile No. 713-798-1252

In the case of LICENSEE:
Title President & CEO
Name Thomas J. Farrell
Address Bellicum Pharmaceuticals, Inc.
2130 W. Holcombe Blvd. Suite 850
Houston, TX 77030
Telephone No. 832-384-1107
Facsimile No. 832-384-1150

15.2 Use of Reference Number. Each such report, notice or other communication shall include BLG number(s) 13-040 listed on the front page of the Agreement.

16. INDEMNITY, INSURANCE & WARRANTIES

16.1 Indemnity.

(I) EACH PARTY SHALL NOTIFY THE OTHER OF ANY CLAIM, LAWSUIT OR OTHER PROCEEDING RELATED TO PATENT RIGHTS. LICENSEE AGREES THAT IT WILL DEFEND, INDEMNIFY AND HOLD HARMLESS BCM, ITS FACULTY MEMBERS, SCIENTISTS, RESEARCHERS, EMPLOYEES, STUDENTS, OFFICERS, TRUSTEES AND AGENTS AND EACH OF THEM (THE "INDEMNIFIED PARTIES"), FROM AND AGAINST ANY AND ALL THIRD PARTY CLAIMS, CAUSES OF ACTION, LAWSUITS OR OTHER PROCEEDINGS (THE "BCM CLAIMS") FILED OR OTHERWISE INSTITUTED AGAINST ANY OF THE INDEMNIFIED PARTIES RELATED DIRECTLY TO OR ARISING OUT OF THE DESIGN, PROCESS, MANUFACTURE OR USE OF PATENT RIGHTS, LICENSED PRODUCTS OR ANY OTHER EMBODIMENT OF PATENT RIGHTS (INCLUDING, BUT NOT LIMITED TO, THE PAYMENT OF ALL REASONABLE ATTORNEYS' FEES AND COSTS OF LITIGATION OR OTHER DEFENSE); PROVIDED, HOWEVER, THAT SUCH INDEMNITY OBLIGATION SHALL NOT APPLY TO ANY BCM CLAIMS ARISING FROM THE GROSS NEGLIGENCE OR INTENTIONAL MISCONDUCT OF ANY INDEMNIFIED PARTY. LICENSEE WILL ALSO ASSUME RESPONSIBILITY FOR ALL COSTS AND EXPENSES

RELATED TO SUCH BCM CLAIMS FOR WHICH IT IS OBLIGATED TO INDEMNIFY THE INDEMNIFIED PARTIES PURSUANT TO THIS SECTION 16.1, INCLUDING, BUT NOT LIMITED TO, THE PAYMENT OF ALL REASONABLE ATTORNEYS' FEES AND COSTS OF LITIGATION OR OTHER DEFENSE.

(II) LICENSEE SHALL HAVE SOLE DISCRETION IN ASSUMING THE DEFENSE OF A BCM CLAIM. UPON CHOOSING TO ASSUME SUCH DEFENSE, LICENSEE SHALL SEND A NOTICE OF THE ASSUMPTION TO BCM. AFTER SENDING THE NOTICE, LICENSEE SHALL CHOOSE AND EMPLOY LEGAL COUNSEL OF REPUTABLE STANDING AND MAY CONTEST, PAY, SETTLE OR COMPROMISE THE BCM CLAIM AS IT MAY DETERMINE, SUBJECT TO THE PROVISIONS OF SECTION 16.1(iv). LICENSEE'S ASSUMPTION OF THE DEFENSE OF THE BCM CLAIM DOES NOT CONSTITUTE AN ADMISSION BY LICENSEE THAT IT IS REQUIRED TO INDEMNIFY BCM FOR THE BCM CLAIM.

(III) LICENSEE SHALL HAVE NO OBLIGATION TO INDEMNIFY BCM UNDER THIS SECTION 16 IF BCM FAILS TO NOTIFY LICENSEE IN WRITING WITHIN TWENTY (20) BUSINESS DAYS AFTER BCM'S RECEIPT OF WRITTEN NOTICE OF THE BCM CLAIM.

(IV) LICENSEE FURTHER AGREES NOT TO SETTLE ANY CLAIM AGAINST AN INDEMNIFIED PARTY WITHOUT THE INDEMNIFIED PARTY'S WRITTEN CONSENT WHICH CONSENT SHALL NOT BE UNREASONABLY WITHHELD, CONDITIONED OR DELAYED. UPON BCM'S WRITTEN REQUEST, LICENSEE FURTHER AGREES TO KEEP THE INDEMNIFIED PARTIES REGULARLY APPRISED OF THE BCM CLAIMS.

(V) FOR THE AVOIDANCE OF DOUBT AND NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT, LICENSEE SHALL HAVE NO INDEMNIFICATION OBLIGATION WHATSOEVER FOR THE POSSESSION OR USE BY BCM, ITS FACULTY MEMBERS, DEVELOPERS, SCIENTISTS, RESEARCHERS, EMPLOYEES, STUDENTS, OFFICERS, TRUSTEES, AGENTS, TRANSFEREES OR COLLABORATORS OF LICENSED PRODUCTS OR ANY OTHER EMBODIMENT OF THE PATENT RIGHTS.

16.2 Insurance.

(i) Until LICENSEE receives commercialization approval from a national regulatory body for a Licensed Product, LICENSEE shall for so long as LICENSEE manufactures or, uses any Licensed Product(s), maintain in full force and effect policies of (a) worker's compensation insurance within statutory limits, (b) employers' liability insurance with limits of not less than […***…] dollars ($[…***…]) per occurrence, (c) general liability insurance (with Broad Form General Liability endorsement) with limits of not less than […***…] dollars ($[…***…]) per occurrence with an annual aggregate of […***…] dollars ($[…***…]) and (d) products liability insurance, with limits of not less than […***…] dollars ($[…***…]) per occurrence with an annual aggregate of […***…] dollars ($[…***…]).

(ii) At such time that LICENSEE receives commercialization approval from a national regulatory body for a Licensed Product, LICENSEE shall for so long as LICENSEE manufactures, uses or sells any such Licensed Product(s), maintain in full force and effect policies of (a) worker's compensation insurance within statutory limits, (b) employers' liability insurance with limits of not less than […***…] dollars ($[…***…]) per occurrence, (c) general liability insurance (with Broad Form General Liability endorsement) with

limits of not less than […***…] dollars ($[…***…]) per occurrence with an annual aggregate of […***…] dollars ($[…***…]) and (d) products liability insurance, with limits of not less than […***…] dollars ($[…***…]) per occurrence with an annual aggregate of […***…] dollars ($[…***…]).

(iii) Such coverage(s) shall be purchased from a carrier or carriers having an A. M. Best rating of at least A- (A minus) and shall name BCM as an additional insured. LICENSEE shall provide to BCM copies of certificates of insurance within […***…] days after execution of this Agreement. Upon request by BCM, LICENSEE shall provide to BCM copies of said policies of insurance. It is the intention of the Parties hereto that LICENSEE shall, throughout the Term of this Agreement, continuously and without interruption, maintain in force the required insurance coverages set forth in this Section 16.2. Failure of LICENSEE to comply with this requirement shall constitute a default of LICENSEE allowing BCM, at its option, to immediately terminate this Agreement.

(iv) BCM reserves the right to request additional policies of insurance where appropriate and reasonable in light of LICENSEE's business operations and availability of coverage.

16.3 DISCLAIMER OF WARRANTY. BCM MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS OR MERCHANTABILITY, REGARDING OR WITH RESPECT TO PATENT RIGHTS OR LICENSED PRODUCTS AND BCM MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, OF THE PATENTABILITY OF PATENT RIGHTS OR LICENSED PRODUCTS OR OF THE ENFORCEABILITY OF ANY PATENTS ISSUING THEREUPON, IF ANY, OR THAT PATENT RIGHTS OR LICENSED PRODUCTS ARE OR SHALL BE FREE FROM INFRINGEMENT OF ANY PATENT OR OTHER RIGHTS OF THIRD PARTIES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS CONFERRING BY IMPLICATION, ESTOPPEL OR OTHERWISE ANY LICENSE OR RIGHTS UNDER ANY PATENTS OF BCM OTHER THAN THE PATENT RIGHTS REGARDLESS OF WHETHER SUCH PATENTS ARE DOMINANT OR SUBORDINATE TO THE PATENT RIGHTS.

17. CONFIDENTIALITY

17.1 Scope. The term "LICENSEE Confidential Information" shall mean any proprietary and secret ideas, proprietary technical information, know-how and proprietary commercial information or other similar proprietary information that are owned by LICENSEE. Collectively, LICENSEE Confidential Information and BCM Confidential Information may be referred to herein as "Confidential Information." A receiving Party shall not disclose the other Party's Confidential Information to any third party without the other Party's prior written consent, and shall not use such Confidential Information of the other Party except as permitted hereunder. Employees, agents or subcontractors of a receiving Party shall be given access to the other Party's Confidential Information only on a legitimate "need to know" basis and after agreeing to be bound in writing to not divulge or reveal the other Party's Confidential Information. The public disclosure by a receiving Party with the permission of the other Party of any one component of that which was identified as or constituted the other Party's Confidential Information shall not prevent the other components from retaining their status as Confidential Information and the property of the other Party

17.2 Exclusion. Such obligation of confidentiality imposed on the receiving Party shall not apply to information which the receiving Party can demonstrate: (i) was at the time of disclosure in the public domain; (ii) has come into the public domain after disclosure through no act or omission of the receiving Party; (iii) was known to the receiving Party prior to disclosure thereof by the other Party; (iv) was lawfully disclosed to the receiving Party on a non-confidential basis by a third party; (v) the receiving Party was compelled to disclose by law or legal process; or (vi) was approved for public release by prior written permission of the other Party.

17.3 Court Order. A receiving Party may make disclosures of the other Party's Confidential Information to the extent required by a Court Order or governmental body, provided the receiving Party first gives prompt, written advance notice to the other Party of such required disclosure to enable the other Party to seek a protective order or otherwise prevent or restrict such disclosure, or to secure confidential treatment of its Confidential Information prior to its disclosure, and the receiving Party will disclose only for the sole purpose of and solely to the extent required by law.

17.4 Confidentiality of Agreement. Unless otherwise provided for in this Agreement, the Parties agree that this Agreement and its terms are to be considered Confidential Information of each Party and shall be treated as such.

18. ADDITIONAL PROVISIONS

18.1 Use of Names. LICENSEE agrees that it shall not use in any way the name of "Baylor College of Medicine" or any logotypes or symbols associated with BCM or the names of any of the scientists or other researchers at BCM without the prior written consent of BCM. BCM agrees that it shall not use in any way the name of LICENSEE or any logotypes or symbols associated with LICENSEE or the names of any employees or agents of LICENSEE without the prior written consent of LICENSEE.

18.2 Marking of Licensed Products. To the extent commercially feasible and consistent with prevailing business practices, LICENSEE shall mark, and shall cause its sublicensees to mark, all Licensed Products that are manufactured or sold under this Agreement with the number of each issued patent under the Patent Rights that applies to such Licensed Product.

18.3 BCM's Disclaimers. Neither BCM, nor any of its faculty members, scientists, researchers, employees, students, officers, trustees or agents assume any responsibility for the manufacture, product specifications, sale or use of Patent Rights or Licensed Products which are manufactured by or sold by LICENSEE.

18.4 Independent Contractors. The Parties hereby acknowledge and agree that each is an independent contractor and that neither Party shall be considered to be the agent, representative, master or servant of the other Party for any purpose whatsoever, and that neither Party has any authority to enter into a contract, to assume any obligation or to give warranties or representations on behalf of the other Party. Nothing in this relationship shall be construed to create a relationship of joint venture, partnership, fiduciary or other similar relationship between the Parties.

18.5 Non-Waiver. The Parties covenant and agree that if a Party fails or neglects for any reason to take advantage of any of the terms provided for the termination of this Agreement or if a Party, having the right to declare this Agreement terminated, shall fail to do so, any such failure or neglect by such Party shall not be a waiver or be deemed or be construed to be a waiver of any cause for the termination of this Agreement subsequently arising, or as a waiver of any of the terms, covenants or conditions of this Agreement or of the performance thereof. None of the terms, covenants and conditions of this Agreement may be waived by a Party except by its written consent.

18.6 Reformation. The Parties hereby agree that neither Party intends to violate any public policy, statutory or common law, rule, regulation, treaty or decision of any government agency or executive body thereof of any country or community or association of countries, and that if any word, sentence, paragraph or clause or combination thereof of this Agreement is found, by a court or executive body with judicial powers having jurisdiction over this Agreement or any of the Parties hereto, in a final, unappealable order to be in violation of any such provision in any country or community or association of countries, such words,

sentences, paragraphs or clauses or combination shall be inoperative in such country or community or association of countries, and the remainder of this Agreement shall remain binding upon the Parties hereto. In lieu of such inoperative words, sentences, paragraphs or clauses, or combination of clauses, there will be added automatically as part of this Agreement, a valid, enforceable and operative provision as close to the original language as may be possible which preserves the economic benefits to the Parties.

18.7 Force Majeure. No liability hereunder shall result to a Party by reason of delay in performance caused by force majeure, that is circumstances beyond the reasonable control of the Party, including, without limitation, acts of God, fire, flood, war, terrorism, civil unrest, labor unrest, or shortage of or inability to obtain material or equipment.

18.8 Section and Paragraph Headings. The section and paragraph headings used in this Agreement are intended for purposes of reference and convenience only, and shall not factor into any interpretation of the Agreement.

18.9 Entire Agreement. The terms and conditions herein constitute the entire agreement between the Parties and shall supersede all previous agreements, whether electronic, oral or written, between the Parties hereto with respect to the subject matter hereof. No agreement of understanding bearing on this Agreement shall be binding upon either Party hereto unless it shall be in writing and signed by the duly authorized officer or representative of each of the Parties and shall expressly refer to this Agreement. Electronic communication between the Parties shall not constitute an agreement of understanding, unless it is subsequently reduced to writing and signed by the duly authorized officer or representative of each of the Parties and shall expressly refer to this Agreement.

18.10 No Effect on ARIAD MTAs. Nothing in this Agreement shall be construed as limiting ARIAD Pharmaceuticals' rights under its material transfer agreements with BCM.

IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement in multiple originals by their duly authorized officers and representatives on the respective dates shown below, but effective as of the Agreement Date.

BELLICUM PHARMACEUTICALS, INC.	BAYLOR COLLEGE OF MEDICINE
Name: /s/ Thomas J. Farrell	Name: /s/ Adam Kuspa, Ph.D. Adam Kuspa, Ph. D.
Title: President & CEO	Title: Senior Vice President, Research
Date: 11/11/14	Date: 11/6/14

Appendix A
Patent Rights

Law Firm Ref. No. BCM Ref. No.	Title and Patent Number (if issued)	Country	Inventor(s)	Appln. No.	Filing Date	Assignment	Priority Information
BLG 13-040	Methods for Inducing Selective Apoptosis	US	Malcolm Brenner	61/347,154	May 21, 2010	BCM	
BLG 13- 040	Methods for Inducing Selective Apoptosis	PCT	Malcolm Brenner	PCT/US2011/037381	May 20, 2011	BCM	61/347,154 May 21, 2010
BLG 13- 040	Methods for Inducing Selective Apoptosis	US	Malcolm Brenner	13/112,739	May 20, 2011	BCM	61/347,154 May 21, 2010
BLG 13- 040	Methods for Inducing Selective Apoptosis	US	Malcolm Brenner	13/786,672	March 6, 2013	BCM	61/347,154 May 21, 2010

Appendix B
Royalty Report

BLG #: _____

Licensee: _____

Reporting Period: _____

Prepared By _____ Date: _____

Approved By _____ Date: _____

Please prepare a separate report for each product line. Then combine all product lines into a summary report.

Product Line Code (SKU):

Country	Units Sold	Exchange Rate	Gross Amounts Received for Sales (USD)	Less Deductions* (USD)	Net Sales (USD)	Royalty Rate	Royalty Amount
USA							
Canada							
Europe:							
Japan							
Other:							
Total							**$**
Third Party Royalty Payments (USD)							**$**
Net Royalty Payable (USD)							**$**
Sublicensing Revenue (USD)							**$**
Other Payments- Milestones, Minimum Royalties, Maintenance Fees (USD)							**$**
Total Payment Due (USD)							**$**

* Deduction Description:

APPENDIX C
FORM OF INVOICE

INVOICE

Baylor Licensing Group
One Baylor Plaza
BCM210-600D
Houston, TX 77030
Phone: 713-798-6821
Fax: 713-798-1252

PLEASE NOTE CHANGE OF ADDRESS FOR ALL PAYMENTS

DATE

RE: XXXXXXXXXXXXX Fee
BLG # 13-040
Dear:

Please let this letter serve as an **INVOICE** for the XXXXXXXXXX fee of $XXXX for the above-referenced technology, as stated in the License Agreement, between Bellicum Pharmaceuticals, Inc. and Baylor College of Medicine.
Please make the check payable to **Baylor College of Medicine** **Please address payment to the address listed below and include BLG ref 13-040 on all payments**.

Should you choose to send payment via wire; I have attached a copy of our wire transfer instructions for your convenience.

Baylor College of Medicine
Licensing Group

P.O. Box 301503
Dallas, Texas 75303-1503

I appreciate your attention to this matter.

Best regards,

Nellie Villarreal
Administrative Coordinator
/nv

ALL WIRE TRANSFER FEES ARE TO BE PAID BY THE SENDER
(NOT BAYLOR COLLEGE OF MEDICINE).

Wire Instructions (Incoming)

Company Information

Name of Company Baylor College of Medicine

Address One Baylor Plaza, M.S. BCM 203
Houston, TX 77030

Contact Person Linda Zoleta

Phone 713-798-4323

BANK INFORMATION

Swift Code [*…***…] (International Wires)

ABA Transit Routing Number (for wires) […***…]
ABA Transit Routing Number (for ACH) […***…]

Name of Recipient Bank JPMorgan Chase Bank
717 Travis, 8th Floor South
8-CBBS-302
Houston, TX 77002

Bank Contact Lewis H. Gissel
Phone 713-216-0401

Account Number […***…]

Further Credit to- Baylor College of Medicine, General Acct.

Reference Baylor Licensing Group —BLG# 13-040

PLEASE NOTE:
Once the money is wired, we need prompt notification (email and/or fax) to the attention of Nellie Villarreal of the date and amount that was wired. The email is blg@bcm.edu, and the fax number is 713-798-1252.

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Richard A. Fair, certify that:

1. I have reviewed this 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(s) 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; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of 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(s) 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: November 5, 2020

By: /s/ Richard A. Fair
Richard A. Fair
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Atabak Mokari, certify that:

1. I have reviewed this 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(s) 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; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of 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(s) 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: November 5, 2020

By: /s/ Atabak Mokari
Atabak Mokari
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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 September 30, 2020 (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/ Richard A. Fair

Richard A. Fair
President and Chief Executive Officer
(Principal Executive Officer)
November 5, 2020

/s/ Atabak Mokari

Atabak Mokari
Chief Financial Officer
(Principal Financial Officer)
November 5, 2020

This certification accompanies the Report to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.