UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended September 30, 2019
OR

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

Commission File Number: 001-37798

Selecta Biosciences, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**26-1622110**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
480 Arsenal Way Watertown MA	**02472**
(Address of principal executive offices)	(Zip Code)

(617) 923-1400
(Registrant's telephone number, including area code)

N/A
(Former name, former address, and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	SELB	Nasdaq Global Market

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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, 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 November 4, 2019, the registrant had 48,196,387 shares of common stock, par value $0.0001 per share, outstanding.

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this Quarterly Report, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, research and development costs, timing and likelihood of success, the plans and objectives of management for future operations and future results of anticipated products and a potential amendment to our exclusive patent license agreement with the Massachusetts Institute of Technology are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential", or "continue" or the negative of these terms or other similar expressions. The forward-looking statements in this Quarterly Report are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this Quarterly Report and are subject to a number of important factors that could cause actual results to differ materially from those in the forward-looking statements, including the factors described under the sections in this Quarterly Report titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as the following:

- our status as a development-stage company and our expectation to incur losses in the future;
- our ability to continue as a going concern, our future capital needs and our need to raise additional funds;
- our ability to build a pipeline of product candidates and develop and commercialize drugs;
- our unproven approach to therapeutic intervention;
- our ability to enroll patients in clinical trials, timely and successfully complete those trials and receive necessary regulatory approvals;
- our ability to establish our own manufacturing facilities and to receive or manufacture sufficient quantities of our product candidates;
- our ability to maintain our existing or future collaborations or licenses; and to reach an agreement regarding an acceptable amendment of our exclusive patent license agreement with the Massachusetts Institute of Technology;
- our ability to protect and enforce our intellectual property rights;
- federal, state, and foreign regulatory requirements, including FDA regulation of our product candidates;
- our ability to obtain and retain key executives and attract and retain qualified personnel;
- developments relating to our competitors and our industry, including the impact of government regulation; and
- our ability to successfully manage our growth.

Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties.

You should read this Quarterly Report and the documents that we reference in this Quarterly Report completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

Selecta Biosciences, Inc. and Subsidiaries

Consolidated Balance Sheets

(Amounts in thousands, except share data and par value)

	September 30, 2019	December 31, 2018
	(Unaudited)	
Assets		
Current assets:		
Cash, cash equivalents, and restricted cash	$ 34,513	$ 37,403
Prepaid expenses and other current assets	1,606	4,673
Total current assets	36,119	42,076
Property and equipment, net	1,452	2,127
Right of use asset, net (Note 8)	594	—
Long-term restricted cash	1,379	279
Total assets	$ 39,544	$ 44,482
Liabilities and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	$ 1,478	$ 1,100
Accrued expenses	5,316	11,700
Loan payable, current portion	20,927	21,385
Lease liability, current portion (Note 8)	734	—
Deferred revenue, current portion	1,023	959
Total current liabilities	29,478	35,144
Non-current liabilities:		
Deferred rent and lease incentive	—	34
Deferred revenue, net of current portion	14,981	13,818
Other long-term liabilities	—	904
Total liabilities	44,459	49,900
Commitments and contingencies (Note 17)		
Stockholders' equity (deficit):		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized; no shares issued and outstanding at September 30, 2019 and December 31, 2018, respectively	—	—
Common stock, $0.0001 par value; 200,000,000 shares authorized; 48,196,387 and 22,471,776 shares issued and outstanding as of September 30, 2019 and December 31, 2018, respectively	5	3
Additional paid-in capital	320,478	279,539
Accumulated deficit	(320,865)	(280,403)
Accumulated other comprehensive loss	(4,533)	(4,557)
Total stockholders' equity (deficit)	(4,915)	(5,418)
Total liabilities and stockholders' equity (deficit)	$ 39,544	$ 44,482

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

Selecta Biosciences, Inc. and Subsidiaries

Consolidated Statements of Operations and Comprehensive Loss

(Amounts in thousands, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Unaudited)			
Grant and collaboration revenue	$ —	$ —	$ 23	$ —
Operating expenses:				
Research and development	8,104	11,885	27,591	37,431
General and administrative	3,690	4,056	12,317	13,092
Total operating expenses	11,794	15,941	39,908	50,523
Loss from operations	(11,794)	(15,941)	(39,885)	(50,523)
Investment income	184	295	707	829
Foreign currency transaction (loss), net	7	26	(33)	97
Interest expense	(388)	(384)	(1,184)	(1,099)
Other (expense), net	(3)	3	(67)	11
Net loss	(11,994)	(16,001)	(40,462)	(50,685)
Other comprehensive loss:				
Foreign currency translation adjustment	(5)	(42)	24	(113)
Unrealized gain on securities	(3)	1	—	16
Total comprehensive loss	$ (12,002)	$ (16,042)	$ (40,438)	$ (50,782)
Net loss per share:				
Basic and diluted	$ (0.26)	$ (0.71)	$ (0.94)	$ (2.27)
Weighted average common shares outstanding:				
Basic and diluted	46,407,846	22,403,954	43,265,909	22,368,574

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

Selecta Biosciences, Inc. and Subsidiaries

Consolidated Statements of Changes in Stockholders' Equity (Deficit)

(Amounts in thousands, except share data)

(Unaudited)

	Common stock		Additional paid-In		Accumulated other	Stockholders'
	Shares	Amount	Capital	Accumulated deficit	comprehensive loss	Equity (Deficit)
Balance at December 31, 2018	22,471,776	$ 3	$279,539	$ (280,403)	$ (4,557)	$ (5,418)
Issuance of common stock under Employee Stock Purchase Plan	11,943	—	20	—	—	20
Issuance of common stock upon exercise of options	115,600	—	145	—	—	145
Issuance of common stock, net of issuance costs of $344	22,188,706	2	30,940	—	—	30,942
Stock-based compensation expense	—	—	1,180	—	—	1,180
Currency translation adjustment	—	—	—	—	22	22
Unrealized gains (losses) on securities	—	—	—	—	2	2
Net loss	—	—	—	(12,074)	—	(12,074)
Balance at March 31, 2019	44,788,025	$ 5	$311,824	$ (292,477)	$ (4,533)	$ 14,819
Issuance of common stock through at-the-market offering, net	164,926	—	372	—	—	372
Stock-based compensation expense	—	—	1,251	—	—	1,251
Currency translation adjustment	—	—	—	—	7	7
Unrealized gains (losses) on securities	—	—	—	—	1	1
Net loss	—	—	—	(16,394)	—	(16,394)
Balance at June 30, 2019	44,952,951	$ 5	$313,447	$ (308,871)	$ (4,525)	$ 56
Issuance of common stock under Employee Stock Purchase Plan	5,262	—	8	—	—	8
Issuance of common stock upon exercise of options	10,000	—	5	—	—	5
Issuance of vested restricted stock units	50,000	—	—	—	—	—
Issuance of common stock through private placement, net of issuance costs of $37	3,178,174	—	5,715	—	—	5,715
Stock-based compensation expense	—	—	1,303	—	—	1,303
Currency translation adjustment	—	—	—	—	(5)	(5)
Unrealized gains (losses) on securities	—	—	—	—	(3)	(3)
Net loss	—	—	—	(11,994)	—	(11,994)
Balance at September 30, 2019	48,196,387	$ 5	$320,478	$ (320,865)	$ (4,533)	$ (4,915)

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

Selecta Biosciences, Inc. and Subsidiaries

Consolidated Statements of Changes in Stockholders' Equity (Deficit)

(Amounts in thousands, except share data)

(Unaudited)

	Common stock		Additional paid-In	Stock option	Accumulated	Accumulated other comprehensive	Stockholders' Equity
	Shares	Amount	Capital	receivable	deficit	loss	(Deficit)
Balance at December 31, 2017	22,343,254	$ 3	$ 273,128	$ —	$ (216,897)	$ (4,420)	$ 51,814
Adoption of new accounting principle	—	—	—	—	1,830	—	1,830
Issuance of common stock under Employee Stock Purchase Plan	6,586	—	51	—	—	—	51
Stock-based compensation expense	—	—	1,153	—	—	—	1,153
Currency translation adjustment	—	—	—	—	—	19	19
Unrealized gains (losses) on securities	—	—	—	—	—	3	3
Net loss	—	—	—	—	(15,888)	—	(15,888)
Balance at March 31, 2018	22,349,840	$ 3	$ 274,332	$ —	$ (230,955)	$ (4,398)	$ 38,982
Issuance of common stock upon exercise of options	46,343	—	311	—	—	—	311
Stock-based compensation expense	—	—	1,245	—	—	—	1,245
Currency translation adjustment	—	—	—	—	—	(90)	(90)
Unrealized gains on securities	—	—	—	—	—	12	12
Net loss	—	—	—	—	(18,796)	—	(18,796)
Balance at June 30, 2018	22,396,183	$ 3	$ 275,888	$ —	$ (249,751)	$ (4,476)	$ 21,664
Issuance of common stock under Employee Stock Purchase Plan	18,152	—	145	—	—	—	145
Issuance of common stock upon exercise of options	12,158	—	162	(53)	—	—	109
Stock-based compensation expense	—	—	1,526	—	—	—	1,526
Currency translation adjustment	—	—	—	—	—	(42)	(42)
Unrealized gains (losses) on securities	—	—	—	—	—	1	1
Net loss	—	—	—	—	(16,001)	—	(16,001)
Balance at September 30, 2018	22,426,493	$ 3	$ 277,721	$ (53)	$ (265,752)	$ (4,517)	$ 7,402

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

Selecta Biosciences, Inc. and Subsidiaries

Consolidated Statements of Cash Flows

(Amounts in thousands)

	Nine Months Ended September 30,	
	2019	**2018**
	(Unaudited)	
Cash flows from operating activities		
Net loss	$ (40,462)	$ (50,685)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	522	789
Amortization of premiums (accretion of discounts) on investments	(154)	(101)
(Gain) loss on disposal of property and equipment	67	(85)
Stock-based compensation expense	3,734	3,924
Non-cash interest expense	338	354
Net realized losses on investments	(1)	—
Changes in operating assets and liabilities:		
Prepaid expenses, deposits and other assets	4,078	(2,816)
Accounts payable	378	(369)
Deferred revenue	(13)	810
Accrued expenses and other liabilities	(7,046)	1,766
Net cash used in operating activities	(38,559)	(46,413)
Cash flows from investing activities		
Receipts from the maturity of short-term investments	16,350	41,655
Purchases of short-term investments	(18,188)	(15,598)
Sale of short term investments	1,992	—
Purchases of property and equipment	(10)	(516)
Proceeds from the sale of property and equipment	94	105
Net cash provided by investing activities	238	25,646
Cash flows from financing activities		
Repayments of principal on outstanding debt	(700)	—
Net proceeds from issuance of common stock	30,942	—
Net proceeds from issuance of common stock- at-the-market offering	372	—
Net proceeds from issuance of common stock- private placement	5,715	—
Proceeds from exercise of stock options	150	421
Proceeds from issuance of common stock under Employee Stock Purchase Plan	28	196
Net cash provided by financing activities	36,507	617
Effect of exchange rate changes on cash	24	(113)
Net change in cash, cash equivalents, and restricted cash	(1,790)	(20,263)
Cash, cash equivalents, and restricted cash at beginning of period	37,682	71,027
Cash, cash equivalents, and restricted cash at end of period	$ 35,892	$ 50,764
Supplement cash flow information		
Cash paid for interest	$ 1,652	$ 833
Noncash investing and financing activities		
Purchase of property and equipment not yet paid	$ —	$ 310
Unrealized gain (loss) on marketable securities	$ —	$ 16

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

1. Nature of the Business and Basis of Presentation

Selecta Biosciences, Inc. (the "Company") was incorporated in Delaware on December 10, 2007, and is based in Watertown, Massachusetts. The Company is a clinical-stage biotechnology company focused on unlocking the full potential of biologic therapies based on its immune tolerance technology (ImmTOR™) platform. The Company plans to combine ImmTOR with a range of biologic therapies for rare and serious diseases that require new treatment options due to high immunogenicity of existing therapies. Since inception, the Company has devoted its efforts principally to research and development of its technology and product candidates, recruiting management and technical staff, acquiring operating assets, and raising capital.

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, new technological innovations, protection of proprietary technology, dependence on key personnel, compliance with government regulations and the need to obtain additional financing. Product candidates currently under development will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval, prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel infrastructure and extensive compliance-reporting capabilities.

The Company's product candidates are in development. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, or maintained, that any products developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies. In addition, the Company is dependent upon the services of its employees and consultants.

The accompanying financial statements have been prepared on a basis that assumes the Company is a going concern, and does not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from any uncertainty related to its ability to continue as a going concern.

Unaudited Interim Financial Information

The accompanying unaudited consolidated financial statements for the three and nine months ended September 30, 2019 and 2018 have been prepared by the Company, pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC") for interim financial statements. Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") have been condensed or omitted pursuant to such rules and regulations. However, the Company believes that the disclosures are adequate to make the information presented not misleading. These consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the notes thereto for the year ended December 31, 2018 included in the Company's Annual Report on Form 10-K that was filed with the SEC on March 15, 2019 (the "Annual Report on Form 10-K"). The unaudited interim financial statements have been prepared on the same basis as the audited consolidated financial statements. In the opinion of management, the accompanying unaudited interim consolidated financial statements contain all adjustments that are necessary for a fair statement of the Company's financial position as of September 30, 2019 and consolidated results of operations and cash flows for the three and nine months ended September 30, 2019. Such adjustments are of a normal and recurring nature. The results of operations for the three and nine months ended September 30, 2019 are not necessarily indicative of the results of operations that may be expected for the year ending December 31, 2019.

Liquidity and Management's Plan

The future success of the Company is dependent on its ability to develop its product candidates and ultimately upon its ability to attain profitable operations. The Company is subject to a number of risks similar to other early-stage life science companies, including, but not limited to, successful development of its product candidates, raising additional capital with favorable terms, protection of proprietary technology and market acceptance of any approved future products. The successful development of product candidates requires substantial working capital which may not be available to the Company on favorable terms or at all.

To date, the Company has financed its operations primarily through the initial public offering of its common stock, a private placement of its common stock, issuances of common and preferred stock, debt, research grants and research collaborations. The Company currently has no source of product revenue, and it does not expect to generate product revenue for the foreseeable future. To date, all of the Company's revenue has been collaboration and grant revenue. The Company has devoted substantially all of its financial resources and efforts to developing its ImmTOR technology, identifying potential product candidates and conducting preclinical studies and its clinical trials. The Company is in the early stages of development of its product candidates, and it has not completed development of any ImmTOR-enabled therapies.

As of September 30, 2019, the Company's cash, cash equivalents and restricted cash were $35.9 million, of which $0.4 million was held by its Russian subsidiary designated solely for use in its operations. The Company has incurred losses and negative cash flows from operating activities since inception. As of September 30, 2019 and December 31, 2018, the Company had an accumulated deficit of $320.9 million and $280.4 million, respectively. The Company anticipates operating losses to continue for the foreseeable future due to, among other things, costs related to research, development of its product candidates, conducting preclinical studies and clinical trials, and its administrative organization. The Company will require substantial additional financing to fund its operations and to continue to execute its strategy, and the Company will pursue a range of options to secure additional capital. These conditions raise substantial doubt about its ability to continue as a going concern within one year after the date that the financial statements are issued.

Management is actively exploring licenses and other strategic collaborations that have the potential to provide non-dilutive capital and/or accelerate the development of new or existing product candidates incorporating the Company's ImmTOR technology. Additionally, the Company may seek to fund its operations through issuances of equity and/or other securities. If the Company enters into strategic collaborations and alliances, which may include existing collaboration partners, the Company may have to relinquish valuable rights to its technologies or product candidates, or grant licenses on terms that are not favorable to the Company. To the extent that the Company raises additional capital through the sale of equity, the ownership interest of its existing shareholders will be diluted and other preferences may be necessary that adversely affect the rights of existing shareholders. The Company requires additional external sources of capital to complete the ongoing head-to-head Phase 2 COMPARE trial against KRYSTEXXA® and additional capital to conduct the planned Phase 3 clinical program for SEL-212. If the Company is unable to raise sufficient capital through strategic collaborations and/or the sale of equity or other securities, it intends to curtail expenses contemplated by the current operating plan, and the Company may be required to delay, limit, reduce or terminate its product development efforts or grant rights to develop and market product candidates that it would otherwise prefer to develop and market itself. Because of the uncertainty in securing additional capital and the insufficient amount of capital resources at September 30, 2019, management has concluded that substantial doubt exists with respect to the Company's ability to continue as a going concern within one year after the date of the filing of this Quarterly Report on Form 10-Q.

All amounts due under the 2017 Term Loan (see Note 9) have been classified as a current liability as of September 30, 2019 due to the considerations discussed above and the assessment that the material adverse change clause under the 2017 Term Loan is not within the Company's control. The Company has not been notified of an event of default by the Lender as of the date of the filing of this Quarterly Report on Form 10-Q.

Guarantees and Indemnifications

As permitted under Delaware law, the Company indemnifies its officers, directors, consultants and employees for certain events or occurrences that happen by reason of the relationship with, or position held at, the Company. Through September 30, 2019, the Company had not experienced any losses related to these indemnification obligations, and no claims were outstanding. The Company does not expect significant claims related to these indemnification obligations and, consequently, concluded that the fair value of these obligations is negligible, and no related reserves were established.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Selecta RUS, LLC ("Selecta (RUS)"), a Russian limited liability corporation, and Selecta Biosciences Security Corporation, a Massachusetts Security Corporation. All significant intercompany accounts and transactions have been eliminated.

Foreign Currency

The functional currency of Selecta (RUS) is the Russian ruble. Assets and liabilities of Selecta (RUS) are translated at period-end exchange rates, while revenues and expenses are translated at average exchange rates for the period. Translation gains and losses are reflected in accumulated other comprehensive loss within stockholders' deficit. Foreign currency transaction gains or losses are reflected in the consolidated statements of operations and comprehensive loss.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires the Company's management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. The Company's management considers many factors in selecting appropriate financial accounting policies and controls, and bases its estimates on historical experience and other market-specific or other relevant assumptions that it believes to be reasonable under the circumstances. In preparing these consolidated financial statements, management used significant estimates in the following areas, among others: revenue recognition, accounting for stock-based compensation and estimating accrued research and development expenses. The Company assesses the above estimates on an ongoing basis; however, actual results could materially differ from those estimates.

Segment Information

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's Chief Executive Officer, in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment, the research and development of nanoparticle immunomodulatory drugs for the treatment and prevention of human diseases.

Cash Equivalents, Short-term Investments and Restricted Cash

Cash equivalents include all highly liquid investments maturing within 90 days from the date of purchase. Investments consist of securities with remaining maturities greater than 90 days when purchased. The Company classifies these investments as available-for-sale and records them at fair value in the accompanying consolidated balance sheets. Investments with less than one year until maturity are classified as short term, while investments with maturities greater than one year are classified as long term. Unrealized gains or losses are included in accumulated other comprehensive income (loss). Premiums or discounts from par value are amortized to investment income over the life of the underlying investment.

Although available to be sold to meet operating needs or otherwise, securities are generally held through maturity. The cost of securities sold is determined based on the specific identification method for purposes of recording realized gains and losses. During the three months ended September 30, 2019, there were de minimis realized losses on sales of investments, and no investments were adjusted for other than temporary declines in fair value.

As of September 30, 2019, the Company has restricted cash balances relating to secured letters of credit in connection with its current Headquarters Lease and New Headquarters Lease (as defined in Note 8). The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported within the consolidated balance sheet that sum to the total of the same such amounts shown in the consolidated statement of cash flows:

	September 30,	
	2019	2018
Cash and cash equivalents	$ 34,234	$ 50,485
Restricted cash	279	—
Long-term restricted cash	1,379	279
Total cash, cash equivalents, and restricted cash shown in the consolidated statement of cash flows	$ 35,892	$ 50,764

Concentrations of Credit Risk and Off-Balance Sheet Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist primarily of cash, cash equivalents, short-term deposits and investments, and accounts receivable. Cash and cash equivalents are deposited with federally insured financial institutions in the United States and may, at times, exceed federally insured limits. Management believes that the financial institutions that hold the Company's deposits are financially credit worthy and, accordingly, minimal risk exists with respect to those balances. Generally, these deposits may be redeemed upon demand and therefore bear minimal interest rate risk. As an integral part of operating its Russian subsidiary, the Company also maintains cash in Russian bank accounts in denominations of both Russian rubles and U.S. dollars. As of September 30, 2019, the Company maintained approximately $0.4 million in Russian bank accounts, all of which was held in U.S. dollars.

The Company did not have any off-balance sheet arrangements as of September 30, 2019 and December 31, 2018.

Fair Value of Financial Instruments

The Company's financial instruments consist mainly of cash equivalents, restricted cash, accounts payable, loans payable, and common stock warrants. The carrying amounts of cash equivalents, restricted cash, accounts receivable, and accounts payable approximate their estimated fair value due to their short-term maturities. At September 30, 2019, the carrying amount of the Company's loan payable approximates its estimated fair value due to the short-term nature of the instrument.

Accounting standards define fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. A three-level hierarchy is used to prioritize the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements), and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Level 1—Level 1 inputs are quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2—Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3—Level 3 inputs are unobservable inputs for the asset or liability in which there is little, if any, market activity for the asset or liability at the measurement date.

To the extent that a valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The fair value of the Company's loan payable was determined using Level 2 inputs.

Fair value is a market-based measure considered from the perspective of a market participant rather than an entity-specific measure. Therefore, even when market assumptions are not readily available, the Company's own assumptions are set to reflect those that market participants would use in pricing the asset or liability at the measurement date. The Company uses prices and inputs that are current as of the measurement date, including during periods of market dislocation. In periods of market dislocation, the observability of prices and inputs may change for many instruments. This condition could cause an instrument to be reclassified within levels in the fair value hierarchy. There were no transfers within the fair value hierarchy during the nine months ended September 30, 2019 or the year ended December 31, 2018.

Property and Equipment

Property and equipment are recorded at cost and depreciated using the straight-line method over the estimated useful lives of the respective assets, generally seven years for furniture and fixtures, five years for laboratory equipment, software and office equipment and three years for computer equipment. Leasehold improvements are amortized over their useful life or the life of the lease, whichever is shorter. Major additions and betterments are capitalized. Maintenance and repairs, which do not improve or extend the life of the respective assets, are charged to operations as incurred. Costs incurred for construction in progress are recorded as assets and are not amortized until the construction is substantially complete and the assets are ready for their intended use.

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. In order to determine if assets have been impaired, assets are tested at the lowest level for which identifiable independent cash flows are available, which is at the entity level ("asset group"). An impairment loss is recognized when the sum of projected undiscounted cash flows is less than the carrying value of the asset group. The measurement of the impairment loss to be recognized is based on the difference between the fair value and the carrying value of the asset group. Based on management's evaluation, the fair value of the asset group, measured as the market capitalization of the Company exceeds its carrying value, and for this reason the Company did not recognize any material impairment losses during the nine months ended September 30, 2019 and 2018.

Debt Issuance Costs

Debt issuance costs and fees paid to lenders are classified as a debt discount and are recorded as a direct deduction from the face amount of the related debt. Issuance costs paid to third parties that are the direct result of the debt issuance are capitalized as a direct deduction from the face amount of the related debt. Debt issuance costs are amortized over the term of the related debt using the interest method and recorded as interest expense. Costs and fees paid to third parties are expensed as incurred.

Accumulated Other Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in the equity of a business entity during a period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners. Comprehensive income (loss) consists of: (i) all components of net loss and (ii) all components of comprehensive loss other than net loss, referred to as other comprehensive loss. Other comprehensive loss is comprised of foreign currency translation adjustments and the unrealized gains and losses on available-for-sale securities.

The components of accumulated other comprehensive income (loss), net of tax, were as follows (in thousands):

	Foreign currency translation adjustment	Unrealized gains (losses) on available-for-sale securities	Accumulated other comprehensive income (loss)
Balance at December 31, 2018	$ (4,557)	$ —	$ (4,557)
Other comprehensive income (loss) during the period	$ 24	$ —	$ 24
Balance at September 30, 2019	$ (4,533)	$ —	$ (4,533)

Revenue Recognition

Revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. Pursuant to ASC 606, a customer is a party that has contracted with an entity to obtain goods or services that are an output of the entity's ordinary activities in exchange for consideration. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract, including whether they are distinct in the context of the contract; (iii) determine the transaction price, including the constraint on variable consideration; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies each performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct. If a promised good or service is not distinct, it is combined with other performance obligations. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. For example, certain performance obligations associated with Spark (see Note 12) will be satisfied over time, and revenue will be recognized using the output method, based on the proportion of actual deliveries to the total expected deliveries over the initial term.

Collaboration and Grant Revenue: The Company currently generates its revenue through grants, collaboration and license agreements with strategic collaborators for the development and commercialization of product candidates. Grants and license agreements with customers are accounted for in accordance with ASC 606. The Company analyzes collaboration arrangements by first assessing whether they are within the scope of ASC Topic 808, Collaborative Arrangements (ASC 808) and evaluates whether such arrangements involve joint operating activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards that are dependent on the commercial success of such activities. Collaboration agreements with customers that are not within the scope of ASC 808 are accounted for in accordance with ASC 606. To the extent the collaboration agreement is within the scope of ASC 808, the Company also assesses whether any aspects of the agreement are within the scope of other accounting literature (specifically ASC 606). The Company early adopted ASU No. 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606*, which provides guidance on evaluating certain transactions between collaborative arrangement participants. If the Company concludes that some or all aspects of the agreement are distinct and represent a transaction with a customer, the Company accounts for those aspects of the arrangement within the scope of ASC 606. The Company recognizes the shared costs incurred that are not within the scope of other accounting literature as a component of the related expense in the period incurred by analogy to ASC 730 and records reimbursements from counterparties as an offset to the related costs. In determining the appropriate amount of revenue to be recognized as it fulfills its obligations under the agreements in accordance with ASC 606, the Company performs the five steps above. As part of the accounting for the arrangement, the Company must develop assumptions that require judgment to determine the stand-alone selling price for each performance obligation identified in the contract. The Company uses key assumptions to determine the stand-alone selling price, which may include market conditions, reimbursement rates for personnel costs, development timelines and probabilities of regulatory success.

The terms of the Company's arrangements typically include one or more of the following: (i) up-front fees; (ii) milestone payments related to the achievement of development, regulatory, or commercial goals; (iii) royalties on net sales of licensed products; (iv) reimbursements or cost-sharing of R&D expenses; and (v) profit/loss sharing arising from co-promotion arrangements.

Licenses of Intellectual Property: If the license to the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenues from non-refundable, up-front fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. If not distinct, the license is combined with other performance obligations in the contract. For licenses that are combined with other performance obligations, the Company assesses the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. Optional licenses are evaluated to determine if they are issued at a discount, and therefore, represent material rights and accounted for as separate performance obligations.

Milestone Payments: At the inception of each arrangement that includes developmental and regulatory milestone payments, the Company evaluates whether the achievement of each milestone specifically relates to the Company's efforts to satisfy a performance obligation or transfer a distinct good or service within a performance obligation. If the achievement of a milestone is considered a direct result of the Company's efforts to satisfy a performance obligation or transfer a distinct good or service and the receipt of the payment is based upon the achievement of the milestone, the associated milestone value is allocated to that distinct good or service. If the milestone payment is not specifically related to the Company's effort to satisfy a performance obligation or transfer a distinct good or service, the amount is allocated to all performance obligations using the relative standalone selling price method. The Company also evaluates the milestone to determine whether they are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price to be allocated, otherwise, such amounts are constrained and excluded from the transaction price. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of such development milestones and any related constraint, and if necessary, adjusts its estimate of the transaction price. Any such adjustments to the transaction price are allocated to the performance obligations on the same basis as at contract inception. Amounts allocated to a satisfied performance obligation shall be recognized as revenue, or as a reduction of revenue, in the period in which the transaction price changes.

Manufacturing Supply Services: Arrangements that include a promise for future supply of drug substance or drug product for either clinical development or commercial supply at the customer's discretion are evaluated to determine if they are distinct and optional. For optional services that are distinct, the Company assesses if they are priced at a discount, and therefore, provide a material right to the licensee to be accounted for as separate performance obligations.

Royalties: For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company will recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied) in accordance with the royalty recognition constraint.

Research and Development Costs

Costs incurred in the research and development of the Company's products are expensed as incurred. Research and development expenses include costs incurred in performing research and development activities, including salaries and benefits, facilities cost, overhead costs, contract services, supplies and other outside costs. Nonrefundable advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Clinical Trial Costs

Clinical trial expenses are a significant component of research and development expenses, and the Company outsources a significant portion of these costs to third parties. Third party clinical trial expenses include patient costs, clinical research organization costs and costs for data management. The accrual for site and patient costs includes inputs such as estimates of patient enrollment, patient cycles incurred, clinical site activations, and other pass-through costs. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected on the consolidated balance sheets as a prepaid asset or accrued clinical trial cost. These third party agreements are generally cancelable, and related costs are recorded as research and development expenses as incurred. Non-refundable advance clinical payments for goods or services that will be used or rendered for future R&D activities are recorded as a prepaid asset and recognized as expense as the related goods are delivered or the related services are performed. The Company also records accruals for estimated ongoing clinical research and development costs. When evaluating the adequacy of the accrued

liabilities, the Company analyzes progress of the studies, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates may be made in determining the accrued balances at the end of any reporting period. Actual results could differ from the estimates made by the Company. The historical clinical accrual estimates made by the Company have not been materially different from the actual costs.

Income Taxes

The Company provides deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the Company's financial statement carrying amounts and the tax basis of assets and liabilities using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. A valuation allowance is provided to reduce the deferred tax assets to the amount that will more-likely-than-not be realized.

The Company determines whether it is more likely than not that a tax position will be sustained upon examination. If it is not more-likely-than-not that a position will be sustained, none of the benefit attributable to the position is recognized. The tax benefit to be recognized for any tax position that meets the more-likely-than-not recognition threshold is calculated as the largest amount that is more than 50% likely of being realized upon resolution of the contingency. The Company accounts for interest and penalties related to uncertain tax positions as part of its provision for income taxes. To date, the Company has not incurred interest and penalties related to uncertain tax positions.

Warrants

The Company determines the accounting classification of warrants that are issued, as either liability or equity, by first assessing whether the warrants meet liability classification in accordance with ASC 480-10, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*, and then in accordance with ASC 815-40, *Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock*. Under ASC 480, warrants are considered liability classified if the warrants are mandatorily redeemable, obligate the issuer to settle the warrants or the underlying shares by paying cash or other assets, or warrants that must or may require settlement by issuing variable number of shares.

If warrants do not meet liability classification under ASC 480-10, the Company assesses the requirements under ASC 815-40, which states that contracts that require or may require the issuer to settle the contract for cash are liabilities recorded at fair value, irrespective of the likelihood of the transaction occurring that triggers the net cash settlement feature. If the warrants do not require liability classification under ASC 815-40, in order to conclude equity classification, the Company assesses whether the warrants are indexed to its common stock and whether the warrants are classified as equity under ASC 815-40 or other applicable GAAP. After all relevant assessments are made, the Company concludes whether the warrants are classified as liability or equity. Liability classified warrants are required to be accounted for at fair value both on the date of issuance and on subsequent accounting period ending dates, with all changes in fair value after the issuance date recorded in the statements of operations as a gain or loss. Equity classified warrants are accounted for at fair value on the issuance date with no changes in fair value recognized after the issuance date.

Stock-Based Compensation

The Company accounts for all stock-based compensation granted to employees and non-employees using a fair value method. Stock-based compensation is measured at the grant date fair value and is recognized over the requisite service period of the awards, usually the vesting period, on a straight-line basis, net of estimated forfeitures. The Company reduces recorded stock-based compensation for estimated forfeitures. To the extent that actual forfeitures differ from the Company's estimates, the differences are recorded as a cumulative adjustment in the period the estimates were adjusted. Stock-based compensation expense recognized in the consolidated financial statements is based on awards that are ultimately expected to vest.

Net Loss Per Share

The Company has reported losses since inception and has computed basic net loss per share by dividing net loss by the weighted average number of common shares outstanding for the period. The Company has computed diluted net loss per common share after considering all potentially dilutive common shares, including stock options, convertible preferred stock, and warrants outstanding during the period except where the effect of including such securities would be antidilutive. Because the Company has reported net losses since inception, these potential common shares have been anti-dilutive and basic and diluted loss per share have been the same.

Contingent Liabilities

The Company accounts for its contingent liabilities in accordance with ASC No. 450, *Contingencies*. A provision is recorded when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. With respect to legal matters, provisions are reviewed and adjusted to reflect the impact of negotiations, estimated settlements, legal rulings, advice of legal counsel and other information and events pertaining to a particular matter. As of September 30, 2019 and

December 31, 2018, the Company was not a party to any litigation that could have a material adverse effect on the Company's business, financial position, results of operations or cash flows.

Leases

Under ASC 842 which was adopted January 1, 2019, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present. Most leases with a term greater than one year are recognized on the balance sheet as right-of-use assets, lease liabilities and, if applicable, long-term lease liabilities. The Company elected not to recognize leases with a term less than one year on its balance sheet. Operating lease right-of-use (ROU) assets and their corresponding lease liabilities are recorded based on the present value of lease payments over the expected remaining lease term. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes its incremental borrowing rates, which are the rates incurred to borrow on a collateralized basis over a similar term, an amount equal to the lease payments in a similar economic environment.

In accordance with the guidance in ASU 2016-02, components of a lease should be split into three categories: lease components (e.g. land, building, etc.), non-lease components (e.g. common area maintenance, consumables, etc.), and non-components (e.g. property taxes, insurance, etc.) Then the fixed and in-substance fixed contract consideration (including any related to non-components) must be allocated based on fair values to the lease components and non-lease components. Although separation of lease and non-lease components is required, the Company elected the practical expedient to not separate lease and non-lease components. The lease component results in an operating right-of-use asset being recorded on the balance sheet and amortized on a straight-line basis as lease expense. See Note 8 for details.

Under prior guidance ASC 840, rent expense and lease incentives from operating leases were recognized on a straight-line basis over the lease term. The difference between rent expense recognized and rental payments was recorded as deferred rent in the accompanying consolidated balance sheets.

Recent Accounting Pronouncements

Recently Adopted

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. ("ASU") 2016-02, *Leases (Topic 842).* ASU 2016-02 requires lessees to recognize most leases on their balance sheet as a right-of-use asset and a lease liability. Leases are classified as either operating or finance based on criteria similar to current lease accounting, with the classification affecting the pattern and classification of expense recognition in the statement of operations.

Subsequently, in July 2018, the FASB issued ASU No. 2018-11, *Leases (Topic 842): Targeted Improvements (ASU 2018-11)*, which includes certain amendments to ASU 2016-02 intended to provide relief in implementing the new standard. Among these amendments is the option to not restate comparative periods presented in the financial statements. The Company has elected this transition approach, using a cumulative-effect adjustment on the effective date of the standard, with comparative periods presented in accordance with the existing guidance in ASC 840.

Pursuant to the guidance under ASU 2016-02, the Company elected certain available expedients by electing the transition package of practical expedients permitted with ASU 2016-02, which allows the Company the option not to reassess previous accounting conclusions around, (i) whether expired or existing contracts contain leases, (ii) lease classification for any expired or existing leases, and (iii) the treatment of initial direct costs for any existing leases. The Company also made an accounting policy election to exclude leases with an initial term of 12 months or less from their balance sheet.

The Company adopted the new standard as of the required effective date of January 1, 2019 resulting in the recognition of a net additional lease liability and right-of-use asset. The standard did not impact the Company's consolidated net loss. See Note 8 for details.

In November 2018, the FASB issued ASU No. 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606* (ASU 2018-18), which provides guidance on whether certain transactions between collaborative arrangement participants should be accounted for with revenue under Topic 606. The new standard is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years with early adoption permitted. The Company early adopted the new standard effective September 30, 2019, and there was no impact on its consolidated financial statements. See Note 14 for details.

Not Yet Adopted

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments-Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments*. Subsequently, in November 2018, the FASB issued ASU 2018-19, *Codification Improvements to Topic 326, Financial Instruments-Credit Losses*. ASU 2016-13 requires entities to measure all expected credit losses for most financial assets held at the reporting date based on an expected loss model which includes historical experience, current conditions, and reasonable and supportable forecasts. ASU 2016-13 also requires enhanced disclosures to help financial

statement users better understand significant estimates and judgments used in estimating credit losses. This ASU is effective for smaller reporting companies for fiscal years beginning after December 15, 2022, with early adoption permitted. The Company is assessing the impact this standard will have on its consolidated financial statements and disclosures.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Changes to the Disclosure Requirements for Fair Value Measurement* (ASU 2018-13) which changes the fair value measurement disclosure requirements of ASC 820. Entities will no longer be required to disclose the amount of, and reasons for, transfers between Level 1 and Level 2 of the fair value hierarchy, the policy of timing of transfers between levels of the fair value hierarchy and the valuation processes for Level 3 fair value measurements. This ASU is effective for public entities for fiscal years beginning after December 15, 2019, with early adoption permitted. The Company is assessing the impact this standard will have on its consolidated financial statements and disclosures.

In August 2018, the FASB issued ASU 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, (ASU 2018-15). The amendments in this update align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The new standard will be effective beginning January 1, 2020 and early adoption is permitted. The Company is currently evaluating the potential impact ASU 2018-15 may have on its financial position upon adoption.

3. Available-for-Sale Marketable Securities

As of September 30, 2019, and December 31, 2018, the Company did not have available-for-sale marketable securities.

4. Net Loss Per Share

The Company has reported a net loss for the three and nine months ended September 30, 2019, and 2018, and for this reason basic and diluted net loss per share are the same for all periods presented. The following table sets forth the computation of basic and diluted net loss per share (in thousands, except share and per-share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Numerator:				
Net loss attributable to common stockholders	$ (11,994)	$ (16,001)	$ (40,462)	$ (50,685)
Denominator:				
Weighted-average common shares outstanding—basic and diluted	46,407,846	22,403,954	43,265,909	22,368,574
Net loss per share attributable to common stockholders —basic and diluted	$ (0.26)	$ (0.71)	$ (0.94)	$ (2.27)

All potential dilutive common shares have been excluded from the computation of the diluted net loss per share for all periods presented, as the effect would have been anti-dilutive. Potential dilutive common share equivalents consist of the following:

	September 30,	
	2019	2018
Stock options to purchase common stock	5,354,645	3,188,169
Unvested restricted stock units	225,000	40,000
Stock warrants to purchase common stock	95,619	176,432
Total	5,675,264	3,404,601

5. Fair Value Measurements

The tables below present information about the Company's financial assets that are measured and carried at fair value as of September 30, 2019 and December 31, 2018, and indicate the level within the fair value hierarchy where each measurement is

classified. Below is a summary of assets measured at fair value on a recurring basis (in thousands):

	September 30, 2019			
	(Level 1)	(Level 2)	(Level 3)	Total
Cash equivalents:				
Money market funds	$ 6,878	$ —	$ —	$ 6,878
Total cash equivalents	$ 6,878	$ —	$ —	$ 6,878

	December 31, 2018			
	(Level 1)	(Level 2)	(Level 3)	Total
Cash equivalents:				
Money market funds	$ 10,123	$ —	$ —	$ 10,123
Total cash equivalents	$ 10,123	$ —	$ —	$ 10,123

At each of September 30, 2019 and December 31, 2018, cash and cash equivalent investments were held in money market funds maturing within 90 days from the date of purchase.

6. Property and Equipment

Property and equipment consists of the following (in thousands):

	September 30, 2019	December 31, 2018
Laboratory equipment	$ 4,909	$ 5,379
Computer equipment and software	477	561
Leasehold improvements	278	278
Furniture and fixtures	235	247
Office equipment	135	135
Construction in process	2	79
Total property and equipment	6,036	6,679
Less accumulated depreciation	(4,584)	(4,552)
Property and equipment, net	$ 1,452	$ 2,127

Depreciation expense was $0.2 million and $0.2 million for the three months ended September 30, 2019 and 2018, respectively. For the nine months ended September 30, 2019 and 2018, depreciation expense was $0.5 million and $0.8 million, respectively.

7. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	September 30, 2019	December 31, 2018
Payroll and employee related expenses	$ 1,780	$ 2,497
Current portion of deferred rent and lease incentive	—	117
Collaboration and licensing	—	1,222
Accrued patent fees	565	736
Accrued external research and development costs	1,760	5,344
Accrued professional and consulting services	793	994
Accrued grant refund	—	175
Accrued interest	96	106
Other	322	509
Accrued expenses	$ 5,316	$ 11,700

8. Leases

On January 1, 2019, the Company adopted Topic 842 using the modified retrospective approach. The Company recorded operating lease assets (right-of-use assets) of $1.6 million and operating lease liabilities of $1.8 million and reversed a lease liability of $0.2 million related to straight-line rent and incentives. There was no impact to accumulated deficit upon

adoption of Topic 842. The underlying assets of the Company's leases are primarily office space. The Company determines if an arrangement qualifies as a lease at its inception.

As a practical expedient permitted under Topic 842, the Company has elected to account for the lease and non-lease components as a single lease component for all leases of which it is the lessee. Lease payments, which may include lease and non-lease components, are included in the measurement of the Company's lease liabilities to the extent that such payments are either fixed amounts or variable amounts that depend on a rate or index as stipulated in the lease contract.

When the Company cannot readily determine the rate implicit in the lease, the Company determines its incremental borrowing rate by using the rate of interest that it would have to pay to borrow on a collateralized basis over a similar term, an amount equal to the lease payments in a similar economic environment. On January 1, 2019, the discount rate used on existing operating leases at adoption, which had remaining lease terms of 15 months, was 10.0%. For new or renewed leases starting in 2020, the discount rate is determined based on the Company's incremental borrowing rate adjusted for the lease term including any reasonably certain renewal periods.

The Company enters into lease agreements with terms generally ranging from 2-8 years. Some of the Company's lease agreements include Company options to either extend and/or early terminate the lease, the costs of which are included in its operating lease liabilities to the extent that such options are reasonably certain of being exercised. Leases with renewal options allow the Company to extend the lease term typically between 1 and 5 years. When determining the lease term, renewal options reasonably certain of being exercised are included in the lease term. When determining if a renewal option is reasonably certain of being exercised, the Company considers several economic factors, including but not limited to, the significance of leasehold improvements incurred on the property, whether the asset is difficult to replace, underlying contractual obligations, or specific characteristics unique to that particular lease that would make it reasonably certain that the Company would exercise such option. Renewal and termination options were generally not included in the lease term for the Company's existing operating leases.

The Company has a non-cancellable operating lease for its laboratory and office space located at 480 Arsenal Way, Watertown, Massachusetts ("Headquarters Lease"). As part of the Headquarters Lease agreement, the landlord provided the Company a tenant improvement allowance of up to $0.7 million, which the Company fully utilized during 2012. The leasehold improvements are capitalized as a component of property and equipment. In connection with the Headquarters Lease, the Company secured a letter of credit for $0.3 million which renews automatically each year and is classified in restricted cash.

In August 2016, the Company signed an amendment to the Headquarters Lease, which extends the term through March 31, 2020. Leases with an initial term of 12 months or less are not recorded on the balance sheet; the Company recognizes lease expense for these leases on a straight-line basis over the lease term. For lease agreements entered into or reassessed after the adoption of Topic 842, lease and non-lease components are combined.

In October 2017, the Company entered into a lease for approximately 5,100 square feet of additional office space located at 75 North Beacon Street, Watertown, Massachusetts (the "75 North Beacon Lease"). On January 11, 2019, the Company vacated 75 North Beacon Street, Watertown, MA and consolidated all employees at its corporate headquarters at 480 Arsenal Way, Watertown, MA. The right of use asset carrying amount of $0.2 million attributable to the 75 North Beacon Lease was written down to zero during the first quarter of 2019.

The Company has a month-to-month facility agreement for its Moscow, Russia office. Rent expense is recognized as incurred.

In July 2019, the Company entered into a lease for 25,078 square feet of laboratory and office space located at 65 Grove Street, Watertown, Massachusetts (the "New Headquarters Lease"). The Company estimates that it will incur $0.8 million in non-reimbursable lessee-paid construction costs for lessor assets. None of these costs were incurred as of September 30, 2019. Lease commencement is expected to occur in March 2020, and the expected lease term is 8 years, therefore the right of use asset and lease liability is not recorded as of September 30, 2019. Rent commencement is expected to occur in May 2020, and the base rent for the first year is $0.2 million per month. The total minimum rental commitments for the New Headquarters Lease are $15.8 million. In connection with the New Headquarters Lease, the Company secured a letter of credit from Silicon Valley Bank for $1.4 million which renews automatically each year.

The Company's total minimum rental commitments for the New Headquarters Lease as of September 30, 2019 are as follows (in thousands):

	September 30, 2019
2020	$ 1,191
2021	1,811
2022	1,865
2023	1,921
2024	1,979
Thereafter	7,027
Total New Headquarters Lease commitment	$ 15,794

Rent expense for the three months ended September 30, 2019 and 2018 was $0.5 million and $0.5 million, respectively. Rent expense for the nine months ended September 30, 2019 and 2018 was $1.5 million and $1.5 million, respectively.

For the three and nine months ended September 30, 2019, the components of lease costs were as follows (in thousands):

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Operating lease expense	$ 341	$ 1,023
Variable lease expense	211	625
Short-term lease expense	3	14
Total lease expense	$ 555	$ 1,662

The maturity of the Company's operating lease liabilities as of September 30, 2019 were as follows (in thousands):

Operating leases:	September 30, 2019
2019 (Remainder)	$ 374
2020	375
Total future minimum lease payments	$ 749
Less imputed interest	15
Total operating lease liabilities	$ 734
Included in the condensed consolidated balance sheet:	
Current operating lease liabilities	$ 734
Non-current operating lease liabilities	—
Total operating lease liabilities	$ 734

The following information represents supplemental disclosure for the statement of cash flows related to operating leases (in thousands):

Operating leases:	Nine Months Ended September 30, 2019
Supplemental Cash Flows Information	
Operating cash flows from operating leases	$ 1,108

The changes in the Company’s right of use asset and lease liability for the nine months ended September 30, 2019 are reflected in the changes in prepaid expenses, deposits and other assets and accrued expenses and other liabilities, respectively, in the consolidated statements of cash flows.

The following summarizes additional information related to operating leases:

Operating leases:	September 30, 2019
Weighted-average remaining lease term	0.5 years
Weighted-average discount rate	10%

9. Debt

2017 Term Loan

On September 12, 2017, the Company entered into a term loan facility of up to $21.0 million (the "2017 Term Loan") with Silicon Valley Bank, a California corporation ("SVB"). The 2017 Term Loan is governed by a loan and security agreement, dated September 12, 2017, between the Company and SVB (the "Loan Agreement"). The 2017 Term Loan was funded in full on September 13, 2017 (the "Funding Date").

On the Funding Date, the Company entered into a payoff letter with SVB, pursuant to which SVB utilized $10.0 million of the 2017 Term Loan to pay off all outstanding obligations under the 2015 Term Loan. The Company recognized a loss on extinguishment of debt in the amount of $0.7 million during the three months ended September 30, 2017.

The Company incurred less than $0.1 million in debt issuance costs in connection with the closing of the 2017 Term Loan. Debt issuance costs are presented in the consolidated balance sheet as a direct deduction from the associated liability and amortized to interest expense over the term of the related debt.

The 2017 Term Loan will mature on February 1, 2022. Each advance under the 2017 Term Loan accrues interest at a floating per annum rate equal to one-half of one percent above the prime rate (as published in the money rates section of The Wall Street Journal). The 2017 Term Loan provided for interest-only payments monthly until August 31, 2019. On September 1, 2019, the Company began making amortization payments on the Term Loan, which will continue to be payable monthly in equal installments of principal and variable interest to fully amortize the outstanding principal over the remaining term of the loan. The monthly interest is subject to recalculation upon a change in the prime rate. The Company may prepay the 2017 Term Loan in full but not in part provided that the Company (i) provides five business days' prior written notice to SVB, (ii) pays on the date of such prepayment for all outstanding principal plus accrued and unpaid interest, 1% if prepaid after the second anniversary.

Amounts outstanding during an event of default are payable upon SVB's demand and shall accrue interest at an additional rate of 4.0% per annum of the past due amount outstanding. The events of default under the Loan Agreement include, but are not limited to, the Company's failure to make any payments of principal or interest under the Loan Agreement or other transaction documents, the Company's breach or default in the performance of any covenant under the Loan Agreement or other transaction documents, the occurrence of a material adverse effect, the Company making a false or misleading representation or warranty in any material respect under the Loan Agreement, the Company's insolvency or bankruptcy, any attachment or judgment on the Company's assets in excess of approximately $0.3 million, or the occurrence of any default under any agreement or obligation of the Company involving indebtedness in excess of approximately $0.3 million. If an event of default occurs, SVB is entitled to take enforcement action, including acceleration of amounts due under the Loan Agreement.

The 2017 Term Loan is secured by a lien on substantially all of the assets of the Company, other than intellectual property, provided that such lien on substantially all assets includes any rights to payments and proceeds from the sale, licensing or disposition of intellectual property. The Company has also granted SVB a negative pledge with respect to its intellectual property.

The 2017 Term Loan does not include any financial covenants. The 2017 Term Loan requires a final payment fee of 5% on the aggregate principal amounts borrowed upon repayment at maturity, on a prepayment date, or upon default. The final payment fee totaling $1.1 million is recorded as a loan discount. Under the 2017 Term Loan, the Company is not required to maintain a minimum cash balance. All deposits in operating, depository and securities accounts are required to be maintained with SVB in an amount equal to the lessor of (i) 100% of the dollar value owed or (ii) 105% of the dollar amount of the then outstanding obligations. In addition, the 2017 Term Loan contains a subjective acceleration clause whereby in an event of default, an immediate acceleration of repayment occurs if there is a material impairment of the lenders' lien or the value of the collateral, a material adverse change in the business condition or operations, or a material uncertainty exists that any portion of the loan may not be repaid.

The Company assessed all terms and features of the 2017 Term Loan in order to identify any potential embedded features that would require bifurcation. As part of this analysis, the Company assessed the economic characteristics and risks of the 2017 Term Loan, including any put and call features. The Company determined that all features of the 2017 Term Loan were clearly and closely associated with the debt host and did not require bifurcation as a derivative liability, or the fair value of the embedded feature was immaterial to the Company's consolidated financial statements. The Company reassesses the identified features on a quarterly basis to determine if they require bifurcation.

As of September 30, 2019 and December 31, 2018, the outstanding principal balance under the 2017 Term Loan was $20.3 million and $21.0 million, respectively.

Future minimum principal and interest payments on the 2017 Term Loan as of September 30, 2019 are as follows (in thousands):

2019 (Remainder)		3,066
2020		9,163
2021		8,692
2022		1,752
Total minimum debt payments	$	22,673
Less: Amount representing interest		(1,323)
Less: Debt discount and deferred charges		(423)
Less: Current portion of loan payable		(20,927)
Loan payable, net of current portion	$	—

All amounts due under the 2017 Term Loan have been classified as a current liability as of September 30, 2019 due to the considerations discussed in Note 1 and the assessment that the material adverse change clause under the 2017 Term Loan is not within the Company's control. The Company has not been notified of an event of default by SVB as of the date of the filing of this Quarterly Report on Form 10-Q.

During each of the three months ended September 30, 2019 and 2018, the Company recognized $0.4 million of interest expense related to the 2017 Term Loan. During the nine months ended September 30, 2019 and 2018, interest expense was $1.2 million and $1.1 million, respectively.

10. Stockholders' Equity

Private Placement

On August 19, 2019, the Company sold 3,178,174 shares of its common stock pursuant to a stock purchase agreement (the "2019 Private Placement") to individual investors, including certain executive officers and members of the board of directors of the Company for aggregate net proceeds of approximately $5.7 million, after deducting transaction costs, at a purchase price equal to $1.81 per share, which was equal to the most recent consolidated closing bid price on the Nasdaq Global Market on August 19, 2019. The shares in the 2019 Private Placement were issued as “restricted securities” (as defined in Rule 144 of the Securities Act) and carry no registration rights that require or permit the filing of any registration statement.

2019 Public Offering

On January 25, 2019, the Company completed an underwritten public offering (the “2019 Follow-On”) of 20,000,000 shares of its common stock at a public offering price of $1.50 per share. On January 29, 2019, an additional 2,188,706 shares were sold at a public offering price of $1.50 per share pursuant to the underwriters’ exercise of an over allotment option. The total net proceeds from the offering were $30.9 million, after deducting underwriting discounts, transaction costs and commissions.

2017 Shelf Registration Statement

On August 10, 2017, the Company filed a universal shelf registration statement on Form S-3 with the SEC to sell an aggregate amount of up to $200.0 million of certain of our securities. The shelf registration statement was declared effective by the SEC on August 28, 2017.

“At-the-Market” Offering

Concurrent with the filing of the shelf registration statement, the Company entered into a sales agreement (the “Sales Agreement”) with Jefferies LLC, as sales agent, pursuant to which the Company may, from time to time, issue and sell common stock with an aggregate value of up to $50 million in an "at-the-market" offering.

Sales of common stock, if any, pursuant to the Sales Agreement, may be made in sales deemed to be an “at the market offering” as defined in Rule 415(a) of the Securities Act, including sales made directly through the Nasdaq Global Market or on any

other existing trading market for the Company's common stock. The Company intends to use the proceeds from the offering for working capital and other general corporate purposes. The Company may suspend or terminate the Sales Agreement at any time.

During the three months ended June 30, 2019, the Company sold 164,926 shares of its common stock pursuant to the Sales Agreement for aggregate net proceeds of approximately $0.4 million, after deducting commissions and other transaction costs. There were no sales made under the Sale Agreement during three months ended September 30, 2019.

PIPE Financing

On June 26, 2017, the Company entered into a securities purchase agreement (the "Institutional Purchase Agreement") with a select group of institutional investors (the "Institutional Investors") and a securities purchase agreement with Timothy A. Springer, Ph.D., a member of the board of directors (the "Springer Purchase Agreement") for a private placement of the Company's securities (the "2017 PIPE"). The closing of the 2017 PIPE occurred on June 27, 2017.

Pursuant to the Institutional Purchase Agreement, the Company sold an aggregate of 2,750,000 shares of its common stock at a purchase price equal to $16.00 per share. Pursuant to the Springer Purchase Agreement, the Company sold to Dr. Springer an aggregate of 338,791 shares of common stock at a purchase price equal to $17.71 per share, which was equal to the most recent consolidated closing bid price on the Nasdaq Global Market on June 23, 2017, and warrants to purchase up to 79,130 shares of common stock ("Warrant Shares"), exercisable at $17.71 per Warrant Share, and with a term of five years. The purchase price for each warrant was equal to $0.125 for each Warrant Share, consistent with Nasdaq Global Market requirements for an "at the market" offering. Under the terms of the Common Stock Purchase Warrant, the warrants can be settled in unregistered shares. The Warrant Shares qualify for equity classification. The fair value of the allocated proceeds was determined on the relative fair value basis.

After deducting for placement agent fees and offering expenses, the aggregate net proceeds from the 2017 PIPE were approximately $47.1 million.

On June 27, 2017, in connection with the 2017 PIPE, the Company entered into a Registration Rights Agreement (the "Registration Rights Agreement") with the Institutional Investors and Dr. Springer. Pursuant to the Registration Rights Agreement, the Company agreed to prepare and file a registration statement with the SEC within 20 days after the closing of the 2017 PIPE for purposes of registering the resale of the shares of common stock issued and sold in the 2017 PIPE (the "Shares"), the Warrant Shares, and any shares of common stock issued as a dividend or other distribution with respect to the Shares or Warrant Shares. The 2017 PIPE registration statement was declared effective by the SEC on July 21, 2017.

The Company agreed to indemnify the Institutional Investors and Dr. Springer, their officers, directors, members, employees and agents, successors and assigns under the registration statement from certain liabilities and to pay all fees and expenses (excluding any legal fees of the selling holder(s), and any underwriting discounts and selling commissions) incident to the Company's obligations under the Registration Rights Agreement.

Initial Public Offering

On June 21, 2016, the Company completed its IPO and issued and sold 5,000,000 shares of common stock at a price to the public of $14.00 per share for net proceeds of $60.8 million after deducting underwriting discounts and commissions and offering expenses. On July 25, 2016, 289,633 additional shares of the Company's common stock were sold to the underwriters pursuant to the exercise of their option to purchase additional shares of common stock at a price to the public of $14.00 per share resulting in additional net proceeds of approximately $3.7 million after deducting underwriting discounts, commissions and offering expenses, bringing the total IPO net proceeds to $64.5 million. Upon the closing of the Company's IPO on June 27, 2016, all outstanding shares of its convertible preferred stock automatically converted into 10,126,118 shares of the Company's common stock. In addition, at this time, the warrants to purchase shares of the Company's Series D and Series E convertible preferred stock were converted into warrants to purchase shares of the Company's common stock.

Common Stock

As of September 30, 2019, the Company had 200,000,000 shares of common stock authorized for issuance, $0.0001 par value per share, with 48,196,387 shares issued and outstanding. The voting, dividend and liquidation rights of the common stockholders are subject to and qualified by the rights, powers and preferences of the preferred stock. The common stock has the following characteristics:

Voting

The common stockholders are entitled to one vote for each share of common stock held with respect to all matters voted on by the stockholders of the Company.

Dividends

The common stockholders are entitled to receive dividends, if and when declared by the Board of Directors. Through September 30, 2019, no dividends have been declared or paid on common stock.

Liquidation

Upon liquidation of the Company, the common stockholders are entitled to receive all assets of the Company available for distribution to such stockholders.

Reserved Shares

The Company has authorized shares of common stock for future issuance as follows:

	Period ending	
	September 30, 2019	**December 31, 2018**
Exercise of common warrants	95,619	95,619
Shares available for future stock incentive awards	3,207,042	1,586,925
Unvested restricted stock units	225,000	175,000
Outstanding common stock options	5,354,645	4,093,979
Total	8,882,306	5,951,523

11. Stock Incentive Plans

Stock Options

The Company maintains the 2008 Stock Incentive Plan (the "2008 Plan") for employees, consultants, advisors, and directors. The 2008 Plan provided for the granting of incentive and non-qualified stock option and restricted stock awards as determined by the Board. At inception of the 2008 Plan, a total of 2,213,412 shares of common stock were authorized for grants under the 2008 Plan. The Company ceased granting awards under the 2008 Plan upon the effectiveness of the 2016 Plan (as defined below); however, awards issued under the 2008 Plan remain subject to the terms of the 2008 Plan and the applicable 2008 Plan agreement. Shares subject to awards that were granted under the 2008 Plan and that expire, lapse or terminate following the effectiveness of the 2016 Plan become available under the 2016 Plan as shares available for future grants. All unvested stock options granted under the 2008 Plan may be exercised into restricted stock subject to forfeiture upon termination prior to vesting.

On June 7, 2016, the Company's stockholders approved the 2016 Incentive Award Plan (the "2016 Plan"), which became effective June 21, 2016. The 2016 Plan provides for the granting of incentive and non-qualified stock option, restricted stock and other stock and cash-based awards as determined by the Board. Shares subject to awards that are granted under the 2016 Plan and that expire, lapse or terminate are available for future grants under the 2016 Plan. At inception of the 2016 Plan, a total of 1,210,256 shares of common stock were authorized for future issuance under the 2016 Plan. The number of shares of common stock that may be issued under the 2016 Plan automatically increases on the first day of each calendar year, beginning in 2017 and ending in and including 2026, by an amount equal to the lesser of: (i) 4% of the number of shares of the Company's common stock outstanding on the last day of the applicable preceding calendar year and (ii) such smaller number of shares as is determined by the Board. During the nine months ended September 30, 2019 and 2018, the number of shares of common stock that may be issued under the 2016 Plan was increased by 898,871 shares and 893,730 shares, respectively. As of September 30, 2019, 1,709,636 shares remain available for future issuance under the 2016 Plan.

The 2008 Plan and 2016 Plan provide that the exercise price of incentive stock options cannot be less than 100% of the fair market value of the Company's common stock on the grant date for participants who own 10% or less of the total combined voting power of the Company, and not less than 110% for participants who own more than 10% of the Company's voting power. Options and restricted stock awards granted under the 2008 Plan and 2016 Plan vest over periods as determined by the Board, which are generally four years and, for options, with terms that generally expire ten years from the grant date.

The Company's 2018 Employment Inducement Incentive Award Plan (the "Inducement Incentive Award Plan"), which was adopted by the Board on September 25, 2018 without stockholder approval pursuant to Rule 5635(c)(4) of the Nasdaq Stock Market LLC listing rules ("Rule 5635(c)(4)"), provides for the grant of equity-based awards in the form of non-qualified stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and other stock or cash based awards. In accordance with Rule 5635(c)(4), awards under the Inducement Incentive Award Plan may only be made to a newly hired employee who has not previously been a member of the Board, or an employee who is being rehired following a bona fide period of non-employment by the Company, as a material inducement to the employee's entering into employment with the Company. The Company reserved 1,175,000 shares of its common stock for issuance under the Inducement Incentive Award Plan. On March 25, 2019, the Board approved the amendment and restatement of the Inducement Incentive Award Plan to

reserve an additional 2,000,000 shares of the Company's common stock for issuance thereunder. As of September 30, 2019, there are 750,000 shares available for future grant under the Inducement Incentive Award Plan.

The fair value of each option award was estimated on the grant date using the Black-Scholes option pricing model. Expected volatilities are based on historical volatilities from guideline companies because the Company's common stock has not traded for a period that is at least equal to the expected term of its stock option awards. The Company uses the "simplified" method to estimate the expected life of options granted and are expected to be outstanding. The risk-free interest rate used is the rate for a U.S. Treasury zero coupon issue with a remaining life consistent with the options expected life on the grant date. The Company has not paid and does not expect to pay in the foreseeable future, any cash dividends. Forfeitures are estimated at the time of grant and are adjusted, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The Company has estimated a forfeiture rate of 10% based on historical attrition trends. The Company records stock-based compensation expense only on awards that are expected to vest.

The estimated grant date fair values of employee stock option awards granted under the 2016 Plan and the Inducement Incentive Award Plan were calculated using the Black-Scholes option pricing model, based on the following weighted-average assumptions:

	Nine Months Ended September 30,	
	2019	**2018**
Risk-free interest rate	2.14%	2.82%
Dividend yield	—	—
Expected term	6.05	6.04
Expected volatility	87.79%	85.45%
Weighted-average fair value of common stock	$ 2.17	$ 12.38

The weighted average grant date fair value of stock options granted to employees during the nine months ended September 30, 2019 and 2018 was $1.60 and $9.03, respectively. The aggregate intrinsic value of stock options exercised during the nine months ended September 30, 2019 and 2018 was $0.1 million and $0.4 million, respectively.

As of September 30, 2019, total unrecognized compensation expense related to unvested employee stock options was $9.1 million, which is expected to be recognized over a weighted average period of 2.8 years.

The estimated grant date fair values of non-employee stock option awards granted under the 2016 Plan were calculated using the Black-Scholes option pricing model, based on the following weighted-average assumptions:

	Nine Months Ended September 30,	
	2019	**2018**
Risk-free interest rate	2.07%	2.70%
Dividend yield	—	—
Expected life (in years)	5.49	5.85
Expected volatility	88.46%	85.95%

The weighted average grant date fair value of stock options granted to non-employees during the nine months ended September 30, 2019 and 2018 was $1.46 and $8.71, respectively.

As of September 30, 2019, total unrecognized compensation expense related to unvested non-employee stock options was $0.8 million, which is expected to be recognized over a weighted average period of 1.5 years.

The following table summarizes the activity under the 2008 Plan, 2016 Plan, and Inducement Incentive Award Plan:

	Number of options	Weighted-average exercise price ($)	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in thousands)
Employee Awards				
Outstanding at December 31, 2018	3,681,575	$ 9.49	7.77	$ 300
Granted	2,389,255	$ 2.17		
Exercised	(125,600)	$ 1.20		
Forfeited	(1,040,169)	$ 9.99		
Outstanding at September 30, 2019	4,905,061	$ 6.03	8.62	$ 94
Vested at September 30, 2019	1,180,429	$ 10.72	6.49	$ 57
Vested and expected to vest at September 30, 2019	4,551,446	$ 6.23	8.55	$ 87
Non-Employee Awards				
Outstanding at December 31, 2018	412,404	$ 6.44	6.42	$ 28
Granted	50,000	$ 2.04		
Exercised	—	$ —		
Forfeited	(12,820)	$ 0.47		
Outstanding at September 30, 2019	449,584	$ 6.12	6.29	$ —
Vested at September 30, 2019	266,736	$ 5.72	4.37	$ —
Vested and expected to vest at September 30, 2019	449,584	$ 6.12	6.29	$ —

Restricted Stock Units

During the first quarter of 2019, the Company awarded 100,000 restricted stock units under the Inducement Incentive Award Plan, of which 50,000 were determined to be granted and 50,000 were reserved for issuance consistent with ASC 718. The granted restricted stock units had a fair value of $2.29 per share based on the closing price of the Company's common stock on the date of grant. These restricted stock units were valued at approximately $0.1 million, and will vest on the date an applicable performance condition is achieved on or prior to December 31, 2020. If the performance condition is not satisfied on or prior to December 31, 2020, the restricted stock units will be forfeited for no consideration.

The reserved 50,000 restricted stock units did not have defined performance criteria until August 6, 2019, at which time, were both granted and vested. These restricted stock units had a fair value of $1.65 per share. The restricted stock units were valued at approximately $0.1 million and fully expensed as of September 30, 2019.

Unrecognized compensation expense is $0.9 million as of September 30, 2019, which is expected to be recognized over a weighted average period of 3.0 years.

The following table summarizes the status of the Company's restricted stock units:

	Number of Shares (#)	Weighted Average Fair Value ($)
Unvested at December 31, 2018	175,000	$ 6.03
Granted	100,000	1.97
Vested	50,000	1.65
Forfeited	—	—
Unvested at September 30, 2019	225,000	$ 5.20

Employee Stock Purchase Plan

On June 7, 2016, the Company's stockholders approved the 2016 Employee Stock Purchase Plan (the "ESPP"), which became effective June 21, 2016. The ESPP is intended to qualify as an "employee stock purchase plan" under Section 423 of the Internal Revenue Code of 1986 with the purpose of providing employees with an opportunity to purchase the Company's common stock through accumulated payroll deductions.

Under the ESPP, the Company has set two six-month offering periods during each calendar year, one beginning March 1st and the other beginning September 1st of each calendar year, during which employees may elect to have up to 25% of their eligible compensation deducted on each payday on an after-tax basis for use in purchasing the Company's common stock on the last trading day of each offering period, subject to limits imposed by the Internal Revenue Code. The purchase price of the shares may not be less than 85% of the fair market value on the first or last trading day of the offering period, whichever is lower. The first ESPP offering period began on March 1, 2017.

At inception of the ESPP, a total of 173,076 shares of common stock were authorized and reserved for future issuance under the ESPP. The number of shares of common stock that may be issued under the ESPP will automatically increase on the first day of each calendar year, beginning in 2017 and ending in and including 2026, by an amount equal to the lesser of: (i) 1% of the number of shares of the Company's common stock outstanding on the last day of the applicable preceding calendar year and (ii) such smaller number of shares as is determined by the Company's Board of Directors. During the nine months ended September 30, 2019 and 2018, the number of shares of common stock that may be issued under the ESPP was increased by 224,717 shares and 223,432 shares, respectively. During the nine months ended September 30, 2019, the Company issued 17,205 shares of common stock under the ESPP. As of September 30, 2019, 747,406 shares remain available for future issuance under the ESPP.

For each of the nine months ended September 30, 2019 and 2018, the Company recognized less than $0.1 million of stock-based compensation expense under the ESPP.

The Company recorded stock-based compensation expense related to stock option awards, restricted stock units and the ESPP in the following expense categories of its consolidated statements of operations and comprehensive loss (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Research and development	$ 504	$ 709	$ 1,468	$ 1,842
General and administrative	799	776	2,266	2,082
Total stock-based compensation expense	$ 1,303	$ 1,485	$ 3,734	$ 3,924

12. Revenue Arrangements

Spark Therapeutics, Inc.

Spark License Agreement

In December 2016, the Company entered into a License and Option Agreement ("Spark License Agreement") with Spark Therapeutics, Inc. ("Spark") pursuant to which the Company and Spark agreed to collaborate on the development of gene therapies for certain targets utilizing the ImmTOR technology. The Spark License Agreement provides Spark with certain exclusive, worldwide, royalty bearing licenses to the Company's intellectual property, allowing Spark to develop and commercialize gene therapies in combination with ImmTOR for an initial identified target.

In addition to an upfront cash payment of $10.0 million under the Spark License Agreement, additional payments of an aggregate of $5.0 million in two payments of $2.5 million each were paid within twelve months of December 2, 2016 ("Contract Date"). The first of the two additional payments was scheduled to be made on or before May 31, 2017 (the "May 2017 License Payment") (see "Spark Letter Agreement" below) and the second was made on October 31, 2017. Spark may also exercise options to research, develop and commercialize gene therapies utilizing the ImmTOR technology for up to four additional targets. The Company is eligible to receive a variable fee up to $2.0 million for each additional target option elected, dependent on the incidence of the applicable indication. As per the agreement, the election period in which Spark can exercise additional targets is a term of three years from the Contract Date, which term expires on December 1, 2019.

Assuming successful development and commercialization, the Company could receive up to an additional $65.0 million in development and regulatory milestone payments and $365.0 million in commercialization milestone payments for each indication. If commercialized, the Company would be eligible to receive tiered royalties on global net sales at percentages ranging from mid-single to low-double digits, all of which apply on a target-by-target basis. Under the terms of the agreement, the Company will be eligible to receive these royalties commencing on the first commercial sale of the licensed product and terminating upon the later of (i) ten years after the first commercial sale, (ii) expiration of the last to expire valid claim on patents covering the jointly invented field specific improvements, or (iii) the expiration of regulatory exclusivity in the applicable country for the licensed product.

The Spark License Agreement may be terminated by Spark for convenience upon ninety days' notice. Either party may terminate the Spark License Agreement on a target-by-target basis for material breach with respect to such target.

In December 2016, the Company also entered into a Share Purchase Agreement (the “Spark Purchase Agreement”) with Spark. Pursuant to the Spark Purchase Agreement, the Company sold 197,238 shares of the Company’s common stock to Spark for gross proceeds of $5.0 million, or $25.35 per share of common stock, at an initial closing (the “Initial Closing”). The purchase price per share represents an amount equal to 115% of the average daily volume weighted average price (“VWAP”) of the common stock during the thirty consecutive calendar days leading up to and ending on the day prior to the Contract Date. Under the Spark Purchase Agreement, Spark agreed not to dispose of any of the Initial Closing Shares or any Acquisition Right Shares that it may acquire until January 1, 2018 and, thereafter, transfers are contractually subject to volume limitations applicable to an “affiliate” under Rule 144 of the Securities Act.

Beyond the Initial Closing, the Spark Purchase Agreement contemplated potential future sales of shares by the Company to Spark as follows:

- First Acquisition Right. During the period beginning on May 1, 2017 and ending on June 1, 2017, Spark had the right (the “First Acquisition Right”) to purchase a number of shares of common stock equal to an aggregate price of $5.0 million. See "Spark Letter Agreement" below.

- Second Acquisition Right. During the period beginning on October 1, 2017 and ending on November 1, 2017, Spark had the right (the “Second Acquisition Right”) to purchase a number of shares of common stock equal to an aggregate price of $5.0 million. On October 31, 2017 Spark exercised this right and purchased 205,254 shares of common stock from the Company for $5.0 million, or $24.36 per share of common stock. The purchase price per share represents an amount equal to 115.0% of the average daily VWAP of the common stock during the thirty consecutive calendar days leading up to and ending on the day prior to the Second Acquisition Right notification date.

The First Acquisition Rights and Second Acquisition Rights are collectively referred to herein as the “Acquisition Rights”.

In connection with the Spark License Agreement and Spark Purchase Agreement, the Company has made contractual payments defined in the MIT license agreement (see Note 14) totaling $2.2 million for the MIT sub-license provided to Spark, and $0.4 million relative to the calculated premium paid by Spark for the equity investments made under the Spark Purchase Agreement.

The terms of the Spark Purchase Agreement and the Spark License Agreement were negotiated at the same time between the parties and the terms of the Spark Purchase Agreement are referenced in the Spark License Agreement in multiple sections. The pricing and terms of the agreements are unique and must be considered in contemplation with each other. There are provisions within the Spark License Agreement that link to the Spark Purchase Agreement related to provisions that constitute a material breach of the license agreement. Therefore, the Company concluded that the two agreements must be combined and evaluated as a single agreement. While the Spark Purchase Agreement and the Spark License agreement are considered to be a single agreement, the Company determined that the purchase of common stock and future acquisition rights are not within the scope of ASC 606. The Company determined that the initial purchase of common stock combined with the embedded future stock Acquisition Rights had a fair value of $2.7 million and this amount was recorded in equity as of the effective date. The remaining $2.3 million of cash received in exchange for the stock and acquisition rights is included in allocable consideration, as this represents the premium paid by Spark on the purchase of common stock, and should be allocated to the remaining performance obligations.

The Company identified the following promises at the inception of the agreement: (1) certain exclusive, worldwide, royalty bearing licenses to the Company’s intellectual property and a license to conduct certain research activities under the collaboration, (the "License Obligation"), (2) options to research, develop and commercialize gene therapies utilizing the ImmTOR technology for up to four additional target therapy options, (the "Option Obligation"), (3) manufactured supply of preclinical and clinical ImmTOR, (the "Supply Obligation") at a discount, and (4) option to purchase manufactured supply of commercial ImmTOR, (the "Commercial Supply Obligation") at fair value. In consideration for these promises, the Company received an upfront payment of $15.0 million. In addition, the Company is eligible to receive additional payments of up to $35.0 million based on the achievement by Spark of future specified development milestones, up to $30.0 million based on the achievement by Spark of future specified regulatory milestones, up to $110.0 million based on the achievement by Spark of future specified commercial milestones, and up to $255.0 million based on the achievement by Spark of future specified sales milestones. The Company will also be eligible to receive tiered royalty payments that reach low double-digits based on future net sales for the duration of the royalty term.

The Company determined that the License Obligation was not capable of being distinct from the Supply Obligation. This is because Spark cannot derive benefit from the license without the simultaneous transfer of the preclinical and clinical supply. Therefore, the License Obligation and Supply Obligation are combined as a single performance obligation (the “Combined License and Supply Obligation”). The Company also determined that the Option Obligation, which includes the related Supply Obligation, provides the customer with a material right and is considered a performance obligation in the arrangement since it was priced at an incremental discount. The Company determined that the optional Commercial Supply Obligation does not provide the customer with a material right and is not considered to be a performance obligation because Spark can derive benefit from the Combined License and Supply Obligation without the delivery of the Commercial Supply Obligation and is

not at an incremental discount. Therefore, the Company determined that the Spark agreement contains five distinct performance obligations: the Combined License and Supply Obligation, and the four separate Option Obligations.

In determining the transaction price, the Company considered the future development milestones, regulatory milestones, commercial milestones, sales milestone, and sales royalties all represent variable consideration. Each of these variable consideration items was evaluated under the most likely amount method to determine whether such amounts were probable of occurrence, or whether such amounts should be constrained until they become probable. As part of its evaluation of the constraint, the Company considered numerous factors, including that receipt of such milestones is outside the control of the Company. Separately, any consideration related to sales-based milestones as well as royalties on net sales upon commercialization by Spark, will be recognized when the related sales occur as they were determined to relate predominantly to the intellectual property granted to Spark and, therefore, have also been excluded from the transaction price in accordance with the royalty recognition constraint. As of September 30, 2019, all milestones were constrained. The Company will re-evaluate the transaction price in each reporting period, as uncertain events are resolved, or as other changes in circumstances occur.

The Company determined that the up-front payment of $12.3 million ($15.0 million, less fair value of the equity totaling $2.7 million as discussed above) was included in the transaction price and was allocated to the performance obligations based on the Company's best estimate of their relative stand-alone selling prices. The Company allocated $7.1 million to the Combined License and Supply Obligation and $5.2 million to the discount on the Option Obligation ($1.3 million for each option) using the relative standalone selling price method to each obligation. The standalone selling price for the Combined License and Supply Obligation was determined using a discounted cash flow model. The standalone selling price for the Option Obligation was determined based on the fair value of the license minus the strike price of the option (the probability of exercise was included in the valuation) as well as the estimated discount of the Supply Obligation.

The estimated proceeds to be received from the sale of the Supply Obligation was also included in the transaction price for the Combined License and Supply Obligation. The total consideration allocated to the Combined License and Supply Obligation will be recognized using the output method, based on the proportion of actual deliveries to the total expected deliveries over the initial term which is estimated to be approximately four years. The discount associated with the Option Obligation, along with the proceeds to be received upon exercise and estimated sale of the Supply Obligation, will be recognized when each of the options are exercised, over the related expected deliveries of its supply. If the options expire without exercise, the related deferred revenue associated with each option will be recognized upon expiration (December 1, 2019).

The Company recognized other assets of $2.6 million related to the incremental costs relating to the payments to MIT that would not have been incurred if the contract with Spark had not been obtained. Under the Company's existing license agreement with MIT (see Note 14), in the event the Company sublicenses the MIT patents to a third party, it will be required to remit to MIT a percentage (ranging from 10% to 30%) of sublicense income. The Company concluded that the payments made to MIT were analogous to sales commissions and represented the cost to obtain a contract, which were evaluated under ASC 340-40-25-1. Such amounts were capitalized as they were both incremental and recoverable. However, upon further review, the Company noted that the amounts paid to MIT represent the cost to fulfill a contract rather than a cost to obtain a contract as they represent the costs that were incurred in order to fulfill their supply obligations under the Spark License Agreement. Therefore, the incremental payments to MIT represent part of the cost to fulfill the contract. When determining the appropriate accounting guidance for the costs to fulfill a customer contract, ASC 340-40-25-6 indicates that any other applicable literature should be considered first. Since the intellectual property is being used exclusively for research and development, the accounting for the MIT costs were previously accounted for under ASC 730-10. Since all of the payments to MIT related to the underlying intellectual property, that does not have alternative future use, such amounts should not have been capitalized, and instead remained recorded as research and development expense.

The Company evaluated the impact of the error on previously issued financial statements included in the Form 10-Q for the quarters ended March 31, 2018, June 30, 2018 and September 30, 2018, noting that the impact was not material to the balance sheet, statement of operations or cash flows. However, correcting the error would be material to the quarterly trends in the statement of operations to expense the amount in the fourth quarter. Therefore, such amounts were corrected by reducing current and long-term assets by $0.2 million and $2.4 million, respectively and increasing accumulated deficit by $2.6 million as of January 1, 2018 by reversing the amounts initially recorded in transition as is shown in the first quarter 2018 Stockholders' Equity (Deficit) statement. There was no impact to the consolidated statements of operations or cash flows for any of the quarters previously filed and no impact to any of the previously issued annual financial statements.

During the nine months ended September 30, 2019, there were two deliveries resulting in less than $0.1 million of revenue recognized. No revenue related to the Spark License Agreement was recognized during the twelve months ended December 31, 2018.

As of September 30, 2019, there was a contract liability of $15.9 million representing deferred revenue associated with this agreement. A total of $1.0 million is presented as current and $14.9 million is presented as noncurrent in the accompanying consolidated balance sheet. As of December 31, 2018, there was $14.7 million of deferred revenue related to this agreement.

Spark Letter Agreement

On June 6, 2017, the Company and Spark entered into a letter agreement (the "Letter Agreement"), pursuant to which the parties agreed that Spark would make the May 2017 License Payment by June 6, 2017. The May 2017 License Payment was received, and recorded as a liability as of June 30, 2017, of which some or all may potentially constitute the reimbursement described below. The parties also agreed that Spark would be deemed to have delivered notice on May 31, 2017 exercising its right to purchase the shares pursuant to the First Acquisition Right. The Letter Agreement further outlines a cost reimbursement arrangement, pursuant to which the Company agreed to reimburse Spark for all costs and expenses, including the cost of materials provided by the Company, associated with the preclinical research and toxicology studies being performed by Spark for any licensed products for a specified amount of time (the "Reimbursement Period"), in an amount not to exceed $2.5 million.

Consistent with the First Acquisition Right, Spark purchased 324,362 shares of common stock pursuant to the Spark Purchase Agreement, as amended by the Letter Agreement, for an aggregate purchase price of $5.0 million, or $15.41 per share of common stock. The purchase price per share represents an amount equal to 115.0% of the average daily volume weighted average price ("VWAP") of the common stock during the thirty consecutive calendar days leading up to and ending on the day prior to the First Acquisition Right notification date. At the initial contract assessment, the Company allocated $2.7 million to equity (representing the fair value of the initial purchase of common stock combined with the embedded future stock Acquisition Rights). Upon exercise of the First Acquisition Right, the Company recorded the purchase amount to stockholders' equity.

The Company determined that the Letter Agreement resulted in a modification to the original agreement. The amount received totaling $2.5 million and the reimbursements pursuant to the Letter Agreement totaling $2.5 million were both included in the transaction price, and a liability was recorded for the amount expected to be repaid. As repayments were made, the underlying liability was reduced. To the extent that an amount was expected to be applied towards the clinical supply obligation, the analysis of variable consideration was updated accordingly.

On October 31, 2017, Spark paid the Company a $2.5 million milestone payment pursuant to the Spark License Agreement, which was included in the transaction price and allocated to the performance obligations using the relative standalone selling price. In addition, Spark exercised the Second Acquisition Right set forth in Section 2.4 of the Spark Purchase Agreement and purchased 205,254 shares of common stock from the Company for $5.0 million, or $24.36 per share of common stock. The purchase price per share represents an amount equal to 115.0% of the average daily VWAP of the common stock during the thirty consecutive calendar days leading up to and ending on the day prior to the Second Acquisition Right notification date.

On June 5, 2019, the term of the Reimbursement Period under the Letter Agreement expired. As of September 30, 2019, the Company updated its estimate of variable consideration included in the transaction price to include $1.2 million of unpaid reimbursements to Spark. As of September 30, 2019, the transaction price totaled $18.3 million, consisting of $11.6 million allocated to the Combined License and Supply Obligation and $6.7 million allocated to the discount on the Option Obligation ($1.7 million for each option).

Skolkovo Foundation

The Company has received grant funding from the Russia-based Development Fund of New Technologies Development and Commercialization Center ("Skolkovo"). From grant inception through September 30, 2019, the Company received $2.0 million from Skolkovo.

Based on the guidance in ASC 606, the Company concluded that the entire $2.0 million of grant funds received from Skolkovo is variable consideration. Although the Company believes it has an enforceable right to the amounts received, there is risk that an audit could result in the Company needing to refund certain amounts back to Skolkovo, resulting in variability in the transaction price. The Company utilized the "expected value" approach in determining the amount that can be recognized. The Company estimated that it will be entitled to revenue of $1.8 million from the Skolkovo grant, and recorded this amount. The remainder of $0.2 million was recorded as a contract liability.

During the year ended December 31, 2018, the Company made a decision to cease work relating to the Skolkovo grant. As a result, Skolkovo performed a formal review of project expenses incurred by the Company. Skolkovo concluded that the Company should (i) return unused grant funds to Skolkovo in the amount of less than $0.1 million and (ii) reimburse $0.1 million of costs deemed to have been overspent relative to the cost share requirement stipulated in the grant.

As of September 30, 2019, a contract liability of $0.1 million remains on the balance sheet and will not be recognized as revenue until the expiration of the three-year audit period, expected April 2021, or sooner, if resolution is reached with Skolkovo or there is a change in the estimate.

Transaction Price Allocated to Future Performance Obligations

Remaining performance obligations represent the transaction price of contracts for which work has not been performed (or has been partially performed) and excludes unexercised contract options. As of September 30, 2019, the aggregate amount of the transaction price allocated to remaining performance obligations was $9.3 million. The Company expects to recognize revenue on approximately 8.8% of the remaining performance obligations over the next 12 months.

Contract Balances from Contracts with Customers

The following table presents changes in the Company's contract liabilities during the nine months ended September 30, 2019 (in thousands):

	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
Nine Months Ended September 30, 2019				
Contract liabilities:				
Deferred revenue	$ 14,777	$ 1,250	$ (23)	$ 16,004
Other liabilities	2,126	—	(2,126)	—
Total contract liabilities	$ 16,903	$ 1,250	$ (2,149)	$ 16,004

13. Related-Party Transactions

In August 2019, the Company completed the 2019 Private Placement (as described in Note 10). The following table sets forth the number of shares of common stock purchased in the 2019 Private Placement by executive officers and members of the board of directors of the Company (and related parties thereto) and holders of more than 5% of the Company's common stock.

Name	Shares of Common Stock Purchased		Total Purchase Price
Timothy A. Springer, Ph.D.	1,600,000	$	2,896,000.00
TAS Partners, LLC (affiliate of Timothy A. Springer, Ph.D.	1,100,000	$	1,991,000.00
Elona Kogan, J.D.	82,872	$	149,998.32
Patrick Zenner	55,248	$	99,998.88
Takashi Kei Kishimoto, Ph.D.	50,000	$	90,500.00
Carsten Brunn, Ph.D.	41,436	$	74,999.16
Scott D. Myers	41,436	$	74,999.16
Stephen Smolinski	13,812	$	24,999.72

In January 2019, the Company completed the 2019 Follow-On (as described in Note 10). The following table sets forth the number of shares of common stock purchased in the 2019 Follow-On by members of the board of directors of the Company (and related parties thereto) and holders of more than 5% of the Company's common stock:

Name	Shares of Common Stock Purchased		Total Purchase Price
Timothy A. Springer, Ph.D.	4,000,000	$	6,000,000.00
Entities affiliated with NanoDimension	1,666,666	$	2,499,999.00
Entities affiliated with OrbiMed Advisors	1,333,333	$	1,999,999.50
Entities affiliated with Polaris	666,666	$	999,999.00
SAF-BND Trust (affiliate of Omid Farokhzad, M.D.)	83,333	$	124,999.50
Chafen Lu (Timothy A. Springer's wife)	66,666	$	99,999.00
Jed Springer (Timothy A. Springer's brother)	1,000	$	1,500.00

During the fourth quarter of 2018, the Company entered into an amended consulting agreement with Dr. Omid Farokhzad, a member of its Board of Directors. The term of the amendment to the Consulting Agreement is April 1, 2018 to December 31,

2019, which extends the original consulting term for an additional nine months from March 31, 2019. Compensation for the Amendment includes a $85,000 payment for the period beginning January 1, 2019 and ending December 31, 2019. The $85,000 will be paid quarterly across the contract term in arrears beginning March 31, 2019. Included within this agreement, a stock option award of 75,000 shares was granted, with a weighted average grant date fair value of $4.35.

The Company incurred expenses for consulting services provided by its founders during the three months ended September 30, 2019 and 2018 totaling $0.1 million and $0.1 million, respectively, and $0.4 million and $0.3 million during the nine months ended September 30, 2019 and 2018, respectively.

14. Collaboration and License Agreements

Asklepios Biopharmaceutical, Inc.

On August 6, 2019, the Company entered into a Feasibility Study and License Agreement with Asklepios Biopharmaceutical, Inc. ("AskBio"), which is referred to as the AskBio License. Pursuant to the AskBio License, the Company and AskBio agreed to license intellectual property rights to each other as part of a collaboration to research, develop, and commercialize certain adeno-associated virus ("AAV") gene therapy products utilizing the Company's ImmTOR technology to enable re-dosing of such AAV gene therapy products to treat serious rare and orphan genetic diseases for which there is a significant unmet medical need.

Pursuant to the AskBio License, the Company and AskBio agreed to conduct proof of concept studies to potentially validate the use of ImmTOR in conjunction with AAV for the treatment of methylmalonic acidemia ("MMA"), based on the Company's product candidate SEL-302, to mitigate the formation of neutralizing anti-AAV capsid antibodies (the "POC Studies"). If the POC Studies are successful, or the parties otherwise elect to do so, the parties will proceed with a collaboration to pursue the development and commercialization of AAV gene therapy product candidates utilizing ImmTOR for the treatment of certain agreed serious rare and orphan genetic diseases. If the POC Studies fail to demonstrate a proof of concept, and the parties do not mutually agree in writing to proceed with the collaboration, the AskBio License will expire.

The Company and AskBio will share responsibility for the research, development and commercialization of products developed under this collaboration. The parties will also share research, development and commercialization costs equally for all collaboration products, but with a right of either party to opt out of certain products, and thereby no longer be required to share costs for such products. Each party will receive a percentage of net profits for each product sold under the collaboration equal to the percentage of shared costs borne by such party in the development of such product. Pursuant to the AskBio License, AskBio is responsible for manufacturing the AAV capsids and AAV vectors and the Company is responsible for manufacturing ImmTOR.

The AskBio License is considered to be within the scope of ASC 808, as both parties are active participants and exposed to the risks and rewards of the collaborative activity. The Company evaluated the terms of the AskBio License and have identified the following promises in the arrangement (1) conducting research and development activities to develop and commercialize products under the collaboration, (the "R&D Services"), (2) granting a non-exclusive, non-transferable, royalty-free, fully paid up, worldwide license to certain intellectual property of the Company, (the "IP Rights") for the purpose of performing the POC Studies, (the "Research License"), (3) granting an exclusive, nontransferable, worldwide license to the IP Rights for use in certain indications (the" Collaboration License"), (4) providing manufactured supply of preclinical and clinical ImmTOR, (the "Manufactured Supply"), (5) participation on identified steering committees responsible for the oversight of the collaboration, (the "JSC Participation"), and (6) granting an exclusive option to obtain a license under the IP Rights to research, develop and commercialize Licensed Products. The Company determined that the R&D Services, Research License, Collaboration License, Manufactured Supply, and JSC Participation were not capable of being distinct, and therefore must be combined into a single performance obligation. Therefore, promises (1) through (5) identified above were combined into a single performance obligation. Furthermore, the Company evaluated the Option Agreement and determined that it does not provide AskBio with a material right under ASC 606 as the option was not priced at a discount. The Company noted that AskBio did not meet the definition of a customer within the scope of ASC 606 for any distinct performance obligations as the Company concluded that such items were not an output of the Company's ordinary activities. As such, the Company determined that the entire arrangement would be accounted for within the scope of ASC 808.

In accordance with ASC 808, collaboration expenses are recognized within R&D expense and selling, general and administrative expense on our condensed consolidated statements of operations. For the nine months ended September 30, 2019, the Company did not recognize any collaboration expense under the AskBio License.

Under certain collaborative arrangements, the Company is entitled to reimbursement of certain R&D expense. Activities under collaborative arrangements for which the Company is entitled to reimbursement are considered to be collaborative activities under the scope of ASC 808. For these units of account, the Company does not analogize to ASC 606 or recognize revenue. Rather, the Company analogizes to the guidance in ASC 730, which requires that reimbursements from counterparties be recognized as an

offset to the related costs. In accordance with ASC 730, the Company records reimbursement payments received from collaboration partners as reductions to R&D expense.

Massachusetts Institute of Technology

On November 25, 2008, the Company entered into an Exclusive Patent License agreement with the Massachusetts Institute of Technology ("MIT"), which is referred to as the Exclusive Patent License. The Company received an exclusive royalty-bearing license to utilize patents held by MIT in exchange for upfront consideration and annual license maintenance fees. Such fees are expensed as incurred and have not been material to any period presented.

As of September 30, 2019, and in connection with the execution of the Spark License Agreement, the Company has made contractual payments pursuant to the Exclusive Patent License totaling $2.2 million for the sublicense granted to Spark, and $0.4 million relative to the calculated premium paid by Spark for the equity investments made under the Spark Purchase Agreement. The Company made no additional payments during the nine months ended September 30, 2019.

Shenyang Sunshine Pharmaceutical Co., Ltd

In May 2014, the Company entered into a license agreement with Shenyang Sunshine Pharmaceutical Co., Ltd. ("3SBio"), which is referred to as the 3SBio License. The Company has paid to 3SBio an aggregate of $3.0 million in upfront and milestone-based payments under the 3SBio License.

Massachusetts Eye and Ear Infirmary and The Schepens Eye Research Institute, Inc.

In May 2016, the Company entered into a license agreement with the Massachusetts Eye and Ear Infirmary and The Schepens Eye Research Institute, Inc. (collectively, "MEE"), which is referred to as the MEE License. On September 16, 2019, in accordance with the terms of the MEE License, the Company notified MEE of its intention to terminate the MEE License, effective December 15, 2019. Through September 30, 2019, the Company paid a total of $0.4 million in license fees due under the MEE License. License fees less than $0.1 million are accrued under the MEE License as of September 30, 2019.

15. Income Taxes

The Company provides for income taxes under ASC 740. Under ASC 740, the Company provides deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the Company's financial statement carrying amounts and the tax bases of assets and liabilities using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. For the three and nine months ended September 30, 2019 and 2018, the Company did not record a current or deferred income tax expense or benefit.

The Company has provided a full valuation allowance against its net deferred tax assets, as the Company believes that it is more likely than not that the deferred tax assets will not be realized.

During the third quarter of 2019, the Company completed a Section 382 study, noting that an ownership change has not occurred since November 2011, therefore, the deferred tax assets related to the federal and Massachusetts net operating losses and credit carryforwards are not currently limited. However, utilization of the net operating loss and research and development credit carryforwards may be subject to a substantial annual limitation under Section 382 and 383 of the Internal Revenue Code due to ownership change limitations that could occur in the future. These ownership changes may limit the amount of net operating loss and research and development credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively.

The Company applies ASC 740 to uncertain tax positions. As of the adoption date of January 1, 2010 and through September 30, 2019, the Company had no unrecognized tax benefits or related interest and penalties accrued. Interest and penalty charges, if any, related to unrecognized tax benefits would be classified as income tax expense in the accompanying statement of operations.

The Company has not, as of yet, conducted a study of its research and development credit carryforwards. This study may result in an adjustment to the Company's research and development credit carryforwards; however, until a study is completed, and any adjustment is known, no amounts are being presented as an uncertain tax position. A full valuation allowance has been provided against the Company's research and development credits and, if an adjustment is required, this adjustment would be offset by an adjustment to the valuation allowance. As a result, there would be no impact to the consolidated balance sheets, statements of operations and comprehensive loss, or cash flows if an adjustment was required.

The statute of limitations for assessment by the Internal Revenue Service and Massachusetts tax authorities is open for tax years since inception. The Company files income tax returns in the United States and Massachusetts. There are currently no federal, state or foreign audits in progress.

Upon adoption of ASC 842, a deferred tax liability was recorded for the right-of-use asset. The deferred tax asset for the lease liability and the deferred tax asset for the lease incentives was reversed, with no impact to the valuation allowance or deferred tax expense.

16. Defined Contribution Plan

The Company maintains a defined contribution plan under Section 401(k) of the Internal Revenue Code (the "401(k) Plan"). The 401(k) Plan covers all employees who meet defined minimum age and service requirements, and allows participants to defer a portion of their annual compensation on a pretax basis. The 401(k) Plan provides for matching contributions on a portion of participant contributions pursuant to the 401(k) Plan's matching formula. All matching contributions vest ratably over 4 years and participant contributions vest immediately. Contributions by the Company totaled less than $0.1 million during each of the three months ended September 30, 2019 and 2018, and $0.1 million and $0.2 million during each of the nine months ended September 30, 2019 and 2018, respectively.

17. Commitments and Contingencies

As of September 30, 2019, the Company had operating lease agreements for offices in Watertown, MA. See Note 8 for additional information regarding the Company's leases.

Other

As permitted under Delaware law, the Company indemnifies its directors for certain events or occurrences while the director is, or was, serving at the Company's request in such capacity. The term of the indemnification is for the director's lifetime. The maximum potential amount of future payments the Company could be required to make is unlimited; however, the Company has directors' insurance coverage that limits its exposure and enables it to recover a portion of any future amounts paid. The Company also has indemnification arrangements under certain of its facility leases that require it to indemnify the landlord against certain costs, expenses, fines, suits, claims, demands, liabilities, and actions directly resulting from certain breaches, violations, or non-performance of any covenant or condition of the Company's lease. The term of the indemnification is for the term of the related lease agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited. To date, the Company had not experienced any material losses related to any of its indemnification obligations, and no material claims with respect thereto were outstanding.

The Company is a party in various other contractual disputes and potential claims arising in the ordinary course of business. The Company does not believe that the resolution of these matters will have a material adverse effect the Company's business, financial position, results of operations or cash flows.

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 financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this Quarterly Report on Form 10-Q, our actual results could differ materially from the results described in, or implied, by these forward-looking statements.

OVERVIEW

We are a clinical-stage biopharmaceutical company using our ImmTOR technology with the goal to effectively and safely treat rare and serious diseases by enabling the development of novel biologic therapies that would otherwise be limited by their immunogenicity. Many such diseases are treated with biologic therapies that are foreign to the patient's immune system and therefore elicit an undesired immune response.

Our proprietary tolerogenic ImmTOR technology encapsulates an immunomodulator in biodegradable nanoparticles and is designed to mitigate the formation of anti-drug antibodies, or ADAs, by inducing antigen-specific immune tolerance to biologic drugs. We believe ImmTOR has potential to enhance the efficacy without compromising the safety of existing approved biologic drugs, improve product candidates under development and enable novel therapeutic modalities, such as re-administration of systemic gene therapy.

Our Current Programs

Chronic Refractory Gout

Our lead product candidate, SEL-212, is designed to be a monthly treatment for chronic refractory gout, a debilitating rare disease with an unmet medical need. SEL-212 consists of a combination of our ImmTOR technology co-administered with pegadricase. Pegadricase is an investigational recombinant pegylated uricase (urate oxidase), an enzyme not naturally found in humans, and is therefore highly immunogenic. This enzyme is designed to treat patients with symptomatic gout, refractory to standard uric acid lowering treatment, by breaking down the excess uric acid to the more soluble allantoin. In preclinical studies, we observed that ImmTOR, when co-administered with pegadricase, induced antigen-specific immune tolerance to pegadricase and substantially reduced the formation of associated ADAs. Based on our Phase 1/2 clinical data, we believe that SEL-212 has the potential to control serum uric acid levels and mitigate the formation of ADAs in response to the therapeutic enzyme.

Our Phase 1 data demonstrated that ImmTOR mitigated the formation of ADAs against pegadricase in a dose-dependent manner after a single dose of SEL-212. In our Phase 2 trial, ImmTOR inhibited the formation of ADAs in the majority of patients with up to five monthly doses, resulting in sustained reduction of SUA levels. We also observed a lower-than-expected rate of gout flares in the first months after initiation of SEL-212 treatment, with further reductions observed in months three to five. SEL-212, if successfully developed and approved, has the potential to offer a unique treatment for patients with chronic refractory gout, including reduced immunogenicity, improved efficacy, and monthly dosing compared to other FDA-approved treatments, and provide clinical evidence supporting the utility of our ImmTOR technology in providing patients with antigenic specific tolerance.

In March 2019, we initiated a Phase 2 head-to-head clinical trial of SEL-212 (COMPARE), in which SEL-212 is being compared against the current FDA-approved therapy for chronic refractory gout, KRYSTEXXA®, in multiple clinical sites in the United States. The COMPARE trial is expected to enroll approximately 150 patients and is designed to compare the efficacy and safety of SEL-212 to KRYSTEXXA in adult patients with chronic refractory gout. The primary endpoint is the comparison of maintenance of serum uric acid (SUA) of < 6 mg/dl at six months of treatment with either SEL-212 or KRYSTEXXA. We plan to release interim data from the COMPARE trial in the first quarter of 2020 and to provide six-month top-line statistical superiority data by mid-2020. Based on the feedback we expect to receive from the FDA in January 2020 regarding the planned Phase 3 clinical trial and financial considerations, planning for the Phase 3 clinical trial of SEL-212 is expected to continue into 2020.

We expect our clinical and marketing strategy for SEL-212 to focus on the unmet medical need in the estimated 160,000 patients in the United States with chronic refractory gout who are being treated by rheumatologists.

Gene Therapy

In August 2019, we entered into a feasibility study and license agreement with Asklepios Biopharmaceutical, Inc., or AskBio, pursuant to which we and AskBio will conduct proof of concept studies to potentially validate the use of our ImmTOR technology in conjunction with an AAV gene therapy to mitigate the formation of neutralizing anti-AAV capsid antibodies, which currently precludes redosing. The initial product candidate being developed under this collaboration is gene therapy for methylmalonic acidemia, or MMA, which can cause severe developmental defects and premature death as a result of an accumulation of toxic metabolites. We previously conducted preclinical studies for this product candidate based on SEL-302 and will leverage that previous work within the collaboration. If the proof of concept studies are successful, we will proceed with a collaboration to pursue the development and commercialization of AAV gene therapy product candidates utilizing ImmTOR for the treatment of certain agreed serious rare and orphan genetic diseases. We plan to enter the clinic under this collaboration in 2020 but we will require additional external sources of capital to conduct the planned clinical program.

Our gene therapy product candidate, SEL-313, is being developed to treat ornithine transcarbamylase deficiency and is currently in preclinical development.

In September 2018, we announced a collaboration with CureCN, a European consortium, for the use of our ImmTOR technology in combination with an AAV gene therapy in Crigler-Najjar syndrome, a rare genetic disorder characterized by an inability to properly convert and clear bilirubin from the body. We expect the CureCN consortium to obtain scientific advice from the German drug regulatory authority in the fourth quarter of 2019.

FINANCIAL OPERATIONS OVERVIEW

Financial Operations

To date, we have financed our operations primarily through the public offering and private placements of our securities, funding received from research grants and collaboration arrangements and our credit facility. We do not have any products approved for sale and have not generated any product sales. All of our revenue to date has been collaboration and grant revenue.

Since inception, we have incurred significant operating losses. We incurred net losses of $40.5 million and $50.7 million for the nine months ended September 30, 2019 and 2018, respectively. As of September 30, 2019, we had an accumulated deficit of $320.9 million. We expect to continue to incur significant expenses and operating losses for at least the next several years as we:

- conduct additional clinical trials for SEL-212;
- continue the research and development of its other product candidates as well as product candidates that it may be developing jointly with collaboration partners;
- seek to enhance its ImmTOR technology and discover and develop additional product candidates;
- seek to enter into collaboration, licensing and other agreements, including, but not limited to research and development, and/or commercialization agreements;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- potentially establish a sales, marketing and distribution infrastructure and scales-up external manufacturing capabilities to commercialize any products for which it may obtain regulatory approval;
- maintain, expand and protect our intellectual property portfolio, including through licensing arrangements; and
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts and to support our operations as a public company.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, license and collaboration agreements, and research grants. We may be unable to raise capital when needed or on reasonable terms, if at all, which would force us to delay, limit, reduce or terminate our product development or future commercialization efforts. We will need to generate significant revenues to achieve profitability, and we may never do so.

Because our current operating plan does not contain sufficient resources, we will require additional external sources of capital to complete the ongoing head-to-head Phase 2 COMPARE trial against KRYSTEXXA® and additional capital to conduct the planned Phase 3 clinical program for SEL-212. Under the terms of our exclusive patent license agreement with the Massachusetts Institute of Technology, or the MIT License, MIT may terminate the MIT License if we fail to meet a diligence obligation, including the initiation of a Phase 3 clinical trial by a specific date in the fourth quarter of 2019. We are currently in active discussions with MIT regarding an amendment to the MIT License to extend this obligation because we do not plan to initiate a trial before our expected meeting with the FDA in January 2020. We believe that we will come to agreement with MIT on an acceptable deferral of this obligation that would enable us to avoid a breach of the MIT License. However, if we are unable to reach an agreement with MIT regarding an acceptable amendment of the MIT License and if we are unable to cure the breach, there could be a material adverse effect on our business. Because of the uncertainty in securing additional capital, we have concluded that substantial doubt exists with respect to our ability to continue as a going concern within one year after the date of the filing of this Quarterly Report on Form 10-Q. For additional information, see “Liquidity and Capital Resources.”

The consolidated financial information presented below includes the accounts of Selecta Biosciences Inc. and our wholly owned subsidiaries, Selecta (RUS) LLC, a Russian limited liability company, or Selecta RUS, and Selecta Biosciences Security Corporation, a Massachusetts securities corporation. All intercompany accounts and transactions have been eliminated.

Grant and collaboration revenue

To date, we have not generated any product sales. Our revenue consists of grant and collaboration revenue, which includes amounts recognized related to upfront and milestone payments for research and development funding under collaboration and license agreements. In addition, we earn revenue under the terms of government contracts or grants, which require the performance of certain research and development activities. We expect that any revenue we generate will fluctuate from quarter to quarter because of the timing and amount of fees, research and development reimbursements and other payments from collaborators. We do not expect to generate revenue from product sales for at least the next several years. If we or our collaborators fail to complete the development of our product candidates in a timely manner or fail to obtain regulatory approval as needed, our ability to generate future revenue will be harmed, and will affect the results of our operations and financial position. For a further description of the agreements underlying our collaboration and grant-based revenue, see Notes 2 and 12 to our consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

Research and development

Our research and development expenses consist of external research and development costs, which we track on a program-by-program basis and primarily include contract manufacturing organization, or CMO, related costs, fees paid to contract research organizations, or CROs, and internal research and development costs, which are primarily compensation expenses for our research and development employees, lab supplies, analytical testing, allocated overhead costs and other related expenses. Our internal research and development costs are often devoted to expanding our programs and are not necessarily allocable to a specific target.

We have incurred a total of $225.6 million in research and development expenses from inception through September 30, 2019, with a majority of the expenses being spent on the development of SEL-212 and a prior nicotine vaccine candidate, and the remainder being spent on our various discovery and preclinical stage product candidate programs and the general expansion of our technology.

In connection with our intention to focus on advancing our ImmTOR platform, as stated in January 2019, we have ceased ongoing work on our immune stimulation programs SELA-070 and SEL-701, and currently do not have plans to move these programs forward or to perform any additional work on either of these programs.

As we expand the clinical development of SEL-212 and our gene therapy programs, we expect our research and development expenses to increase.

We expense research and development costs as incurred. Conducting a significant amount of research and development is central to our business model. Product candidates in clinical development generally have higher development costs than those in earlier stages of development, primarily due to the size, duration and cost of clinical trials. We plan to increase our research and development expenses for the foreseeable future as we seek to complete development of SEL-212, and to further advance our preclinical and earlier stage research and development projects. The successful development of our clinical and preclinical product candidates is highly uncertain. At this time, we cannot reasonably estimate the nature, timing or costs of the efforts that will be necessary to complete the development of SEL-212 or any of our preclinical programs or the period, if any, in which material net cash inflows from these product candidates may commence. Clinical development timelines, the probability of success and development costs can differ materially from our expectations. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those which we currently expect will be required for the completion of clinical development of a product candidate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time to complete any clinical development.

The following table sets forth the components of our research and development expenses during the periods indicated (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Research and development expenses (key projects and initiatives):				
SEL-212	$ 4,019	$ 5,742	$ 15,334	$ 17,634
SELA-070	—	661	46	1,760
Discovery and preclinical stage product candidate programs, collectively	211	919	511	2,109
Other internal research and development expenses	3,874	4,563	11,700	15,928
Total research and development expenses	$ 8,104	$ 11,885	$ 27,591	$ 37,431

General and administrative

General and administrative expenses consist primarily of salaries and related benefits, including stock-based compensation, related to our executive, finance, business development and support functions. Other general and administrative expenses include facility-related costs not otherwise allocated to research and development expenses, travel expenses for our general and administrative personnel and professional fees for auditing, tax and corporate legal services, including intellectual property-related legal services.

Investment income

Investment income consists primarily of interest income earned on our cash and cash equivalents and short-term investments.

Interest expense

Interest expense consists of interest expense on amounts borrowed under our credit facilities.

Other income (expense)

Other income (expense) for each of the three and nine months ended September 30, 2019 and 2018 was de minimis.

Foreign currency transaction gain (loss)

The functional currency of our Russian subsidiary is the Russian ruble. In addition to holding cash denominated in Russian rubles, our Russian bank accounts also hold cash balances denominated in U.S. dollars to facilitate payments to be settled in U.S. dollars or other currencies. At each of September 30, 2019 and December 31, 2018, we maintained cash of $0.4 million in Russian banks, all of which was denominated in U.S. dollars. The amounts denominated in U.S. dollars and used in transacting the day-to-day operations of our Russian subsidiary are subject to transaction gains and losses, which are reported as incurred.

RESULTS OF OPERATIONS

Comparison of the Three Months Ended September 30, 2019 and 2018

Revenue

During the three months ended September 30, 2019, and 2018, we recognized no revenue.

Research and development

The following is a comparison of research and development expenses for the three months ended September 30, 2019 and 2018 (in thousands, except percentages):

	Three Months Ended September 30,		Increase	
	2019	2018	(decrease)	
Research and development	$ 8,104	$ 11,885	$ (3,781)	(32)%

During the three months ended September 30, 2019, our research and development expenses decreased by $3.8 million, or 32%, as compared to the same period in 2018. The decrease reflects the timing of expenses recognized for Selecta's head-to-head COMPARE study, in addition to reduced salaries and benefits resulting from the headcount reduction in early 2019, and the completion of work on prior programs.

General and administrative

The following is a comparison of general and administrative expenses for the three months ended September 30, 2019 and 2018 (in thousands, except percentages):

	Three Months Ended September 30,		Increase	
	2019	2018	(decrease)	
General and administrative	$ 3,690	$ 4,056	$ (366)	(9)%

During the three months ended September 30, 2019, our general and administrative expenses decreased by $0.4 million, or 9%, as compared to the same period in 2018. The reduction in costs was primarily the result of reduced legal and professional fees.

Investment income

Investment income remained relatively unchanged during the three months ended September 30, 2019 as compared to 2018.

Foreign currency transaction gain (loss)

We recognized foreign currency gains of less than $0.1 million during each of the three months ended September 30, 2019 and 2018, reflecting minimal fluctuation of the U.S. dollar to the Russian ruble from the beginning to the end of each period.

Interest expense

Interest expense was $0.4 million for each of the three months ended September 30, 2019 and 2018, representing interest expense and amortization of the carrying costs of our credit facilities.

Other income (expense)

Other income (expense) was de minimis for each of the three months ended September 30, 2019 and 2018.

Net Loss

Net loss for the three months ended September 30, 2019 was $12.0 million compared to $16.0 million for the three months ended September 30, 2018.

Comparison of the Nine Months Ended September 30, 2019 and 2018

Revenue

During the nine months ended September 30, 2019, we recognized less than $0.1 million of revenue for two shipments under our collaboration agreement with Spark and no revenue for the same period in 2018.

Research and development

The following is a comparison of research and development expenses for the nine months ended September 30, 2019 and 2018 (in thousands, except percentages):

	Nine Months Ended September 30,		Increase	
	2019	2018	(decrease)	
Research and development	$ 27,591	$ 37,431	$ (9,840)	(26)%

During the nine months ended September 30, 2019, our research and development expenses decreased by $9.8 million, or 26%, as compared to the same period in 2018. The decrease reflects the timing of expenses recognized for Selecta's head-to-head COMPARE study, in addition to reduced salaries and benefits resulting from the headcount reduction in early 2019, and the completion of work on prior programs.

General and administrative

The following is a comparison of general and administrative expenses for the nine months ended September 30, 2019 and 2018 (in thousands, except percentages):

	Nine Months Ended September 30,		Increase	
	2019	2018	(decrease)	
General and administrative	$ 12,317	$ 13,092	$ (775)	(6)%

During the nine months ended September 30, 2019, our general and administrative expenses decreased by $0.8 million, or 6%, as compared to the same period in 2018. The reduction in costs was primarily the result of reduced legal and professional fees.

Investment income

Investment income remained relatively unchanged during the nine months ended September 30, 2019 as compared to the same period in 2018.

Foreign currency transaction gain (loss)

We recognized foreign currency losses of less than $0.1 million and gains of less than $0.1 million during the nine months ended September 30, 2019 and 2018, respectively, reflecting little fluctuation of the U.S. dollar to the Russian ruble from the beginning to the end of each period.

Interest expense

Interest expense was $1.2 million and $1.1 million for the nine months ended September 30, 2019 and 2018, respectively, representing interest expense and amortization of the carrying costs of our credit facilities.

Other income (expense)

Other income (expense) was de minimis for each of the nine months ended September 30, 2019 and 2018.

Net Loss

Net loss for the nine months ended September 30, 2019 was $40.5 million compared to $50.7 million for the nine months ended September 30, 2018.

LIQUIDITY AND CAPITAL RESOURCES

Since our inception, we have incurred recurring net losses. We expect that we will continue to incur losses and that such losses will increase for the foreseeable future. We expect that our research and development and general and administrative expenses will continue to increase and, as a result, we will need additional capital to fund our operations, which we may raise through a combination of equity offerings, debt financings, third-party funding and other collaborations and strategic alliances.

From our inception through September 30, 2019, we have raised an aggregate of $347.8 million to fund our operations, which includes $118.5 million from the sale of preferred stock, $11.1 million in government grant funding, $25.3 million from

borrowings under our credit facility, $44.3 million from our collaborations and license agreements, $64.5 million in combined net proceeds from our initial public offering in June 2016 and the underwriters' exercise in part of their option to purchase additional shares of our common stock in July 2016, $47.1 million in combined net proceeds from a private placement of our common stock in June 2017, $30.9 million from an underwritten follow-on offering of our common stock in January 2019, $0.4 million in net proceeds from an "at-the-market" offering of our common stock in May 2019 and $5.7 million from a private placement of our common stock in August 2019.

On August 10, 2017, we entered into an open market sale agreement with Jefferies LLC, as sales agent, or the Sales Agreement, pursuant to which we may, from time to time, issue and sell common stock with an aggregate value of up to $50.0 million in an "at-the market" offering. During the three months ended June 30, 2019, the Company sold 164,926 shares of its common stock pursuant to the Sales Agreement for aggregate net proceeds of approximately $0.4 million, after deducting commissions and other transaction costs. There were no sales made under the Sales Agreement during the three months ended September 30, 2019.

On January 25, 2019, we completed a public offering of 20,000,000 shares of our common stock at a public offering price of $1.50 per share. On January 29, 2019, an additional 2,188,706 shares were sold at a public offering price of $1.50 per share. The total net proceeds from the offering were $30.9 million, after deducting underwriting discounts and commissions.

On August 19, 2019, we sold 3,178,174 shares of its common stock pursuant to a Stock Purchase Agreement to individual investors, including certain of our executive officers and members of our board of directors for aggregate net proceeds of approximately $5.7 million, after deducting transaction costs.

As of September 30, 2019, our cash, cash equivalents, and restricted cash were $35.9 million, of which $0.4 million was held by our Russian subsidiary designated solely for use in its operations. Our Russian subsidiary cash is consolidated for financial reporting purposes.

In addition to our existing cash equivalents, we receive research and development funding pursuant to our research grants and collaboration agreements. Currently, funding from research grants and payments under our collaboration agreements represent our only source of committed external funds.

Indebtedness

On September 12, 2017, we entered into a term loan facility of up to $21.0 million with Silicon Valley Bank, a California corporation, or SVB, the proceeds of which were used to repay our previously existing term loan facility with Oxford Finance LLC and Pacific Western Bank, as successor in interest to Square 1 Bank, and for general corporate and working capital purposes. The term loan facility is governed by a loan and security agreement, dated September 12, 2017, between us and SVB, which was funded in full on September 13, 2017. The term loan facility with SVB is secured by a lien on substantially all assets, other than intellectual property, provided that such lien on assets includes any rights to payments and proceeds from the sale, licensing or disposition of intellectual property. We also granted SVB a negative pledge with respect to our intellectual property.

The term loan facility contains customary covenants and representations, including but not limited to financial reporting obligations and limitations on dividends, indebtedness, collateral, investments, distributions, transfers, mergers or acquisitions, taxes, corporate changes, deposit accounts, and subsidiaries. The term loan facility also contains other customary provisions, such as expense reimbursement, non-disclosure obligations as well as indemnification rights for the benefit of SVB.

The events of default under the term loan facility include, but are not limited to, our failure to make any payments of principal or interest under the term loan facility or other transaction documents, our breach or default in the performance of any covenant under the term loan facility or other transaction documents, the occurrence of a material adverse effect, making a false or misleading representation or warranty in any material respect under the term loan facility, our insolvency or bankruptcy, any attachment or judgment on our assets in excess of approximately $0.3 million, or the occurrence of any default under any of our agreements or obligations involving indebtedness in excess of approximately $0.3 million. If an event of default occurs, SVB is entitled to take enforcement action, including acceleration of amounts due under the term loan facility. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

Plan of operations and future funding requirements

As of the date of this Quarterly Report on Form 10-Q, we have not generated any product sales. We do not know when, or if, we will generate revenue from product sales. We will not generate significant revenue from product sales unless and until we obtain regulatory approval and commercialize one of our current or future product candidates. 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, and general overhead costs. We expect that we will continue to generate losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our product candidates, and begin to commercialize any approved products.

We are subject to risks in the development of our products, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. We expect that we will need substantial additional funding to support our continuing operations.

As of September 30, 2019 and December 31, 2018, we had an accumulated deficit of $320.9 million and $280.4 million, respectively. We anticipate operating losses to continue for the foreseeable future due to, among other things, costs related to research, development of our product candidates, conducting preclinical studies and clinical trials, and our administrative organization. We will require substantial additional financing to fund our operations and to continue to execute our strategy, and we will pursue a range of options to secure additional capital.

Management is exploring various sources of funding such as strategic collaborations and the issuance of equity to fund our operations. If we raise additional funds through strategic collaborations and alliances, which may include existing collaboration partners, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms that are not favorable to us. To the extent that we raise additional capital through the sale of equity, the ownership interest of our existing shareholders will be diluted and other preferences may be necessary that adversely affect the rights of existing shareholders. The current operating plan does not provide sufficient funding to complete the COMPARE trial, or to commence the planned Phase 3 clinical program for SEL-212. Because our current operating plan does not contain sufficient resources, we will require additional external sources of capital to complete the ongoing head-to-head Phase 2 COMPARE trial against KRYSTEXXA® and additional capital to conduct the planned Phase 3 clinical program for SEL-212. If we are unable to raise sufficient capital, we intend to curtail expenses contemplated by the current operating plan, and we may be required to delay, limit, reduce or terminate our product development efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. Under the terms of our exclusive patent license agreement with the Massachusetts Institute of Technology, or the MIT License, MIT may terminate the MIT License if we fail to meet a diligence obligation, including the initiation of a Phase 3 clinical trial by a specific date in the fourth quarter of 2019. We are currently in active discussions with MIT regarding an amendment to the MIT License to extend this obligation because we do not plan to initiate a trial before our expected meeting with the FDA in January 2020. We believe that we will come to agreement with MIT on an acceptable deferral of this obligation that would enable us to avoid a breach of the MIT License. However, if we are unable to reach an agreement with MIT regarding an acceptable amendment of the MIT License and if we are unable to cure the breach, there could be a material adverse effect on our business. Because of the uncertainty in securing additional capital and the insufficient amount of cash and short-term investments at September 30, 2019, management has concluded that substantial doubt exists with respect to our ability to continue as a going concern within one year after the date of the filing of this Quarterly Report on Form 10-Q.

Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of our clinical trials of SEL-212;
- the number of product candidates that we pursue;
- our collaboration agreements remaining in effect, our entering into additional collaboration agreements and our ability to achieve milestones under these agreements;
- the cost of manufacturing clinical supplies of our product candidates;
- our headcount growth and associated costs;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our other product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates.

Summary of Cash Flows

(In thousands)	Nine Months Ended September 30, 2019	2018
Cash provided by (used in):		
Operating activities	$ (38,559)	$ (46,413)
Investing activities	238	25,646
Financing activities	36,507	617
Effect of exchange rate changes on cash	24	(113)
Net change in cash, cash equivalents, and restricted cash	$ (1,790)	$ (20,263)

Operating activities

Net cash used in operating activities for the nine months ended September 30, 2019 was $38.6 million compared to $46.4 million in the same period in 2018, a decrease of $7.9 million. The decrease in net cash used in operating activities was primarily due to a $10.2 million decrease in recorded net loss for the nine months ended September 30, 2019, and a decrease of $6.9 million in prepaid expenses, which were offset by an increase of $8.8 million in accrued expenses.

Investing activities

Net cash provided by investing activities for the nine months ended September 30, 2019 was $0.2 million compared to net cash provided from investing activities of $25.6 million in the same period in 2018. The net cash provided by investing activities in 2019 was the result of purchases of short-term investments of $18.2 million, offset by $16.4 million of maturities and $2.0 million of sales of short term investments.

Financing activities

Net cash provided by financing activities for the nine months ended September 30, 2019 was $36.5 million compared to $0.6 million in the same period in 2018. The net cash provided by financing activities in 2019 was the result of $30.9 million in net proceeds from an underwritten follow-on offering of our common stock in January 2019 and $5.7 million net proceeds from a private placement offering in August 2019, offset by $0.7 million principal payment on outstanding debt.

Off-Balance Sheet Arrangements

As of September 30, 2019, we did not have any off-balance sheet arrangements as defined in the rules and regulations of the Securities and Exchange Commission.

Recent Accounting Pronouncements

For a discussion of recently adopted or issued accounting pronouncements please refer to Note 2 to our consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

CRITICAL ACCOUNTING POLICIES AND USE OF ESTIMATES

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities in our consolidated financial statements, as well as the reported revenues and expenses during the reporting periods. These items are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on historical experience, known trends and events, and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ materially from these estimates under different assumptions or conditions.

Clinical Trial Costs

Clinical trial expenses are a significant component of research and development expenses, and we outsource a significant portion of these costs to third parties. Third party clinical trial expenses include patient costs, clinical research organization costs and costs for data management. The accrual for site and patient costs includes inputs such as estimates of patient enrollment, patient cycles incurred, clinical site activations, and other pass-through costs. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected on the consolidated balance sheets as a prepaid asset or accrued clinical trial cost. These third party agreements are generally cancelable, and related costs are recorded as research and development expenses as incurred. Non-refundable advance clinical payments for goods or services that will be used or rendered for future R&D activities are recorded as a prepaid asset and recognized as expense as the related goods are delivered or the related services are performed. We also record accruals for

estimated ongoing clinical research and development costs. When evaluating the adequacy of the accrued liabilities, we analyze progress of the studies, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates may be made in determining the accrued balances at the end of any reporting period. Actual results could differ from the estimates made by the Company. The historical clinical accrual estimates made by the Company have not been materially different from the actual costs.

Revenue Recognition

Revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. Pursuant to ASC 606, a customer is a party that has contracted with an entity to obtain goods or services that are an output of the entity's ordinary activities in exchange for consideration. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, we perform the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract, including whether they are distinct in the context of the contract; (iii) determine the transaction price, including the constraint on variable consideration; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) we satisfy each performance obligation. We only apply the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, we assess the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct. If a promised good or service is not distinct, it is combined with other performance obligations. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. For example, certain performance obligations associated with Spark (see Note 12 to our consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q) will be satisfied over time, and revenue will be recognized using the output method, based on the proportion of actual deliveries to the total expected deliveries over the initial term.

Collaboration and Grant Revenue: We currently generate our revenue through grants, collaboration and license agreements with strategic collaborators for the development and commercialization of product candidates. Grants and license agreements with customers are accounted for in accordance with ASC 606. We analyze collaboration arrangements by first assessing whether they are within the scope of ASC Topic 808, Collaborative Arrangements (ASC 808) and evaluate whether such arrangements involve joint operating activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards that are dependent on the commercial success of such activities. Collaboration agreements with customers that are not within the scope of ASC 808 are accounted for in accordance with ASC 606. To the extent the collaboration agreement is within the scope of ASC 808, we also assess whether any aspects of the agreement are within the scope of other accounting literature (specifically ASC 606). We early adopted ASU No. 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606*, which provides guidance on evaluating certain transactions between collaborative arrangement participants. If we conclude that some or all aspects of the agreement are distinct and represent a transaction with a customer, we account for those aspects of the arrangement within the scope of ASC 606. We recognize the shared costs incurred that are not within the scope of other accounting literature as a component of the related expense in the period incurred by analogy to ASC 730 and record reimbursements from counterparties as an offset to the related costs. In determining the appropriate amount of revenue to be recognized as it fulfills our obligations under the agreements in accordance with ASC 606, we perform the five steps above. As part of the accounting for the arrangement, we must develop assumptions that require judgment to determine the stand-alone selling price for each performance obligation identified in the contract. We use key assumptions to determine the stand-alone selling price, which may include market conditions, reimbursement rates for personnel costs, development timelines and probabilities of regulatory success.

The terms of our arrangements typically include one or more of the following: (i) up-front fees; (ii) milestone payments related to the achievement of development, regulatory, or commercial goals; (iii) royalties on net sales of licensed products; (iv) reimbursements or cost-sharing of R&D expenses; and (v) profit/loss sharing arising from co-promotion arrangements.

Licenses of intellectual property: If the license to our intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, we recognize revenues from non-refundable, up-front fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. If not distinct, the license is combined with other performance obligations in the contract. For licenses that are combined with other performance obligations, we assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue. We evaluate the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. Optional licenses are evaluated to determine if they are issued at a discount, and therefore, represent material rights and accounted for as separate performance obligations.

Milestone Payments: At the inception of each arrangement that includes developmental and regulatory milestone payments, we evaluate whether the achievement of each milestone specifically relates to our efforts to satisfy a performance obligation or

transfer a distinct good or service within a performance obligation. If the achievement of a milestone is considered a direct result of our efforts to satisfy a performance obligation or transfer a distinct good or service and the receipt of the payment is based upon the achievement of the milestone, the associated milestone value is allocated to that distinct good or service. If the milestone payment is not specifically related to our effort to satisfy a performance obligation or transfer a distinct good or service, the amount is allocated to all performance obligations using the relative standalone selling price method. We also evaluate the milestones to determine whether they are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price to be allocated, otherwise, such amounts are constrained and excluded from the transaction price. At the end of each subsequent reporting period, we re-evaluate the probability of achievement of such development milestones and any related constraint, and if necessary, adjusts our estimate of the transaction price. Any such adjustments to the transaction price are allocated to the performance obligations on the same basis as at contract inception. Amounts allocated to a satisfied performance obligation shall be recognized as revenue, or as a reduction of revenue, in the period in which the transaction price changes.

Manufacturing Supply Services: Arrangements that include a promise for future supply of drug substance or drug product for either clinical development or commercial supply at the customer's discretion are evaluated to determine if they are distinct and optional. For optional services that are distinct, we assess if they are priced at a discount, and therefore, provide a material right to the licensee to be accounted for as separate performance obligations.

Royalties: For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, we will recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied) in accordance with the royalty recognition constraint.

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012, or the JOBS Act, permits an ''emerging growth company'' such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Smaller Reporting Company

We qualify as a "smaller reporting company" under the rules of the Securities Act and the Exchange Act. As a result, in addition to the exemptions available to us as an "emerging growth company," we may choose to take advantage of certain scaled disclosure requirements available specifically to smaller reporting companies. Additionally, even if we cease to be an emerging growth company as noted above, as long as we continue to be a smaller reporting company, we may continue to rely on the reduced executive compensation disclosure obligations available to emerging growth companies. We will remain a smaller reporting company until the last day of the fiscal year in which the aggregate market value of our common stock held by non-affiliated persons and entities, or our public float, was less than $250 million as of the last business day of our most recently completed second fiscal quarter, or the last day of the fiscal year in which we have at least $100 million in revenue and at least $700 million in public float as of the last business day of our most recently completed second fiscal quarter.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates. As of September 30, 2019 and December 31, 2018, we had cash, cash equivalents and restricted cash of $35.9 million and $37.7 million, respectively, consisting of non-interest and interest-bearing money market accounts. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. Due to the short-term and the low risk profile of our money market accounts and investments, and our current plan to hold investments to maturity, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our cash equivalents or short-term investments.

In addition, we are subject to currency risk for balances held in Russian rubles in our foreign subsidiary. We hold portions of our funds in both U.S. dollars and Russian rubles. The exchange rate between the U.S. dollar and Russian ruble changes from period to period. At September 30, 2019, we held cash and cash equivalents totaling $0.4 million in Russian banks to support our Russian subsidiary, all of which were denominated in U.S. dollars. We do not hedge against foreign currency risks. We do not believe that inflation and changing prices had a significant impact on our results of operations for any periods presented herein.

Item 4. Controls and Procedures

Limitations on effectiveness of controls and procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of disclosure controls and procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of September 30, 2019.

Changes in internal control over financial reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended September 30, 2019 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

We are not party to any material legal proceedings.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should consider carefully the risks described below, together with the other information included or incorporated by reference in this Quarterly Report on Form 10-Q. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects could be materially and adversely affected. In these circumstances, the market price of our common stock could decline. Other events that we do not currently anticipate or that we currently deem immaterial may also affect our business, prospects, financial condition and results of operations.

RISKS RELATED TO OUR FINANCIAL POSITION AND NEED FOR ADDITIONAL CAPITAL

We are a development-stage company and have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses in every year. Our net loss was $40.5 million for the nine months ended September 30, 2019 and $65.3 million for each of the years ended December 31, 2018 and 2017, respectively. As of September 30, 2019, we had an accumulated deficit of $320.9 million. To date, we have financed our operations primarily through the public offering and private placements of our securities, funding received from research grants and collaboration arrangements and our credit facility. We currently have no source of product revenue, and we do not expect to generate product revenue for the foreseeable future. All of our revenue to date has been collaboration and grant revenue. We have devoted substantially all of our financial resources and efforts to developing our ImmTOR technology, identifying potential product candidates and conducting preclinical studies and our clinical trials. We are in the early stages of development of our product candidates, and we have not completed development of any ImmTOR-enabled therapies. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We expect that our expenses will increase substantially as we:

- conduct additional clinical trials of SEL-212, our lead product candidate;
- continue the research and development of our other product candidates;
- seek to enhance our ImmTOR technology and discover and develop additional product candidates;
- seek to maintain and enter into collaboration, licensing and other agreements, including, but not limited to research and development, and/or commercialization agreements;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- potentially establish a sales, marketing and distribution infrastructure and scale up external manufacturing capabilities to commercialize any products for which we may obtain regulatory approval;
- maintain, expand and protect our intellectual property portfolio, including through licensing arrangements;
- add clinical, scientific, operational, financial and management information systems and personnel, including personnel to support our product development and potential future commercialization efforts and to support our operations as a public company; and
- experience any delays or encounter any issues with any of the above, including, but not limited to, failed studies, complex results, safety issues or other regulatory, manufacturing or scale-up challenges.

To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, discovering additional product candidates, obtaining regulatory approval and securing reimbursement for these product candidates, manufacturing, marketing and selling any products for which we may obtain regulatory approval, and establishing and managing our collaborations at various stages of a product candidate's development. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with pharmaceutical and biological product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability.

If we are required by the FDA or other regulatory authorities to perform studies in addition to those currently expected, or if there are any delays in completing our clinical trials or the development of any of our product candidates, our expenses could increase and revenue could be further delayed.

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress our value and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product offerings or continue our operations.

We will need substantial additional funding in order to complete development of our product candidates and commercialize our products, if approved. If we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts.

We expect our expenses to increase in connection with our ongoing activities, particularly as we conduct our clinical trials of SEL-212, continue to develop our gene therapy program, including our collaboration with AskBio, and continue research and development for our other product candidates. In addition, if we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. Accordingly, we will need to obtain substantial additional funding to continue operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our clinical trials, our other research and development programs or any future commercialization efforts.

We believe that our existing cash, cash equivalents, investments, and restricted cash as of September 30, 2019 will enable us to fund our operating expenses and capital expenditure requirements through the first quarter of 2020. The current operating plan does not provide sufficient funding to complete the COMPARE trial, or to commence the planned Phase 3 clinical program for SEL-212. Because our current operating plan does not contain sufficient resources, we will require additional external sources of capital to complete the ongoing head-to-head Phase 2 COMPARE trial against KRYSTEXXA® and additional capital to conduct the planned Phase 3 clinical program for SEL-212. Under the terms of our exclusive patent license agreement with the Massachusetts Institute of Technology, or the MIT License, MIT may terminate the MIT License if we fail to meet a diligence obligation, including the initiation of a Phase 3 clinical trial by a specific date in the fourth quarter of 2019. We are currently in active discussions with MIT regarding an amendment to the MIT License to extend this obligation because we do not plan to initiate a trial before our expected meeting with the FDA in January 2020. We believe that we will come to agreement with MIT on an acceptable deferral of this obligation that would enable us to avoid a breach of the MIT License. However, if we are unable to reach an agreement with MIT regarding an acceptable amendment of the MIT License and if we are unable to cure the breach, there could be a material adverse effect on our business. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Because of the uncertainty in securing additional capital, we have concluded that substantial doubt exists with respect to our ability to continue as a going concern within one year after the date of the filing of this Quarterly Report on Form 10-Q.

Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of our clinical trials of SEL-212;
- the number of product candidates that we pursue;
- our collaboration agreements remaining in effect, our entering into additional collaboration agreements and our ability to achieve milestones under these agreements;
- the cost of manufacturing clinical supplies of our product candidates;
- our headcount growth and associated costs;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our other product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders, and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline. The sale of additional equity or convertible securities would dilute all of our stockholders. The incurrence of indebtedness could result in increased fixed payment obligations and we may be required to agree to certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable and we may be required to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects.

If we are unable to obtain funding on a timely basis, we may be required to significantly curtail, delay or discontinue one or more of our research or development programs, including our clinical trial programs, or the commercialization of any product candidates, or be unable to sustain or expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially affect our business, financial condition and results of operations.

Our recurring losses from operations and negative cash flows from operations raise substantial doubt regarding our ability to continue as a going concern.

As of September 30, 2019 and December 31, 2018, we had an accumulated deficit of $320.9 million and $280.4 million, respectively. We anticipate operating losses to continue for the foreseeable future due to, among other things, costs related to research, development of our product candidates, conducting preclinical studies and clinical trials, and our administrative organization. We will require substantial additional financing to fund our operations and to continue to execute our strategy, and we will pursue a range of options to secure additional capital. These conditions raise substantial doubt about our ability to continue as a going concern within one year after the date of filing this Quarterly Report on Form 10-Q.

We are exploring various sources of funding such as strategic collaborations and the issuance of equity to fund our operations. If we raise additional funds through strategic collaborations and alliances, which may include existing collaboration partners, we may have to relinquish valuable rights to our technologies or product candidates, or, grant licenses on terms that are not favorable to us. To the extent that we raise additional capital through the sale of equity, the ownership interest of our existing shareholders will be diluted and other preferences may be necessary that adversely affect the rights of existing shareholders. The current operating plan does not provide sufficient funding to complete the COMPARE trial, or to commence the planned Phase 3 clinical program for SEL-212. Because our current operating plan does not contain sufficient resources, we will require additional external sources of capital to complete the ongoing head-to-head Phase 2 COMPARE trial against KRYSTEXXA® and additional capital to conduct the planned Phase 3 clinical program for SEL-212. If we are unable to raise sufficient capital, we intend to curtail expenses contemplated by the current operating plan, and we may be required to delay, limit, reduce or terminate our product development efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. If the foregoing plans are unsuccessful and we are unable to continue as a going concern, you could lose all or part of your investment in the company.

Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We commenced active operations in 2007, and our operations to date have been limited to developing and researching our SVP technology and related products and programs, building our intellectual property portfolio, developing our supply chain, planning our business, raising capital and providing general and administrative support for these operations. Other than SEL-212, our lead product candidate, our other product candidates are still in preclinical development. While we have completed our early development clinical trials and a Phase 2 clinical trial for SEL-212, we have not completed a clinical trial for any other product candidate, nor have we demonstrated our ability to successfully complete any Phase 3 or other pivotal clinical trials, obtain regulatory approvals, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Additionally, we expect our financial condition and operating results to continue to fluctuate significantly from quarter-to-quarter and year-to-year due to a variety of factors, many of which are beyond our control. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

The terms of our credit facility place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

On September 12, 2017, we entered into a term loan facility of up to $21.0 million with Silicon Valley Bank, or SVB. The term loan facility is governed by a loan and security agreement, dated September 12, 2017, between us and SVB, which was funded in full on September 13, 2017. The term loan facility with SVB is secured by a lien on substantially all of our assets, other than

intellectual property, provided that such lien on substantially all assets includes any rights to payments and proceeds from the sale, licensing or disposition of intellectual property. We also granted SVB a negative pledge with respect to our intellectual property.

The term loan facility contains customary covenants and representations, including but not limited to financial reporting obligations and limitations on dividends, indebtedness, collateral, investments, distributions, transfers, mergers or acquisitions, taxes, corporate changes, deposit accounts, and subsidiaries. The term loan facility also contains other customary provisions, such as expense reimbursement, non-disclosure obligations as well as indemnification rights for the benefit of SVB. The events of default under the term loan facility include, but are not limited to, our failure to make any payments of principal or interest under the term loan facility or other transaction documents, our breach or default in the performance of any covenant under the term loan facility or other transaction documents, the occurrence of a material adverse effect, making a false or misleading representation or warranty in any material respect under the term loan facility, our insolvency or bankruptcy, any attachment or judgment on our assets of at least approximately $0.3 million, or the occurrence of any default under any of our agreements or obligations involving indebtedness in excess of approximately $0.3 million. If an event of default occurs, SVB is entitled to take enforcement action, including acceleration of amounts due under the term loan facility. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

Our ability to use our net operating loss and research and development tax credit carryforwards to offset future taxable income may be subject to certain limitations.

We have net operating loss carryforwards, or NOLs, for federal and state income tax purposes that may be available to offset our future taxable income, if any. In general, under Sections 382 and 383 of the U.S. Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to use its pre-change NOLs to offset future taxable income. If the U.S. Internal Revenue Service, or IRS, challenges our analysis that existing NOLs will not expire before utilization due to previous ownership changes, or if we undergo an ownership change in connection with or after a public offering, our ability to use our NOLs could be limited by Section 382 of the Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Sections 382 and 383 of the Code. Furthermore, our ability to use NOLs of companies that we may acquire in the future may be subject to limitations. As a result, we may not be able to use a material portion of the NOLs reflected on our balance sheet, even if we attain profitability. The reduction of the corporate tax rate under the Tax Cuts and Jobs Act of 2017, or the TCJA, may cause a reduction in the economic benefit of our NOLs and other deferred tax assets available to us. Under the TCJA, net operating losses generated after December 31, 2017 will not be subject to expiration but may only be used to offset up to 80% of our taxable income.

RISKS RELATED TO THE DISCOVERY, DEVELOPMENT AND REGULATORY APPROVAL OF OUR PRODUCT CANDIDATES

Our product candidates are based on our ImmTOR technology, which is an unproven approach designed to induce antigen-specific immune tolerance to biologic drugs. We are very early in our clinical development efforts and may not be successful in our efforts to use our ImmTOR technology to build a pipeline of product candidates and develop marketable drugs.

All of our product candidates are derived from our ImmTOR technology, which is an unproven approach to induce antigen-specific immune tolerance and to mitigate the immunogenicity of biologic therapies currently being implemented to treat patients. We are primarily developing our ImmTOR technology to improve and enable activity in biologics that are designed to treat rare and serious diseases, with an initial focus on developing SEL-212 for the treatment of chronic refractory gout. We are also leveraging our ImmTOR platform to pursue programs in additional therapeutic areas with a focus on gene therapy.

We are developing two gene therapy product candidates for rare inborn errors of metabolism. Our lead gene therapy program, known as SEL-302, is a potential gene therapy product candidate for MMA. In August 2019, we entered into a feasibility study and license agreement with AskBio, pursuant to which we and AskBio agreed to conduct proof of concept studies to potentially validate the use of our ImmTOR technology in conjunction with an AAV gene therapy for the treatment of MMA, based on SEL-302, to mitigate the formation of neutralizing anti-AAV capsid antibodies. If the proof of concept studies are successful, we will proceed with a collaboration to pursue the development and commercialization of AAV gene therapy product candidates utilizing ImmTOR for the treatment of certain agreed serious rare and orphan genetic diseases. Our second gene therapy product candidate, known as SEL-313, is being developed to treat ornithine transcarbamylase deficiency. In September 2018, we announced a collaboration with CureCN, a European consortium, for the use of our ImmTOR technology in combination with an AAV gene therapy in Crigler-Najjar syndrome, a rare genetic disorder characterized by an inability to properly convert and clear bilirubin from the body. We expect the CureCN consortium to obtain scientific advice from the German drug regulatory authority in the fourth quarter of 2019.

We are at an early stage of development and our technology has not yet led to, and may never lead to, approvable or marketable drugs. We may have problems identifying new product candidates and applying our technologies to these other areas. Even if we are successful in identifying new product candidates, they may not be suitable for clinical development, including as a result of 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. The success of our product candidates will depend on several factors, including the following:

- design, initiation and completion of preclinical studies and clinical trials with positive results;
- reliance on third parties (including but not limited to collaborators, licensees, clinical research organizations and contract manufacturing organizations);
- receipt of marketing approvals from applicable regulatory authorities;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- making arrangements with third-party manufacturers for, or establishing, commercial manufacturing capabilities, or establishing such capabilities ourselves;
- launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- our existing collaboration agreements remaining in effect and our ability to enter into new collaborations throughout the development process as appropriate, from preclinical studies through to commercialization;
- acceptance of our products, if and when approved, by patients and the medical community;
- effectively competing with other therapies;
- obtaining and maintaining coverage and adequate reimbursement by third-party payors, including government payors, for our products, if approved;
- protecting our rights in our intellectual property portfolio;
- operating without infringing or violating the valid and enforceable patents or other intellectual property of third parties;
- maintaining an acceptable safety profile of our products following approval; and
- maintaining and growing an organization of scientists and business people who can develop and commercialize our product candidates and technology.

If we do not successfully develop and commercialize product candidates based upon our technological approach, we will not be able to obtain future revenues, which would result in significant harm to our financial position and adversely affect our stock price.

As a result, we cannot be certain that our approach, or our development of SEL-212, will lead to the development or approval of marketable products. In addition:

- due to the unproven nature of our ImmTOR therapeutics, there may be different efficacy and safety rates in various indications;
- the FDA or other regulatory agencies may lack experience in evaluating the efficacy and safety of products based on ImmTOR or a biologic sourced from China or other jurisdictions, which could result in a longer-than-expected regulatory review process, increase our expected development costs or delay or prevent commercialization of our product candidates; and
- in the event of a biologics license application, or BLA, for SEL-212 or another product and a pre-approval inspection by the FDA of the facilities of Shenyang Sunshine Pharmaceutical Co., Ltd., or 3SBio, or any other third party manufacturers we may use, the FDA may not approve the facility for production or may make observations that will take significant time for 3SBio or such other manufacturer to address.

The occurrence of any of the foregoing, would effectively prevent or delay approval of our lead and other product candidates.

We are applying our ImmTOR technology to antigen-specific immune tolerance for gene therapy involving gene augmentation, replacement or editing. Regulatory authorities in the United States and European Union have limited experience in reviewing and approving gene therapy products, which could affect the time and data required to obtain marketing authorization of any of our product candidates.

Our future success depends in part on our successful development of viable gene therapy product candidates utilizing ImmTOR technology. We may experience problems or delays in developing such product candidates and any such problems or delays (i)

may result in unanticipated costs and time to develop our product candidates and/or (ii) may not be resolved in a satisfactory manner.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive and may take many years. If additional clinical trials are required for certain jurisdictions, these trials can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved, and may ultimately be unsuccessful. Changes in marketing approval policies during the development period, changes in or the enactment or promulgation of additional statutes or regulations, respectively, or changes in the regulatory review process for each submitted product application, may cause delays in the review and approval of an application.

The regulatory approval process and clinical trial requirements for novel product candidates can be more expensive and take longer than for other, better known or more extensively studied product candidates, and we cannot predict how long it will take or how much it will cost to complete clinical developments and obtain regulatory approvals for a gene therapy product candidate in either the United States or the European Union or how long it will take to commercialize a gene therapy product candidate, if and when approved. Regulatory requirements governing gene therapy products have changed frequently and may continue to change in the future. For example, the FDA established the Office of Tissues and Advanced Therapies within its Center for Biologics Evaluation and Research, or CBER, to consolidate the review of gene therapy and related products, and the Cellular, Tissue and Gene Therapies Advisory Committee to advise CBER on its review. These and other regulatory review agencies, committees and advisory groups and the requirements and guidelines they promulgate may lengthen the regulatory review process, require us to perform additional preclinical studies or clinical trials, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of these treatment candidates or lead to significant post-approval limitations or restrictions.

Additionally, under the National Institutes of Health, or NIH, Guidelines for Research Involving Recombinant DNA Molecules, or the NIH Guidelines, supervision of human gene transfer trials includes evaluation and assessment by an institutional biosafety committee, or IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them.

A similar framework is in place in the European Union, or the EU. The European Medicines Agency, or the EMA, has a Committee for Advanced Therapies, or CAT, that is responsible for assessing the quality, safety and efficacy of advanced-therapy medicinal products. Advanced-therapy medical products include gene therapy medicine, somatic-cell therapy medicines and tissue-engineered medicines. The role of the CAT is to prepare a draft opinion on an application for marketing authorization for a gene therapy medicinal candidate that is submitted to the EMA. In the EU, the development and evaluation of a gene therapy medicinal product must be considered in the context of the relevant EU guidelines. The EMA may issue new guidelines concerning the development and marketing authorization for gene therapy medicinal products and require that we comply with these new guidelines. Similarly, complex regulatory environments exist in other jurisdictions in which we might consider seeking regulatory approvals for our product candidates, further complicating the regulatory landscape. As a result, the procedures and standards applied to gene therapy products and cell therapy products may be applied to any of our gene therapy or genome editing product candidates, but that remains uncertain at this point.

The clinical trial requirements of the FDA, the EMA and other regulatory authorities and the criteria these regulators use to evaluate the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty and intended use and market of the potential products. The regulatory approval process for product candidates created with novel genome editing technology such as ours can be more lengthy, rigorous and expensive than the process for other better known or more extensively studied product candidates and technologies. Since we are developing novel treatments for diseases in which there is little clinical experience with new endpoints and methodologies, there is heightened risk that the FDA, the EMA or comparable regulatory bodies may not consider the clinical trial endpoints to provide clinically meaningful results, and the resulting clinical data and results may be more difficult to analyze. This may be a particularly significant risk for many of the genetically defined diseases for which we may develop product candidates alone or with collaborators due to small patient populations for those diseases, and designing and executing a rigorous clinical trial with appropriate statistical power is more difficult than with diseases that have larger patient populations. Regulatory agencies administering existing or future regulations or legislation may not allow production and marketing of products utilizing genome editing technology in a timely manner or under technically or commercially feasible conditions. Even if our product candidates obtain required regulatory approvals, such approvals may later be withdrawn as a result of changes in regulations or the interpretation of regulations by applicable regulatory agencies.

Changes in applicable regulatory guidelines may lengthen the regulatory review process for our product candidates, require additional studies or trials, increase development costs, lead to changes in regulatory positions and interpretations, delay or

prevent approval and commercialization of such product candidates, or lead to significant post-approval limitations or restrictions. Additionally, adverse developments in clinical trials conducted by others of gene therapy products or products created using genome editing technology, or adverse public perception of the field of genome editing, may cause the FDA, the EMA and other regulatory bodies to revise the requirements for approval of any product candidates we may develop or limit the use of products utilizing genome editing technologies, either of which could materially harm our business. Furthermore, regulatory action or private litigation could result in expenses, delays or other impediments to our research programs or the development or commercialization of current or future product candidates.

As we advance any gene therapy product candidates, we will be required to consult with various regulatory authorities, and we must comply with applicable laws, rules, and regulations, which may change from time to time including during the course of development of our product candidates. If we fail to do so, we may be required to delay or discontinue the clinical development of certain of our product candidates. These additional processes may result in a review and approval process that is longer than we otherwise would have expected. Even if we comply with applicable laws, rules, and regulations, and even if we maintain close coordination with the applicable regulatory authorities with oversight over our product candidates, our development programs may fail to succeed. Regulatory authorities have substantial discretion in the approval process and may refuse to accept a marketing application as deficient or may decide that our data is insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a product candidate. Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a potential product to market would materially and adversely affect our business, financial condition, results of operations and prospects.

Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Our lead product candidate, SEL-212, was evaluated in a Phase 2 clinical program that was initiated in October 2016 and the final patient's last visit occurred in January 2019. In March 2019, we initiated COMPARE, a Phase 2 clinical trial designed to directly compare the safety, efficacy and tolerability of SEL-212 to the currently FDA-approved uricase therapy, KRYSTEXXA, for the treatment of patients with refractory gout. We are preparing for the start of a pivotal Phase 3 program for SEL-212.

In May 2017 we licensed LMB-100, a potent immunotoxin, from the National Cancer Institute (NCI) and a Phase 1 clinical trial of LMB-100 plus ImmTOR (SEL-403) initiated in March 2018 by NCI in patients with malignant pleural or peritoneal mesothelioma who had undergone at least one regimen of chemotherapy under a Cooperative Research and Development Agreement (CRADA) between the NCI and the Company. In October 2018, the NCI informed the Company of a Grade 5 Serious Adverse Event (patient death) in this clinical trial related to pneumonitis, which was deemed by the trial investigator to be probably related to SVP-Rapamycin and possibly related to the patient’s pleural mesothelioma condition. This patient had received previous therapies, including two courses of radiation therapy and three different immune check point inhibitors, which have been reported to be associated with pneumonitis. However, the possible relationship to SVP-Rapamycin could not be excluded. Pneumonitis has been reported in patients receiving daily oral rapamycin. In addition, a Serious Adverse Event (pericardial effusion) was seen in one of the other three patients dosed in the SEL-403 clinical trial. Pericardial effusion can also be a side effect of immunotoxin therapies targeting mesothelin. The FDA placed the IND for SEL-403 on full clinical hold in response to adverse events observed during the Phase 1 trial. Selecta has terminated the license of LMB-100 from NCI, effective April 9, 2019 and is no longer pursuing this product candidate.

Aside from these programs, our other product candidates are in preclinical development. It is impossible to predict when or if any of our product candidates will prove effective and safe in humans or will receive regulatory approval, and the risk of failure through the development process is high. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Preclinical development is costly and inherently uncertain. For example, we have invested significant resources in our preclinical gene therapy program, which has demonstrated the potential for treatment of rare inborn errors of metabolism. Early preclinical results may not be predictive of future results, however, if our technology proves to be ineffective or unsafe as a result of, among other things, adverse side effects, pre-existing anti-drug antibodies that can neutralize the viral vector and block gene transfer, or cellular immune response to the transduced cells, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the clinical development and commercialization of our product candidates.

Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must conduct extensive clinical trials to demonstrate the safety and efficacy of the product candidate for its intended indications. Clinical testing is expensive, difficult to design and implement, can take many years to complete and its outcome is inherently uncertain. A failed clinical trial can occur at any stage of testing. Moreover, the outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict

final results. For example, the clinical trial results from our Phase 2 head-to-head study of SEL-212, including interim results, may not be predictive of future results. Moreover, we may not be able to complete, or may be required to deviate from the current clinical trial protocol for a variety of reasons.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical trials after achieving positive results in preclinical development or early-stage clinical trials, and we cannot be certain that we will not face similar setbacks. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway or safety or efficacy observations made in clinical trials, including adverse events. SAEs caused by, or other unexpected properties of, any product candidates that we may choose to develop could cause us, an institutional review board or regulatory authority to interrupt, delay or halt clinical trials of one or more of such product candidates and could result in a more restrictive label or the delay or denial of marketing approval by the FDA or comparable non-U.S. regulatory authorities. If any product candidate that we may choose to develop is associated with SAEs or other unexpected properties, we may need to abandon development or limit development of that product candidate to certain uses or subpopulations in which those undesirable characteristics would be expected to be less prevalent, less severe or more tolerable from a risk-benefit perspective. For example, in the SEL-403 Phase 1 clinical trial, a Grade 5 SAE (patient death) occurred that was deemed by the trial investigator to be probably related to SVP-Rapamycin and possibly related to the patient's pleural mesothelioma condition which led the Company to abandon development of SEL-403. In the SEL-212 Phase 1/2 clinical program, multiple SAEs have occurred, and future SAEs may occur causing the Company to incur additional costs or experience delays in completing, or causing the Company to ultimately be unable to complete, the development and commercialization of our product candidates, and delay or prevent our ability to obtain FDA approval. Moreover, preclinical and clinical data is often susceptible to varying interpretations and analyses, and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA or other regulatory authority approval. If we fail to produce positive results in clinical trials of our product candidates, the development timeline and regulatory approval and commercialization prospects for our product candidates, and, correspondingly, our business and financial prospects, would be negatively impacted.

In addition, we cannot be certain as to what type and how many clinical trials the FDA will require us to conduct before we may gain regulatory approval to market SEL-212 or any of our other product candidates in the United States or other countries, if any. Prior to approving a new therapeutic product, the FDA generally requires that safety and efficacy be demonstrated in two adequate and well-controlled clinical trials. We expect that we may need to conduct more than one Phase 3 trial for SEL-212 for a chronic refractory gout indication in order to gain approval from the FDA. Even if we conduct more than one Phase 3 trial for SEL-212, the FDA may not accept the data, and may delay, limit or deny approval of SEL-212. Additional clinical trials could cause us to incur significant development costs, delay or prevent the commercialization of SEL-212 or otherwise adversely affect our business.

We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval for, or commercialize, our product candidates, including:

- clinical trials of our product candidates may produce unfavorable, incomplete or inconclusive results;

- regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;

- we may experience delays in reaching, or fail to reach, agreement on acceptable terms with contract research organizations, or CROs, or clinical trial sites;

- we may be unable to recruit suitable patients to participate in a clinical trial, the number of patients required for clinical trials of our product candidates may be larger than we expect, enrollment in these clinical trials may be slower than we expect or participants may drop out of these clinical trials at a higher rate than we expect;

- the number of clinical trial sites required for clinical trials of our product candidates may be larger than we expect;

- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;

- we may have to suspend or terminate clinical trials of our product candidates for various reasons, including a finding that the participants are being exposed to unacceptable health risks;

- investigators, regulators, data safety monitoring boards or institutional review boards may require that we or our investigators suspend or terminate clinical research, or we may decide to do so ourselves;

- investigators may deviate from the trial protocol, fail to conduct the trial in accordance with regulatory requirements or misreport study data;

- the cost of clinical trials of our product candidates may be greater than we expect or we may have insufficient resources to pursue or complete certain aspects of our clinical trial programs or to do so within the timeframe we planned;

- the supply or quality of raw materials or manufactured product candidates (whether provided by us or third parties) or other materials necessary to conduct clinical trials of our product candidates may be insufficient, inadequate or not available at an acceptable cost, or in a timely manner, or we may experience interruptions in supply;

- regulators may revise the requirements for approving our product candidates, or such requirements may not be as we expect;

- the FDA or comparable foreign regulatory authorities may disagree with our clinical trial design or our interpretation of data from preclinical studies and clinical trials, or may change the requirements for approval even after it has reviewed and commented on the design of our clinical trials; and

- regarding trials managed by our existing or any future collaborators, our collaborators may face any of the above issues, and may conduct clinical trials in ways they view as advantageous to them but potentially suboptimal for us.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, or if we are forced to delay or abandon certain clinical trials or other testing in order to conserve capital resources, we may:

- be delayed in obtaining marketing approval for our product candidates, if at all;

- lose the support of collaborators, requiring us to bear more of the burden of research and development;

- not obtain marketing approval at all;

- obtain marketing approval in some countries and not in others;

- obtain approval for indications or patient populations that are not as broad as intended or desired;

- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;

- be subject to additional post-marketing testing requirements; or

- have a product removed from the market after obtaining marketing approval.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by a Data Safety Monitoring Board for such trial or by the FDA or comparable foreign regulatory authorities. Such authorities may impose such a suspension or termination 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 trial site by the FDA or comparable foreign 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 drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. In addition, changes in regulatory requirements and policies may occur, and we may need to amend clinical trial protocols to comply with these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical trial.

Our product development costs will increase if we experience delays in clinical testing or in obtaining marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, potentially impairing our ability to successfully commercialize our product candidates and harming our business and results of operations.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. In addition, from time to time our competitors have ongoing clinical trials for product candidates that treat the same indications as our product candidates, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' product candidates.

We are initially developing our lead product candidate, SEL-212, for the treatment of chronic refractory gout, which affects approximately 160,000 patients in the United States. Accordingly, there is a limited number of patients who could enroll in our clinical studies.

In addition to the size of the patient population, patient enrollment is also affected by other factors including:

- the severity of the disease under investigation;
- the patient eligibility criteria for the study in question;
- the perceived risks and benefits of the product candidate under study;
- the availability of other treatments for the disease under investigation;
- the existence of competing clinical trials;
- our efforts to facilitate timely enrollment in clinical trials;
- investigators engagement with, or enthusiasm about, the trial;
- our payments for participating in clinical trials;
- the patient referral practices of physicians;
- the design of the trial;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

In addition, our clinical trials will compete with other 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 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 at such clinical trial site. Our inability to enroll a sufficient number of patients for our clinical trials would result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates, which could cause the value of our common stock to decline and limit our ability to obtain additional financing.

We may conduct clinical trials for product candidates at sites outside the United States, and the FDA may not accept data from trials conducted in such locations or the complexity of regulatory burdens may otherwise adversely impact us.

Opening trial sites outside the United States may involve additional regulatory, administrative and financial burdens, including compliance with foreign and local requirements relating to regulatory submission and clinical trial practices. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of these data is subject to certain conditions imposed by the FDA. For example, the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with good clinical practices, or GCPs, including review and approval by an independent ethics committee and informed consent from trial patients. The trial data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. Generally, the patient population for any clinical trials conducted outside the United States must be representative of the population for which we intend to seek approval in the United States. In addition, while these clinical trials are subject to the applicable local laws, FDA acceptance of the data will be dependent upon its determination that the trials also complied with all applicable U.S. laws and regulations. Nonetheless, there can be no assurance that the FDA will accept data from trials conducted outside the United States. If the FDA does not accept the data from any trial that we conduct outside the United States, it would likely result in the need for additional clinical trials, which would be costly and time-consuming and delay or permanently halt our development of any applicable product candidates.

In addition, the conduct of clinical trials outside the United States could have a significant impact on us. Risks inherent in conducting international clinical trials include:

- foreign regulatory requirements that could burden or limit our ability to conduct our clinical trials;
- increased costs and heightened supply constraints associated with the acquisition of standard of care drugs and/or combination or comparator agents for which we may bear responsibility in certain jurisdictions;
- administrative burdens of conducting clinical trials under multiple foreign regulatory schema;
- foreign exchange fluctuations;
- more burdensome manufacturing, customs, shipment and storage requirements;
- cultural differences in medical practice and clinical research;
- lack of consistency in standard of care from country to country;

- diminished protection of intellectual property in some countries; and

- changes in country or regional regulatory requirements.

We may not be able to obtain orphan drug designation for our product candidates, and even if we do, we may be unable to maintain the benefits associated with orphan drug designation, including the potential for market exclusivity.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. We expect to seek orphan drug designation for several of our product candidates. Under the Orphan Drug Act of 1983, the FDA may designate a product as an orphan product if it is intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals in the United States, or a patient population of greater than 200,000 individuals in the United States, but for which there is no reasonable expectation that the cost of developing the drug or biologic will be recovered from sales in the United States.

In the United States, orphan designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. In addition, if a product candidate that has orphan designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications, including a full BLA or full new drug application, or NDA, to market the same biologic or drug for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or where the manufacturer is unable to assure sufficient product quantity.

The applicable exclusivity period is ten years in the European Union, but such exclusivity period can be reduced to six years if a product no longer meets the criteria for orphan designation or if the product is sufficiently profitable so that market exclusivity is no longer justified.

Even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs can be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the later drug is clinically superior if it is shown to be safer, more effective or makes a major contribution to patient care. Orphan drug designation neither shortens the development time or regulatory review time of a drug or biologic nor gives the drug or biologic any advantage in the regulatory review or approval process.

Interim, top-line and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim, top-line or preliminary data from our clinical studies, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a full analyses of all data related to the particular trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the top-line results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Preliminary or “top-line” data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, preliminary and top-line data should be viewed with caution until the final data are available. We may also disclose interim data from our clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure. Any information we determine not to disclose may ultimately be deemed significant by you or others with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. If the interim, top-line, or preliminary data that we report differ from final results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, product candidates may be harmed, which could seriously harm our business.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that SEL-212 or any other product candidates we may seek to develop in the future will ever obtain regulatory approval. Neither we nor any future collaborator is permitted to market any of our product candidates in the United States until we receive regulatory approval of a Biologics License Application, or BLA, from the FDA.

Prior to obtaining approval to commercialize a product candidate in the United States or abroad, we or our collaborators must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or foreign regulatory agencies, that such product candidates are safe and effective, or in the case of biologics, safe, pure, and potent, for their intended uses. Results from nonclinical studies and clinical trials can be interpreted in different ways. Even if we believe the nonclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. The FDA may also require us to conduct additional preclinical studies or clinical trials for our product candidates either prior to or post-approval, or it may object to elements of our clinical development program.

The FDA or any foreign regulatory bodies can delay, limit or deny approval of our drug or device product candidates or require us to conduct additional nonclinical or clinical testing or abandon a program for, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- serious and unexpected drug-related side effects experienced by participants in our clinical trials or by individuals using drugs similar to our product candidates;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- 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 acceptable or sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere, and we may be required to conduct additional clinical studies;
- the FDA's or the applicable foreign regulatory agency may disagree regarding the formulation, labeling and/or the specifications of our product candidates;
- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes 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.

Of the large number of drugs in development, only a small percentage successfully complete the FDA or foreign regulatory approval processes and are commercialized. The lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market our product candidates, which would significantly harm our business, results of operations and prospects.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, including Phase 4 clinical trials, and/or the implementation of a Risk Evaluation and Mitigation Strategy, or REMS, which may be required to assure safe use of the drug after approval. The FDA or the applicable foreign regulatory agency also may approve a product candidate for a more limited indication or patient population than we originally requested, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Any breakthrough therapy designation that we may receive from the FDA for our product candidates may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

We may in the future seek breakthrough therapy designation for some of our product candidates. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. For drugs that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Drugs designated as breakthrough therapies by the FDA are also eligible for accelerated approval.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. The availability of breakthrough therapy designation was established with the passage of the Food and Drug Administration Safety and Innovation Act of 2012. We cannot be sure that any evaluation we may make of our product candidates as qualifying for breakthrough therapy designation will meet the FDA's expectations. In any event, the receipt of a breakthrough therapy designation for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that such product candidates no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Negative public opinion and increased regulatory scrutiny of gene therapy and genetic research may damage public perception of our product candidates or compromise our ability to conduct our business or obtain regulatory approvals for our product candidates.

Gene therapy remains a novel technology. Public perception may be influenced by claims that gene therapy is unsafe, and gene therapy may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians specializing in the treatment of those diseases that our product candidates target and prescribing treatments that involve the use of our product candidates in lieu of, or in addition to, existing treatments they are already familiar with and for which greater clinical data may be available. More restrictive government regulations or negative public opinion would have a negative effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates or demand for any products we may develop. Our product candidates, including our products that utilize viral delivery systems, could produce adverse events. Adverse events in our clinical trials or following approval of any of our product candidates, even if not ultimately attributable to our product candidates, could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of our product candidates, stricter labeling requirements for those product candidates that are approved and a decrease in demand for any such product candidates.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign authorities. Further, therapies such as those we are developing involve unique side effects that could be exacerbated compared to side effects from other types of therapies with singular components. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects. In such an event, our trials could be suspended or terminated, and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. For example, a patient in the Phase 1 trial of SEL-403 experienced a Grade 5 SAE (patient death) related to pneumonitis, which was deemed by the trial investigator to be probably related to ImmTOR and possibly related to the patient's pleural mesothelioma condition, and in November 2018, the FDA placed the IND for SEL-403 on full clinical hold due to adverse events observed in the Phase 1 trial. Selecta has terminated the license of LMB-100 from NCI, effective April 9, 2019 and is no longer pursuing this product candidate.

The drug-related side effects could also affect patient enrollment in our clinical trials or the ability of any enrolled patients to complete such trials or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

Additionally, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approvals of such product;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
- regulatory authorities may impose additional restrictions on the marketing of, or the manufacturing processes for, the particular product;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients, or become subject to fines, injunctions or the imposition of civil or criminal penalties;
- our reputation may suffer; and
- we could be required to develop a risk evaluation and mitigation strategy (REMS) plan to prevent, monitor and/or manage a specific serious risk by informing, educating and/or reinforcing actions to reduce the frequency and/or severity of the event.

Any of these events could prevent us from achieving or maintaining market acceptance of a particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

In addition, if our product candidates are associated with undesirable side effects in certain patient populations, such as pediatric patients or the elderly, we may need to abandon their development or limit development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective, any of which would harm our business.

RISKS RELATED TO OUR DEPENDENCE ON THIRD PARTIES AND MANUFACTURING

We rely on 3SBio in China as our primary supplier of pegadricase and on other third parties for the manufacture of our product candidates for preclinical and clinical testing, and expect to continue to do so for the foreseeable future. Our reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or that such quantities may not be available at an acceptable cost, or in compliance with regulatory requirements, which could delay, prevent or impair our development or commercialization efforts.

We obtain the biologic pegadricase, a component of SEL-212, primarily from 3SBio in China. Under our license agreement with 3SBio, we have limited rights to manufacture pegadricase and, while we have entered into a contract with a back-up supplier located outside of China, we expect to continue to rely on 3SBio as the primary supplier of pegadricase for the foreseeable future.

Any disruption in production or inability of 3SBio in China to produce adequate quantities of pegadricase to meet our needs, whether as a result of a natural disaster, failure to comply with regulatory requirements or other causes, could impair our ability to operate our business on a day-to-day basis and to continue our research and development of our future product candidates. Furthermore, since 3SBio is located in China, we are exposed to the possibility of product supply disruption and increased costs in the event of changes in the policies, laws, rules and regulations of the United States or Chinese governments, political unrest or unstable economic conditions in China. For example, trade tensions between the United States and China have been escalating in recent months. Most notably, several rounds of U.S. tariffs have been placed on Chinese goods being exported to the United States. Each of these U.S. tariff impositions against Chinese exports were followed by a round of retaliatory Chinese tariffs on U.S. exports to China. Pegadricase is subject to, and any other components we purchase from China may be subject to these tariffs, which could increase our manufacturing costs and could make our products, if successfully developed and approved, less competitive than those of our competitors whose inputs are not subject to these tariffs.

Any of these matters could materially and adversely affect our business and results of operations. Any issues related to the manufacturing lots or similar action regarding pegadricase used in preclinical studies or clinical trials could delay the studies or trials or detract from the integrity of the trial data and its potential use in future regulatory filings. In addition, manufacturing interruptions or failure to comply or maintain compliance with regulatory requirements by 3SBio could significantly delay our clinical development of potential products and reduce third-party or clinical researcher interest and support of our proposed trials. These interruptions or failures could also impede commercialization of our future product candidates and impair our competitive position. Further, we may be exposed to fluctuations in the value of the local currency in China. Future appreciation of the local currency could increase our costs. In addition, labor costs could continue to rise as wage rates increase due to increased demand for skilled laborers and the availability of skilled labor declines in China.

In addition to 3SBio, we rely, and expect to continue to rely, on other third parties for the manufacture of our product candidates for preclinical and clinical testing, as well as for commercial manufacture if any of our product candidates receive marketing approval. Our reliance on such third parties increases the risk that we will not have sufficient quantities of our product candidates on a timely basis or at all, or that such quantities will be available at an acceptable cost or quality, which

could delay, prevent or impair our development or commercialization efforts. For example, we rely on third parties for the manufacture of our gene therapy preclinical materials. Gene therapy is a relatively new area for commercial biopharmaceutical development and there are a limited number of contract manufacturing organizations, or CMOs, with adequate facilities and expertise in this area. As a result, we may be unable to successfully manufacture our gene therapy preclinical materials through a third party or scale up the manufacture of our gene therapy product candidates for clinical testing or commercialization, if at all.

We may be unable to establish any agreements with third-party manufacturers on acceptable terms or at all. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including the:

- inability, failure or unwillingness of third-party manufacturers to comply with regulatory requirements, maintain quality assurance, meet our needs, specifications or schedules or continue to supply products to us;

- reduced control we have over product development, including with respect to our lead product candidate, due to our reliance on such third-party manufacturers,

- breach of manufacturing agreements by the third-party manufacturers;

- misappropriation or disclosure of our proprietary information, including our trade secrets and know-how;

- relationships that the third-party manufacturer may have with others, some of which may be our competitors, and, if it does not successfully carry out its contractual duties, does not meet expectations, experiences work stoppages, or needs to be replaced, we may need to enter into alternative arrangements, which may not be available, desirable or cost-effective; and

- termination or nonrenewal of agreements by third-party manufacturers at times that are costly or inconvenient for us.

The facilities used by our contract manufacturers to manufacture our product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit our marketing application to the FDA. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with the regulatory requirements, known as current good manufacturing practices, or cGMPs, for manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers or suppliers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocations, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products. In addition, there are a limited number of manufacturers that operate under cGMP regulations that might be capable of manufacturing our products. Therefore, our product candidates and any future products that we may develop may compete with other products for access to manufacturing facilities. Any failure to gain access to these limited manufacturing facilities could severely impact the clinical development, marketing approval and commercialization of our product candidates.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for redundant supply or a second source for required raw materials used in the manufacture of our product candidates or for the manufacture of finished product. Moreover, we often rely on one CMO to produce multiple product components. For instance, one of our CMOs produces several polymers used in our ImmTOR technology. If our current CMOs cannot perform as agreed, we may be required to replace such manufacturers and we may be unable to replace them on a timely basis or at all. Our current and expected future dependence upon others for the manufacture of our product candidates or products could delay, prevent or impair our development and commercialization efforts.

Our existing collaborations are important to our business, and future licenses may also be important to us. If we are unable to maintain any of these collaborations, or if these arrangements are not successful, or we are unable to enter into future licenses, our business could be adversely affected.

We have entered into collaborations with other parties, including pharmaceutical companies and universities, to develop products based on our ImmTOR technology platform, and such collaborations and licensing arrangements currently represent a significant portion of our product pipeline and are expected to represent a larger portion of our pipeline in the future. Certain of our collaborations have provided us with important funding for some of our development programs and we expect to receive

additional funding under collaborations in the future although not all of our collaborations may result in funding to the Company, and certain collaborations, licenses and agreements may result in increased expenditures by the Company. Our existing collaborations, and any future collaborations we enter into, may pose a number of risks, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;

- collaborators may not perform their obligations as expected;

- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on preclinical or clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;

- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;

- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;

- a collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product or products;

- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;

- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;

- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;

- collaborations may be terminated for the convenience of the collaborator or for our failure to comply with our obligations under existing or future collaborations and, if terminated, we would potentially lose the right to pursue further development or commercialization of the applicable product candidates;

- collaborators may learn about our technology and use this knowledge to compete with us in the future;

- there may be conflicts between different collaborators that could negatively affect those collaborations and potentially others; and

- the number and type of our collaborations could adversely affect our attractiveness to future collaborators or acquirers.

If our collaborations do not result in the successful development and commercialization of products or if one of our collaborators terminates its agreement with us, we may not receive any future research and development funding or milestone or royalty payments under such collaborations. If we do not receive the funding we expect under these agreements, our continued development of our ImmTOR technology and product candidates could be delayed and we may need additional resources to develop additional product candidates. All of the risks relating to product development, regulatory approval and commercialization described in this Quarterly Report on Form 10-Q also apply to the activities of our therapeutic program collaborators and there can be no assurance that our collaborations will produce positive results or successful products on a timely basis or at all.

Additionally, subject to its contractual obligations to us, if one of our collaborators is involved in a business combination or otherwise changes its business priorities, the collaborator might deemphasize or terminate the development or commercialization of any product candidate licensed to it by us. If one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators and the perception of our business in the business and financial communities, and our stock price, could be adversely affected. In addition, we have a limited number of collaborations and if our relationship with any one or more of such collaborators were to cease, our business would be harmed as a result. Under the terms of our exclusive patent license agreement with the Massachusetts Institute of Technology, or the MIT License, MIT may terminate the MIT License if we fail to meet a diligence obligation, including the initiation of a Phase 3 clinical trial by a

specific date in the fourth quarter of 2019. We are currently in active discussions with MIT regarding an amendment to the MIT License to extend this obligation because we do not plan to initiate a trial before our expected meeting with the FDA in January 2020. We believe that we will come to agreement with MIT on an acceptable deferral of this obligation that would enable us to avoid a breach of the MIT License. However, if we are unable to reach an agreement with MIT regarding an acceptable amendment of the MIT License and if we are unable to cure the breach, there could be a material adverse effect on our business.

We are actively exploring licenses and other strategic collaborations with additional pharmaceutical and biotechnology companies for development and potential commercialization of therapeutic products. However, we face significant competition in seeking appropriate collaborators. If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, we may not be able to access specific antigens that would be suitable to development with our technology, have to curtail the development of a product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates or bring them to market or continue to develop our programs, and our business may be materially and adversely affected.

We rely, and expect to continue to rely, on third parties to conduct our clinical trials, and those third parties may not perform satisfactorily, including by failing to meet deadlines for the completion of such trials.

We expect to continue to rely on third parties, such as CROs, clinical data management organizations, medical institutions and clinical investigators, to conduct and manage our clinical trials, including our Phase 2 and Phase 3 clinical trials of SEL-212 and for our other product candidates. We also expect to rely on other third parties to store and distribute drug supplies for our clinical trials.

Our reliance on these third parties for research and development activities will reduce our control over these activities but does not relieve us of our responsibilities. For example, we remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulatory standards, commonly referred to as GCP regulations, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, safety and welfare of trial participants are protected. Other countries' regulatory agencies also have requirements for clinical trials. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs or third-party contractors fail to comply with applicable GCPs, the data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP regulations. In addition, our clinical trials must be conducted with product produced under current good manufacturing practice, or cGMP, regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, *ClinicalTrials.gov*, within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, do not comply with confidentiality obligations, do not meet expected deadlines, experience work stoppages, terminate their agreements with us or need to be replaced, or do not conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we may need to enter into new arrangements with alternative third parties, which could be difficult, costly or impossible, and our clinical trials may be extended, delayed or terminated, or may need to be repeated. If any of the foregoing occur, we may not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates or in commercializing our product candidates.

We have no experience manufacturing our product candidates at commercial scale, and if we decide to establish our own manufacturing facility, we cannot assure you that we can manufacture our product candidates in compliance with regulations at a cost or in quantities necessary to make them commercially viable.

We have a pilot manufacturing facility at our Watertown, Massachusetts location where we conduct process development, scale-up activities and the manufacture of ImmTOR product candidates for preclinical use. We rely on our scaled equipment installed at our CMOs for the manufacture of the clinical supply of all of our product candidates. If our facility, or our CMOs' facilities, were damaged or destroyed, or otherwise subject to disruption, it would require substantial lead-time to replace our manufacturing capabilities. In such event, we would be forced to identify and rely entirely on alternative third-party contract

manufacturers for an indefinite period of time. Any disruptions or delays at our facility or its failure to meet regulatory compliance would impair our ability to develop and commercialize our product candidates, which would adversely affect our business and results of operations.

In addition, the FDA and other comparable foreign regulatory agencies must, pursuant to inspections that are conducted after submitting a BLA or relevant foreign marketing submission, confirm that the manufacturing processes for the product candidate meet cGMP regulations. We do not currently have any of our own manufacturing facilities that meet the FDA's cGMP requirements for the production of any product candidates used in humans, and rely on our CMOs for clinical production.

We may choose to establish a manufacturing facility for our product candidates for production at a commercial scale. However, we have no experience in commercial-scale manufacturing of our product candidates and this activity will require substantial additional funds and additional qualified employees. We may not be able to develop commercial-scale manufacturing facilities that are adequate to produce materials for additional later-stage clinical trials or commercial use.

The equipment and facilities employed in the manufacture of pharmaceuticals are subject to stringent qualification requirements by regulatory agencies, including validation of such facilities, equipment, systems, processes and analytics. We may be subject to lengthy delays and expense in conducting validation studies, if we can meet the requirements at all.

RISKS RELATED TO COMMERCIALIZATION OF OUR PRODUCT CANDIDATES AND OTHER LEGAL COMPLIANCE MATTERS

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of our product candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If our product candidates do not achieve an adequate level of acceptance, we may not generate significant product revenues and we may not become profitable. The degree of market acceptance of our product candidates, if any, will depend on a number of factors, including:

- their efficacy, safety and other potential advantages compared to alternative treatments;
- the clinical indications for which our product candidates are approved;
- our ability to offer them for sale at competitive prices;
- their convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement for our product candidates;
- the prevalence and severity of their side effects and their overall safety profiles;
- any restrictions on the use of our product candidates together with other medications;
- interactions of our product candidates with other medicines patients are taking;
- our ability to create awareness with patients and physicians about the harmful effects of uric acid deposits;
- the timing of market introduction of any approved product candidates as well as competitive products and other therapies;
- inability of certain types of patients, particularly with respect to certain rare diseases or conditions, to take our product candidates;
- their ability to remain attractive in the event of changing treatment guidelines;
- adverse publicity about the product or favorable publicity about competitive products; and
- potential product liability claims.

We currently have no sales organization. If we are unable to establish effective sales, marketing and distribution capabilities, or enter into agreements with third parties with such capabilities, we may not be successful in commercializing our product candidates if and when they are approved.

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing or distribution of pharmaceutical products. To achieve commercial success for any product candidate for which we obtain marketing approval,

we will need to establish a sales and marketing organization or make arrangements with third parties to perform sales and marketing functions and we may not be successful in doing so.

In the future, we expect to build a focused sales and marketing infrastructure to market or co-promote our product candidates in the United States and potentially elsewhere, if and when they are approved. There are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force is expensive and time-consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Outside the United States, we may rely on third parties to sell, market and distribute our product candidates. We may not be successful in entering into arrangements with such third parties or may be unable to do so on terms that are favorable to us. In addition, our product revenue and our profitability, if any, may be lower if we rely on third parties for these functions than if we were to market, sell and distribute any products that we develop ourselves. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

We face substantial competition, including from biosimilars, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

The development and commercialization of new drug and biologic products and technologies is highly competitive and is characterized by rapid and substantial technological development and product innovations. We are aware that pharmaceutical and biotechnology companies, including Horizon Pharma plc, offer or are pursuing the development of pharmaceutical products or technologies that may address one or more indications that our product candidates target, as well as smaller, early-stage companies, that offer or are pursuing the development of pharmaceutical products or technologies that may address one or more indications that our product candidates target. We face competition with respect to our current product candidates, and will face competition with respect to any product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources, established presence in the market and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and reimbursement for product candidates and in marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors.

These third parties compete with us in recruiting and retaining qualified scientific, sales and marketing and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market, especially for any competitor developing a competing immunomodulating therapeutic that will likely share our same regulatory approval requirements. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic or biosimilar products.

We expect the product candidates we develop will be regulated as biological products, or biologics, and therefore they may be subject to competition sooner than anticipated.

The Biologics Price Competition and Innovation Act of 2009 (BPCIA) was enacted as part of the Affordable Care Act to establish an abbreviated pathway for the approval of biosimilar and interchangeable biological products. The regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an approved biologic. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the reference product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement the BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that any product candidate approved in the United States as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or

otherwise, or that the FDA will not consider the subject product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of the reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

Even if we are able to commercialize any product candidates, the products may become subject to unfavorable pricing regulations or third-party coverage or reimbursement policies, any of which would have a material adverse effect on our business.

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval, especially novel products like our gene therapy product candidates, and may be particularly difficult because of the higher prices associated with gene therapy product candidates. Our ability to commercialize any product candidates successfully will depend, in part, on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels.

Obtaining and maintaining adequate reimbursement for our products may be difficult. We cannot be certain if and when we will obtain an adequate level of reimbursement for our products by third-party payors. Even if we do obtain adequate levels of reimbursement, third-party payors, such as government or private healthcare insurers, carefully review and increasingly question the coverage of, and challenge the prices charged for, products. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that pharmaceutical companies provide them with predetermined discounts from list prices and are challenging the prices charged for products. We may also be required to conduct expensive pharmacoeconomic studies to justify coverage and reimbursement or the level of reimbursement relative to other therapies. Some third-party payors may require pre-approval of coverage for new and innovative therapies, such as our product candidates, before they will provide reimbursement. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not be able to successfully commercialize any product candidate for which we obtain marketing approval.

There may be significant delays in obtaining reimbursement for newly approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA or similar regulatory authorities outside of the United States. Moreover, eligibility for reimbursement does not imply that a product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim reimbursement levels for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the product and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost products and may be incorporated into existing payments for other services. Net prices for products may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of products from countries where they may be sold at lower prices than in the United States. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for any approved products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new products vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control, including possible price reductions, even after initial approval is granted. As a result, we might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain marketing approval. There can be no assurance that our product candidates, if they are approved for sale in the United States or in other countries, will be considered medically necessary for a specific indication or cost-effective, or that coverage or an adequate level of reimbursement will be available.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed bills 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 drug products. There can be no assurance that our product candidates, if approved for sale in the United States or in other countries, will not be subject to heightened governmental scrutiny, unfavorable regulatory inquiry or action, or congressional inquiry.

Product liability lawsuits against us could cause us to incur substantial liabilities and limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in clinical trials and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- regulatory investigations, product recalls or withdrawals, or labeling, marketing or promotional restrictions;
- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- loss of clinical trial participants or increased difficulty in enrolling future participants;
- significant costs to defend the related litigation or to reach a settlement;
- substantial payments to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.
- distraction of management's attention from our primary business;
- substantial monetary awards to patients or other claimants;

We maintain general liability, product liability and umbrella liability insurance. Our existing insurance coverage may not fully cover potential liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. A successful product liability claim or series of claims brought against us could cause our share price to decline and, if judgments exceed our insurance coverage, could adversely affect our results of operations and business, including preventing or limiting the commercialization of any product candidates we develop.

Failure to obtain marketing approval in international jurisdictions would prevent our product candidates from being marketed abroad.

Although we do not have any current plans to market and sell our products in other jurisdictions outside of the United States, we may decide to do so in the future and either we or our collaborators would need to obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval in foreign countries may differ substantially from that required to obtain FDA approval. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product candidate be approved for reimbursement before the product candidate can be approved for sale in that country. We or our collaborators may not obtain approvals for our product candidates from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions, or by the FDA. However, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our product candidates in any market.

Our relationships with healthcare providers, customers and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, exclusion from government healthcare programs, contractual damages, reputational harm and diminished profits and future earnings.

Arrangements with physicians, others who may be in a position to generate business for us, and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that constrain the business or financial arrangements and relationships through which we market, sell and distribute any products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations include the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under a federal healthcare program such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation; in addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;

- the federal false claims and civil monetary penalties laws, including the civil False Claims Act, which impose criminal and civil penalties against individuals or entities for knowingly presenting, or causing to be presented, to the federal government claims for payment that are false or fraudulent. Private individuals (e.g., whistleblowers) can bring these actions on behalf of the government;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for, among other things, executing or attempting to execute a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, which also imposes obligations, including mandatory contractual terms, on certain types of people and entities with respect to safeguarding the privacy, security and transmission of individually identifiable health information;

- the federal Physician Payments Sunshine Act, which requires applicable manufacturers of certain products for which payment is available under a federal healthcare program to report annually to the government information related to certain payments or other "transfers of value" made to physicians and teaching hospitals, as well as ownership and investment interests held by the physicians and their immediate family members;

- analogous state laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by third-party payors, including private insurers; requirements to comply with federal and pharmaceutical industry compliance guidelines, and; state data privacy and price transparency laws, many of which differ from each other in significant ways and often are broader than and not preempted by HIPAA or the Sunshine Act, thus complicating compliance efforts; and

- similar healthcare laws and regulations in the European Union and other jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers and laws governing the privacy and security of certain protected information, such as the General Data Protection Regulation, or GDPR, which imposes obligations and restrictions on the collection and use of personal data relating to individuals located in the European Union (including health data).

Efforts to ensure that our business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices, including our relationships with physicians and other healthcare providers, some of whom may recommend, purchase and/or prescribe our product candidates, if approved, may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental laws and regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion of products from government funded healthcare programs, such as Medicare and Medicaid, disgorgement, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our product candidates and affect the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval.

For example, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of

healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the ACA of importance to our potential product candidates are the following:

- an annual, nondeductible fee payable by any entity that manufactures or imports specified branded prescription drugs and biologic agents;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- extension of manufacturers' Medicaid rebate liability to individuals enrolled in Medicaid managed care organizations;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA. The Trump Administration and the U.S. Congress may take further action regarding the Affordable Care Act, including, but not limited to, repeal or replacement. Most recently, the Tax Cuts and Jobs Acts, or the Tax Act, was enacted, which, among other things, removes penalties for not complying with the individual mandate to carry health insurance. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. While the Trump Administration and CMS have both stated that the ruling will have no immediate effect, it is unclear how this decision, subsequent appeals, if any, and other efforts to repeal and replace the ACA will impact the ACA and our business. We cannot predict the ultimate content, timing or effect of any healthcare reform legislation or the impact of potential legislation on us.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our products.

Even if we receive regulatory approval for any of our product candidates, we will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense. Additionally, any of our product candidates, if approved, could be subject to post-marketing restrictions or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unexpected problems with our products.

Any product candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to the continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. We and our contract manufacturers will also be subject to continual review and periodic inspections to assess compliance with cGMP. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, including the requirement to implement a risk evaluation and mitigation strategy, or REMS, which could include requirements for a medication guide, physician communication plans or additional elements to assure safe use, such as restricted distribution methods, patient registries and other risk mitigation tools. If any of our product candidates receives marketing approval, the accompanying label may limit the approved use of our product, which could limit sales of the product.

The FDA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of our approved products. The FDA closely regulates the post-approval marketing and promotion of drugs and biologics to ensure they are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding off-label use, and if

we market our products outside of their approved indications, we may be subject to enforcement action for off-label marketing. Violations of the FDA's restrictions relating to the promotion of prescription products may also lead to investigations alleging violations of federal and state health care fraud and abuse laws, as well as state consumer protection laws.

In addition, if a regulatory agency or we later discover previously unknown problems with our products, such as adverse events of unexpected severity or frequency or problems with manufacturers or manufacturing processes, the regulatory agency may impose restrictions on the products or us, including requiring withdrawal of the product from the market. Any failure to comply with applicable regulatory requirements may yield various results, including:

- litigation involving patients taking our products;
- restrictions on such products, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a product;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning letters;
- withdrawal of products from the market;
- suspension or termination of ongoing clinical trials;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- damage to relationships with existing and potential collaborators;
- unfavorable press coverage and damage to our reputation;
- refusal to permit the import or export of our products;
- product seizure or detention;
- injunctions; or
- imposition of civil or criminal penalties.

Noncompliance with other requirements in foreign jurisdictions regarding safety monitoring or pharmacovigilance can also result in significant financial penalties. Similarly, failure to comply with U.S. and foreign regulatory requirements regarding the development of products for pediatric populations and the protection of personal health information can also lead to significant penalties and sanctions.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response, and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenues. If regulatory sanctions are applied or if regulatory approval is withheld or withdrawn, the value of our company and our operating results will be adversely affected.

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. 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, which would adversely affect our business, prospects, financial condition and results of operations.

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the current administration may impact our business and industry. Namely, the Trump administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these Executive Orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

Changes in funding for the FDA and other government agencies could hinder their ability to hire and retain key leadership and other personnel, or otherwise prevent new products and services from being approved, developed or commercialized in a timely manner, 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 the 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 other government agencies 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 for 35 days beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities. If a prolonged government shutdown occurs, 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

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 have a material adverse effect on 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 partners 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 product candidates 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 partners, even if we do not explicitly authorize or have actual knowledge of such activities. Our 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.

Governments outside the United States tend to impose strict price controls, which may adversely affect our revenues, if any.

In some countries, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product candidate. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after coverage and reimbursement have been obtained. Reference pricing used by various countries and parallel distribution or arbitrage between low-priced and high-priced countries, can further reduce prices. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies, which is time-consuming and costly. If coverage and reimbursement of our product candidates are unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be materially adversely affected.

If we or our contract manufacturers or other third parties fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on our business.

We and our contract manufacturers and other third parties with whom we do business are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including biological materials and chemicals. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. The failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

RISKS RELATED TO OUR INTELLECTUAL PROPERTY

If we or our licensors are unable to adequately protect our proprietary technology, or obtain and maintain issued patents that are sufficient to protect our product candidates, others could compete against us more directly, which would negatively impact our business.

Our success depends in large part on our ability to obtain and maintain patent and other intellectual property protection in the United States and other countries with respect to our proprietary technology and products. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and product candidates. We also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

The patent prosecution process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost, in a timely manner or in all jurisdictions. As we reach the statutory deadlines for deciding whether and where to initiate prosecution in specific foreign jurisdictions by filing national stage applications based on our Patent Cooperation Treaty, or PCT, applications, we will have to decide whether and where to pursue patent protection for the various inventions claimed in our patent portfolio, and we will only have the opportunity to obtain patents in those jurisdictions where we pursue protection. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, such as, with respect to proper priority claims, inventorship, claim scope or patent term adjustments. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business. We also cannot guarantee that any of our patent searches or analyses, including but not limited to the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete and thorough, nor can we be certain that we have identified each and every patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction.

In some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents covering technology that we license from third parties. We may also require the cooperation of our licensors to enforce any licensed patent rights, and such cooperation may not be provided. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Moreover, we have obligations under our licenses, and any failure to satisfy those obligations could give our licensor the right to terminate the license. Termination of a necessary license could have a material adverse impact on our business.

We cannot provide any assurances that the issued patents we currently own, or any future patents, include claims with a scope sufficient to protect our product candidates or otherwise provide any competitive advantage. Further, it is possible that a patent claim may provide coverage for some but not all parts of a product candidate or third-party product. These and other factors may provide opportunities for our competitors to design around our patents.

Moreover, other parties may have developed technologies that may be related or competitive to our approach, and may have filed or may file patent applications, and may have received or may receive patents that may overlap or conflict with our patent applications, either by claiming similar methods or by claiming subject matter that could dominate our patent position. In addition, it may be some time before we understand how the patent office reacts to our patent claims and whether they identify prior art of relevance that we have not already considered.

Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in any owned patents or pending patent applications, or that we were the first to file for patent protection of such inventions, nor can we know whether those from whom we may license patents were the first to make the inventions claimed or were the first to file. For these and other reasons, the issuance, scope, validity, enforceability and commercial value of our patent rights are subject to a level of uncertainty. Our pending and future patent applications may not result in patents being issued that protect our technology or

products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

We may be subject to a third-party preissuance submission of prior art to the U.S. Patent and Trademark Office, or USPTO, or become involved in opposition, derivation, reexamination, inter partes review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize product candidates without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Furthermore, an adverse decision in an interference proceeding can result in a third party receiving the patent right sought by us, which in turn could affect our ability to develop, market or otherwise commercialize our product candidates. The issuance, scope, validity, enforceability and commercial value of our patents are subject to a level of uncertainty.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. Due to legal standards relating to patentability, validity, enforceability and claim scope of patents covering biotechnological and pharmaceutical inventions, our ability to obtain, maintain and enforce patents is uncertain and involves complex legal and factual questions. Even if issued, a patent's validity, inventorship, ownership or enforceability is not conclusive. Accordingly, rights under any existing patent or any patents we might obtain or license may not cover our product candidates, or may not provide us with sufficient protection for our product candidates to afford a commercial advantage against competitive products or processes, including those from branded and generic pharmaceutical companies.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how, information, or technology that is not covered by our patents. Although our agreements require all of our employees to assign their inventions to us, and we require all of our employees, consultants, advisors and any other third parties who have access to our trade secrets, proprietary know-how and other confidential information and technology to enter into appropriate confidentiality agreements, we cannot be certain that our trade secrets, proprietary know-how, and other confidential information and technology will not be subject to unauthorized disclosure or that our competitors will not otherwise gain access to or independently develop substantially equivalent trade secrets, proprietary know-how, and other information and technology. 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 United States. As a result, we may encounter significant problems in protecting and defending our intellectual property globally. If we are unable to prevent unauthorized disclosure of our intellectual property related to our product candidates and technology to third parties, we may not be able to establish or maintain a competitive advantage in our market, which could adversely affect our business and operations.

Any litigation to enforce or defend our patent rights, even if we were to prevail, could be costly and time-consuming and would divert the attention of our management and key personnel from our business operations. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded if we were to prevail may not be commercially meaningful. Even if we are successful, domestic or foreign litigation, or USPTO or foreign patent office proceedings, may result in substantial costs and distraction to our management. We may not be able, alone or with our licensors or potential collaborators, to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or other proceedings, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or other proceedings. In addition, during the course of this kind of litigation or proceedings, there could be public announcements of the results of hearings, motions or other interim proceedings or developments or public access to related documents. If investors perceive these results to be negative, the market price for our common stock could be adversely affected.

If we are unable to protect the confidentiality of our trade secrets and know-how, our business and competitive position would be harmed.

In addition to seeking patents for some of our technology and product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also seek to enter into confidentiality and invention or patent assignment agreements with our employees, advisors and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Our trade secrets may also be obtained by third parties by other means, such as breaches of our physical or computer security

systems. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. Moreover, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to, or independently developed by, a competitor, our competitive position would be harmed.

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

As is the case with other biotechnology companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biotechnology industry involves both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. In addition, recent patent reform legislation could further increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted and may also affect patent litigation. The USPTO recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, in particular the first to file provisions, became effective on March 16, 2013. A third party that files a patent application in the USPTO after that date but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by the third party. This requires us to be cognizant of the time from invention to filing of a patent application. Thus, for our U.S. patent applications containing a priority claim after March 16, 2013, there is a greater level of uncertainty in the patent law. Moreover, some of the patent applications in our portfolio will be subject to examination under the pre-Leahy-Smith Act law and regulations, while other patents applications in our portfolio will be subject to examination under the law and regulations, as amended by the Leahy-Smith Act. This introduces additional complexities into the prosecution and management of our portfolio.

In addition, the Leahy-Smith Act limits where a patentee may file a patent infringement suit and provides opportunities for third parties to challenge any issued patent in the USPTO. These provisions apply to all of our U.S. patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a federal court action.

Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims because it may be easier for them to do so relative to challenging the patent in a federal court action. It is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

In addition, 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. From time to time, the U.S. Supreme Court, other federal courts, the U.S. Congress or the USPTO may change the standards of patentability, and any such changes could have a negative impact on our business.

Depending on these and other decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change or be interpreted in unpredictable ways that would weaken our ability to obtain new patents or to enforce any patents that may issue to us in the future. In addition, these events may adversely affect our ability to defend any patents that may issue in procedures in the USPTO or in courts.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability, and the ability of our collaborators, to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is considerable intellectual property litigation in the biotechnology and pharmaceutical industries. While no such litigation has been brought against us and we have not been held by any court to have infringed a third party's intellectual property rights, we cannot guarantee that our technology, product candidates or use of our product candidates do not infringe third-party patents.

We are aware of numerous patents and pending applications owned by third parties, and we monitor patents and patent applications in the fields in which we are developing product candidates, both in the United States and elsewhere. However, we may have failed to identify relevant third-party patents or applications. For example, applications filed before November 29, 2000 and certain applications filed after that date that will not be filed outside the United States remain confidential until

patents issue. Moreover, it is difficult for industry participants, including us, to identify all third-party patent rights that may be relevant to our product candidates and technologies because patent searching is imperfect due to differences in terminology among patents, incomplete databases and the difficulty in assessing the meaning of patent claims. We may fail to identify relevant patents or patent applications or may identify pending patent applications of potential interest but incorrectly predict the likelihood that such patent applications may issue with claims of relevance to our technology. In addition, we may be unaware of one or more issued patents that would be infringed by the manufacture, sale or use of a current or future product candidate, or we may incorrectly conclude that a third-party patent is invalid, unenforceable or not infringed by our activities. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our technologies, our product candidates or the use of our product candidates.

The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may allege that our product candidates or the use of our technologies infringes patent claims or other intellectual property rights held by them or that we are employing their proprietary technology without authorization. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our product candidates and technology, including interference or derivation proceedings before the USPTO and similar bodies in other countries. Third parties may assert infringement claims against us based on existing intellectual property rights and intellectual property rights that may be granted in the future.

Patent and other types of intellectual property litigation can involve complex factual and legal questions, and their outcome is uncertain. If we are found, or believe there is a risk we may be found, to infringe a third party's intellectual property rights, we could be required or may choose to obtain a license from such third party to continue developing and marketing our product candidates and technology. However, we may not be able to obtain any such license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

Even if we are successful in such proceedings, we may incur substantial costs and divert management time and attention in pursuing these proceedings, which could have a material adverse effect on us. Patent litigation is costly and time-consuming. We may not have sufficient resources to bring these actions to a successful conclusion. There could be public announcements of the results of hearings, motions or other interim proceedings or developments and 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.

Any of these risks coming to fruition could have a material adverse impact on our business.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property, and our issued patents covering our product candidates could be found invalid or unenforceable or could be interpreted narrowly if challenged in court.

Competitors may infringe our intellectual property, including our patents or the patents of our licensors. As a result, we may be required to file infringement claims to stop third-party infringement or unauthorized use. This can be expensive, particularly for a company of our size, and time-consuming. If we initiated legal proceedings against a third party to enforce a patent, if and when issued, covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge include alleged failures to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement, or failure to claim patent-eligible subject matter. Grounds for unenforceability assertions include allegations that someone connected with the prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post-grant review, inter partes review, interference proceedings and equivalent proceedings in foreign jurisdictions, such as opposition proceedings. Such proceedings could result in revocation or amendment of our patents in such a way that they no longer cover our product candidates or competitive products. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. 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 patent protection on our product candidates. Moreover, even if not found invalid or unenforceable, the claims of our patents could be construed narrowly or in a manner that does not cover the allegedly infringing technology in question. Such a loss of patent protection would have a material adverse impact on our business.

The lives of our patents may not be sufficient to effectively protect our products and business.

Patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after its first effective non-provisional filing date. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates, proprietary technologies and their uses are obtained, once the patent life has expired, we may be open to competition. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. If we do not have sufficient patent life to protect our product candidates, proprietary technologies and their uses, our business and results of operations will be adversely affected.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for noncompliance 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 and, in some jurisdictions, during the pendency of a patent application. 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. In such an event, our competitors might be able to enter the market, which would have an adverse effect on our business.

If we fail to comply with our obligations in our intellectual property licenses and funding arrangements with third parties, we could lose rights that are important to our business.

We are party to multiple license agreements that impose, and we may enter into additional licensing and funding arrangements with third parties that may impose, diligence, development and commercialization timelines, milestone payment, royalty, insurance and other obligations on us. Under our existing licensing agreements, we are obligated to pay royalties on net product sales of product candidates or related technologies to the extent they are covered by the agreement. Our results of operations will be affected by the level of royalty payments that we are required to pay to third parties. We cannot precisely predict the amount, if any, of royalties that we will be required to pay to third parties in the future. Any disagreements with the counterparty over the amount of royalties owed could lead to litigation, which is costly. In addition, if we fail to comply with our obligations under current or future license agreements, our counterparties may have the right to terminate these agreements, in which event we might not be able to develop, manufacture or market any product candidate that is covered by these agreements, or may face other penalties under the agreements. Such an occurrence could materially adversely affect the value of product candidates being developed using rights licensed to us under any such agreement. Termination of these agreements or reduction or elimination of our rights under these agreements may result in our having to negotiate new or reinstated agreements with less favorable terms, or cause us to lose our rights under these agreements, including our rights to important intellectual property or technology. Furthermore, our counterparties may allege that we are operating outside the scope of the licenses granted and terminate our license or otherwise require us to alter development, manufacturing or marketing activities.

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

We currently have rights to certain intellectual property, through licenses from third parties and under patents and patent applications that we own, to develop our product candidates. Because we may find that our programs require the use of proprietary rights held by third parties, the growth of our business may depend in part on our ability to acquire, in-license or use these proprietary rights. We may be unable to acquire or in-license compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary for our product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, financial resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment. Under the terms of our exclusive patent license agreement with the Massachusetts Institute of Technology, or the MIT License, MIT may terminate the MIT License if we fail to meet a diligence obligation, including the initiation of a Phase 3 clinical trial by a specific date in the fourth quarter of 2019. We are

currently in active discussions with MIT regarding an amendment to the MIT License to extend this obligation because we do not plan to initiate a trial before our expected meeting with the FDA in January 2020. We believe that we will come to agreement with MIT on an acceptable deferral of this obligation that would enable us to avoid a breach of the MIT License. However, if we are unable to reach an agreement with MIT regarding an acceptable amendment of the MIT License and if we are unable to cure the breach, there could be a material adverse effect on our business.

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

We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may also engage advisors and consultants who are concurrently employed at universities or other organizations or who perform services for other entities. Although we try to ensure that our employees, advisors and consultants do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, advisors or consultants have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such party's former or current employer or in violation of an agreement with another party. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

In addition, while it is our policy to require our employees, consultants, advisors and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property. Similarly, we may be subject to claims that an employee, advisor or consultant performed work for us that conflicts with that person's obligations to a third party, such as an employer, and thus, that the third party has an ownership interest in the intellectual property arising out of work performed for us. Litigation may be necessary to defend against these claims. Although we have no knowledge of any such claims being alleged to date, if such claims were to arise, litigation may be necessary to defend against any such claims.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential collaborators or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely impact our financial condition or results of operations.

We will not seek to protect our intellectual property rights in all jurisdictions throughout the world and we may not be able to adequately enforce our intellectual property rights even in the jurisdictions where we seek protection.

Filing, prosecuting and defending patents on product candidates in all countries and jurisdictions throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than in the United States, assuming that rights are obtained in the United States and assuming that rights are pursued outside the United States. In this regard, in addition to the United States, we also seek to protect our intellectual property rights in other countries. The statutory deadlines for pursuing patent protection in individual foreign jurisdictions are based on the priority date of each of our patent applications. For all of the patent families in our portfolio, including the families that may provide coverage for our lead product candidate, the relevant statutory deadlines have not yet expired. Therefore, for each of the patent families that we believe provide coverage for our lead product candidate, we will need to decide whether and where

to pursue additional protection outside the United States. In addition, the laws of some foreign countries, do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, for our existing patent rights outside the United States and any foreign patent rights we may decide to pursue in the future, we may not be able to obtain relevant claims and/or we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions.

Competitors may use our technologies in jurisdictions where we do not pursue and obtain patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as in the United States. These products may compete with our product candidates and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. Even if we pursue and obtain issued patents in particular jurisdictions, our patent claims or other intellectual property rights may not be effective or sufficient to prevent third parties from so competing.

If we do not obtain additional protection under the Hatch-Waxman Act and similar foreign legislation extending the terms of our patents for our product candidates, our business may be harmed.

Depending upon the timing, duration and specifics of FDA regulatory approval for our product candidates, one or more of our U.S. patents may be eligible for limited patent term restoration under the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. Patent term restorations, however, are limited to a maximum of five years and cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval by the FDA.

The application for patent term extension is subject to approval by the USPTO, in conjunction with the FDA. It takes at least six months to obtain approval of the application for patent term extension. We may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, the period during which we will have the right to exclusively market our product will be shortened, our competitors may obtain earlier approval of competing products and our ability to generate revenues could be materially adversely affected.

RISKS RELATED TO OUR OPERATIONS

Our new corporate strategy and restructuring may not be successful.

On January 3, 2019, following a strategic business review, we announced our new strategy to focus on the development of SEL-212 for the treatment of chronic refractory gout and advancement of our ImmTOR technology in the area of gene therapy, specifically ImmTOR in combination with AAV gene therapy for the treatment of CN and MMA, as well as the deprioritization of our oncology development program. The success of this strategic shift will depend on our ability to successfully develop our product candidates, hire and retain senior management or other highly qualified personnel, prioritize competing projects and efforts and obtain sufficient resources, including additional capital, as well as our ability to enter into collaborations with third parties. The early stage development of novel product candidates is highly unpredictable due to the lengthy and expensive process of clinical drug development, potential for safety, efficacy or tolerability problems with such product candidates, unexpected expenses or inaccurate financial assumptions or forecasts, potential delays or unfavorable decisions of regulatory agencies and competition for targeted indications or within targeted markets. Accordingly, there are no assurances our change in strategic focus will be successful, which may have an adverse effect on our results of operations or financial condition.

Also on January 3, 2019, as a result of our strategic business review, we announced our plan to reduce budgeted headcount by approximately 36% to align our workforce with our newly announced strategy. The reduction in workforce resulted in the termination of approximately 17 employment positions effective January 3, 2019. We substantially completed the reduction in workforce during the first quarter of 2019. Our workforce after these actions may not be sufficient to fully execute our new strategy, and we may not be able to effectively attract or retain new management or qualified employees needed to implement this strategy.

We incurred aggregate charges in connection with the reduction in workforce of approximately $0.5 million, all of which were cash expenditures. However, our restructuring activities may also result in unexpected risks or costs, such as employee claims and contractual disputes and the risk that the actual financial and other impacts of the reductions could vary materially from the outcomes anticipated, which may have a material adverse effect on our results of operations or financial condition.

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on Carsten Brunn, Ph.D., our President and Chief Executive Officer, Alison Schecter, M.D., our Chief Medical Officer, as well as the other principal members of our management, scientific and clinical team. Although we have entered into employment agreements or offer letters with Dr. Brunn, Dr. Schecter and certain of our executive officers, each of

them may terminate their employment with us at any time. We do not maintain "key person" insurance for any of our executives or other employees.

Recruiting and retaining qualified scientific, clinical, manufacturing, technology and sales and marketing personnel will also be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize product candidates. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We expect to expand our development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of lead discovery and product development, regulatory affairs, clinical affairs and manufacturing and, if any of our product candidates receives marketing approval, sales, marketing and distribution. To manage our expected future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such expected growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel in a timely manner, if at all. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage or financially support growth could delay the execution of our business plans or disrupt our operations.

We have incurred increased costs as a result of operating as a public company, and our management will be required to devote substantial time to compliance initiatives and corporate governance practices.

As a public company, and particularly after we are no longer an emerging growth company, we have incurred and expect to continue to incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The Nasdaq Global Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations have increased our legal and financial compliance costs and made some activities more time-consuming and costly.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, we are required to furnish a report by our management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. If we are unable to maintain effective internal control over financial reporting, we may not have adequate, accurate or timely financial information, and we may be unable to meet our reporting obligations as a public company or comply with the requirements of the SEC or Section 404. This could result in a restatement of our financial statements, the imposition of sanctions, including the inability of registered broker dealers to make a market in our common stock, or investigation by regulatory authorities. Any such action or other negative results caused by our inability to meet our reporting requirements or comply with legal and regulatory requirements or by disclosure of an accounting, reporting or control issue could adversely affect the trading price of our securities and our business. Material weaknesses in our internal control over financial reporting could also reduce our ability to obtain financing or could increase the cost of any financing we obtain. This could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements.

A variety of risks associated with maintaining our subsidiary in Russia or expanding operations internationally could adversely affect our business.

In addition to our U.S. operations, we maintain a wholly owned subsidiary in Russia, Selecta RUS. We may face risks associated with maintaining our subsidiary in Russia, or with any international operations, including possible unfavorable

regulatory, pricing and reimbursement, legal, political, tax and labor conditions, which could harm our business. We may also rely on collaborators to commercialize any approved product candidates outside of the United States. Doing business internationally involves a number of risks, including but not limited to:

- multiple, conflicting and changing laws and regulations, such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of our product candidates in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining protection of and enforcing our intellectual property rights;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple-payor reimbursement regimes, government payors or patient self-pay systems;
- limits on our ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our product candidates and exposure to foreign currency exchange rate fluctuations, which could result in increased operating expenses and reduced revenues;
- natural disasters, political and economic instability, including wars, events of terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions and economic weakness, including inflation;
- changes in diplomatic and trade relationships;
- challenges in 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 United States;
- certain expenses including, among others, expenses for travel, translation and insurance;
- legal risks, including use of the legal system by the government to benefit itself or affiliated entities at our expense, including expropriation of property; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and activities that may fall within the purview of the FCPA its books and records provisions, or its anti-bribery provisions.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our results of operations.

Our business and operations would suffer in the event of system failures.

Despite the implementation of security measures, our internal computer systems and those of our current and future contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we are not aware of any such material system failure, accident 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. Likewise, we rely on third parties to manufacture our product candidates and conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. 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.

Acquisitions or joint ventures could disrupt our business, cause dilution to our stockholders and otherwise harm our business.

We may acquire other businesses, product candidates or technologies as well as pursue strategic alliances, joint ventures, technology licenses or investments in complementary businesses. We have not made any acquisitions to date, and our ability to do so successfully is unproven. Any of these transactions could be material to our financial condition and operating results and expose us to many risks, including:

- disruption in our relationships with future customers or with current or future distributors or suppliers as a result of such a transaction;
- unexpected liabilities related to acquired companies;

- difficulties integrating acquired personnel, technologies and operations into our existing business;
- diversion of management time and focus from operating our business to acquisition integration challenges;
- increases in our expenses and reductions in our cash available for operations and other uses;
- possible write-offs or impairment charges relating to acquired businesses; and
- inability to develop a sales force for any additional product candidates.

Foreign acquisitions involve unique risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries.

Also, the expected benefit of any acquisition may not materialize. Future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

RISKS RELATED TO OUR COMMON STOCK

The market price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.

The trading price of our common stock is likely to be volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. The stock market in general and the market for smaller biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your common stock at or above the price at which you purchased. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;
- results or progress, or changes in approach or timelines, of clinical trials of our product candidates or those of our competitors;
- failure or discontinuation of any of our development programs;
- commencement of, termination of, or any development related to any collaboration or licensing arrangement;
- regulatory or legal developments in the United States and other countries;
- development of new product candidates that may address our markets and make our product candidates less attractive;
- changes in physician, hospital or healthcare provider practices that may make our product candidates less useful;
- announcements by us, our partners or our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations or capital commitments;
- announcement or market expectation of additional financing efforts;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our product candidates or clinical development programs;
- failure to meet or exceed financial estimates, projections or development timelines of the investment community or that we provide to the public;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates or products;
- actual or expected changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- sale of common stock by us or our stockholders in the future as well as the overall trading volume of our common stock;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and

- the other factors described in this “Risk factors” section.

Our executive officers, directors and principal stockholders, if they choose to act together, will continue to have the ability to control or significantly influence all matters submitted to stockholders for approval.

Our executive officers, directors and stockholders who own more than 5% of our outstanding common stock and their respective affiliates, in the aggregate, hold shares representing approximately 42.9% of our outstanding voting stock as of September 30, 2019. As a result, if these stockholders choose to act together, they would be able to control or significantly influence all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, would control or significantly influence the election of directors, the composition of our management and approval of any merger, consolidation or sale of all or substantially all of our assets.

A significant portion of our total outstanding shares are eligible to be sold into the market, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. Holders of an aggregate of approximately 3.1 million shares of our common stock as of September 30, 2019 have rights, subject to specified conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders, until such shares can otherwise be sold without restriction under Rule 144 or until the rights terminate pursuant to the terms of the investors’ rights agreement between us and such holders. We have also registered and intend to continue to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

We are an “emerging growth company,” and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and may remain an emerging growth company until the last day of the fiscal year following the fifth anniversary of the closing of the initial public offering of our common stock. However, if certain events occur prior to the end of such five-year period, including if we become a “large accelerated filer,” our annual gross revenues exceed $1.07 billion or we issue more than $1.07 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;

- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;

- reduced disclosure obligations regarding executive compensation; and

- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be reduced or more volatile. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

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

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. If any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our preclinical studies, clinical trial programs and operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts

ceases coverage of us or fails to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Provisions in our restated certificate of incorporation and restated bylaws and under Delaware law could make an acquisition of our company, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our restated certificate of incorporation and our restated bylaws, which became effective upon the closing of the initial public offering of our common stock may discourage, delay or prevent a merger, acquisition or other change in control of our company that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the General Corporation Law of the State of Delaware, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Furthermore, our restated certificate of incorporation specifies that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for most legal actions involving claims brought against us by stockholders. We believe this provision benefits us by providing increased consistency in the application of Delaware law by chancellors particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. However, the provision may have the effect of discouraging lawsuits against our directors, officers, employees and agents as it may limit any stockholder's ability to bring a claim in a judicial forum that such stockholder finds favorable for disputes with us or our directors, officers, employees or agents. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any applicable action brought against us, a court could find the choice of forum provisions contained in our restated certificate of incorporation to be applicable or unenforceable in such action.

We could be subject to securities class action litigation.

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

Recently-enacted U.S. Tax reform legislation could adversely affect our business and financial condition.

The TCJA has significantly changed the U.S. federal income taxation of U.S. corporations, including by reducing the U.S. corporate income tax rate, limiting interest deductions, modifying or repealing many business deductions and credits (including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as "orphan drugs"), adopting elements of a territorial tax system, imposing a one-time transition tax, or repatriation tax, on all undistributed earnings and profits of certain U.S.-owned foreign corporations, revising the rules governing net operating losses and the rules governing foreign tax credits, and introducing new anti-base erosion provisions. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal taxable income as a starting point for computing state and local tax liabilities. While some of the changes made by the TCJA may adversely affect us in one or more reporting periods and prospectively, other changes may be beneficial on a going forward basis. We continue to work with our tax advisors and auditors to determine the full impact that the TCJA will have on us on an ongoing basis. We urge our investors to consult with their legal and tax advisors with respect to the TJCA.

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

On August 19, 2019, we entered into a Stock Purchase Agreement (the "Purchase Agreement") with the purchasers named therein (each, an "Investor" and, collectively, the "Investors"), including certain of our executive officers and members of our board of directors.

On August 20, 2019, pursuant to the Purchase Agreement, we sold an aggregate of 3,178,174 shares of our common stock to the Investors for aggregate gross proceeds of approximately $5.8 million, at a purchase price equal to $1.81 per share, which was equal to the most recent consolidated closing bid price on the Nasdaq Global Market on August 19, 2019.

This transaction was exempt from registration pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended, and Rule 506 of Regulation D promulgated thereunder, as a transaction by an issuer not involving a public offering. Each Investor has represented that it is an accredited investor, as defined in Regulation D, and has acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends have been affixed to the securities issued in this transaction.

Item 3. Defaults upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Restated Certificate of Incorporation of Selecta Biosciences, Inc.	8-K	001-37798	3.1	6/29/2016	
3.2	Amended and Restated By-laws of Selecta Biosciences, Inc.	8-K	001-37798	3.2	6/29/2016	
10.1	Employment Agreement, dated August 12, 2019, by and between Selecta Biosciences, Inc. and Bradford D. Dahms					*
10.2†	Feasibility Study and License Agreement by and between Asklepios BioPharmaceutical, Inc. and Selecta Biosciences, Inc. dated August 6, 2019					*
10.3	Lease Agreement by and between BRE-BMR Grove LLC and Selecta Biosciences, Inc. dated July 23, 2019					*
31.1	Rule 13a-14(a) / 15d-14(a) Certification of Chief Executive Officer					*
31.2	Rule 13a-14(a) / 15d-14(a) Certification of Chief Financial Officer					*
32.1	Section 1350 Certification of Chief Executive Officer					**
32.2	Section 1350 Certification of Chief Financial Officer					**
101.INS	Inline XBRL Instance Document - the Instance Document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL 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 Linkbase Document					***
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					***
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					***
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					***

* Filed herewith.

** Furnished herewith.

*** Submitted electronically herewith.

† Portions of this exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

SELECTA BIOSCIENCES, INC.

Date: November 8, 2019

By: /s/ Carsten Brunn, Ph.D.

Carsten Brunn, Ph.D.

President and Chief Executive Officer, and Director

(Principal Executive Officer)

Date: November 8, 2019

By: /s/ Bradford D. Dahms

Bradford D. Dahms

Chief Financial Officer

(Principal Financial Officer)

Employment Agreement

This Employment Agreement (this "Agreement"), dated as of August 12, 2019, is made by and between SELECTA BIOSCIENCES, INC., a Delaware corporation (together with any successor thereto, the "Company"), and Bradford D. Dahms. ("Executive") (collectively referred to as the "Parties" or individually referred to as a "Party"), and effective as of September 3, 2019 (the "Effective Date").

RECITALS

A. It is the desire of the Company to assure itself of the services of Executive on the Effective Date and thereafter by entering into this Agreement.

B. Executive and the Company mutually desire that Executive provide services to the Company on the terms herein provided.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and of the respective covenants and agreements set forth below, the Parties hereto agree as follows:

1. Employment.

(a) General. Effective on the Effective Date, the Company shall employ Executive and Executive shall be employed by the Company, for the period and in the positions set forth in this Section 1, and subject to the other terms and conditions herein provided.

(b) At-Will Employment. The Company and Executive acknowledge that Executive's employment is and shall continue to be at-will, as defined under applicable law, and that Executive's employment with the Company may be terminated by either Party at any time for any or no reason (subject to the notice requirements of Section 3(b)). This "at-will" nature of Executive's employment shall remain unchanged during Executive's tenure as an employee and may not be changed, except in an express writing signed by Executive and a duly authorized officer of the Company. If Executive's employment terminates for any reason, Executive shall not be entitled to any payments, benefits, damages, award or compensation other than as provided in this Agreement or otherwise agreed to in writing by the Company or as provided by applicable law. The term of this Agreement (the "Term") shall commence on the Effective Date and end on the date this Agreement is terminated under Section 3.

(c) Positions and Duties. Executive shall serve as the Chief Financial Officer of the Company with such responsibilities, duties and authority normally associated with such positions and as may from time to time be reasonably assigned to Executive by the Chief Executive Officer of the Company. Executive shall devote substantially all of Executive's working time and efforts to the business and affairs of the Company (which shall include service to its affiliates, if applicable), provided that Executive may engage in outside business activities (including serving on outside boards or committees) following approval by the Board of Directors of the Company or an authorized committee thereof (in either case, the "Board") to the extent such activities do not materially interfere with the performance of Executive's duties and responsibilities under this Agreement or violate the terms of the Employee Nondisclosure, Noncompetition and Assignment of Intellectual Property Agreement attached as Exhibit B (the "Restrictive Covenant Agreement"). Executive agrees to observe and comply with the rules and policies of the Company as adopted by the Company from time to time, in each case as amended from time to time, as set forth in writing, and as delivered or made available to Executive (each, a "Policy").

2. Compensation and Related Matters.

(a) Annual Base Salary. During the Term, Executive shall receive a base salary at a rate of $350,000 per annum, which shall be paid in accordance with the customary payroll practices of the Company and shall be pro-rated for partial years of employment. Upon Executive's six-month anniversary, the Company will re-evaluate Executive's base salary according to external market data and performance. Such annual base salary shall be reviewed (and may be increased) from time to time by the Board (such annual base salary, as it may be increased from time to time, the "Annual Base Salary").

(b) Bonus. During the Term, Executive will be eligible to participate, on the same basis as other actively employed senior executives of the Company, in an annual incentive program established by the Board. Executive's annual incentive compensation under such incentive program (the "Annual Bonus") shall be targeted at 40% of Executive's Annual Base Salary (the "Target Bonus"). The Annual Bonus payable under the incentive program shall be based on the achievement of performance goals to be determined by the Board; provided that, Executive's Annual Bonus for the Company's 2019 fiscal year shall be prorated for time employed for 2019. The payment of any Annual Bonus will be made on or before March 15 of the year following the calendar year in which such Annual Bonus is earned, subject to Executive's continued employment through the last day of such year.

(c) Benefits. During the Term, Executive shall be eligible to participate, on the same basis as other actively employed senior executives of the Company, in employee benefit plans, programs and arrangements of the Company (including medical, dental and 401(k) plans), consistent with the terms thereof and as such plans, programs and arrangements may be amended from time to time. In no event shall Executive be eligible to participate in any severance plan or program of the Company, except as set forth in Section 4 of this Agreement.

(d) Vacation. During the Term, Executive shall be entitled to accrue four weeks of paid vacation per year in accordance with the Company's policies. Vacation days accrued, but not used by the end of the calendar year may be used in the subsequent calendar year; provided that no more than five accrued vacation days may be carried over from one year to the next. Any vacation shall be taken at the reasonable and mutual convenience of the Company and Executive.

(e) Business Expenses. During the Term, the Company shall reimburse Executive for all reasonable travel and other business expenses incurred by Executive in the performance of Executive's duties to the Company in accordance with the Company's expense reimbursement Policy.

(f) Key Person Insurance. At any time during the Term, the Company shall have the right to insure the life of Executive for the Company's sole benefit. The Company shall have the right to determine the amount of insurance and the type of policy. Executive shall reasonably cooperate with the Company in obtaining such insurance by submitting to physical examinations, by supplying all information reasonably required by any insurance carrier, and by executing all necessary documents reasonably required by any insurance carrier, provided that any information provided to an insurance company or broker shall not be provided to the Company without the prior written authorization of Executive. Executive shall incur no financial obligation by executing any required document, and shall have no interest in any such policy.

(g) Stock Options. No later than the first regularly scheduled meeting of the Board following the Effective Date, and subject to the approval of the Board, Executive will be granted an option to purchase 400,000 shares of common stock of the Company with an exercise price per share equal to the

closing price per share of the Company's common stock on the date of grant or the last trading day preceding the date of grant if the date of grant is not a trading day (the "Option"). Subject to Executive's continued employment by the Company, the Option shall vest over a four-year period, with 25% vesting on the first anniversary of the Effective Date and the remaining 75% vesting on each monthly anniversary of the Effective date in 36 equal monthly installments following the first anniversary of the Effective Date. The Option will be subject to the terms of the Selecta Biosciences, Inc. 2018 Employment Inducement Incentive Award Plan (the "2018 EIIAP") and the applicable award agreement evidencing such award.

(h) Signing Bonus. Executive shall receive a single lump-sum cash payment of $50,000, payable at the same time as Executive's first regularly scheduled Company paycheck, subject to and conditioned upon Executive's continued employment through the payment date (the "Signing Bonus"). If Executive's employment is terminated by the Company for Cause or by Executive other than for Good Reason (as defined below), in either case within 12 months of the Effective Date, Executive will repay the Company the full amount of the Signing Bonus and the Company will be entitled (but not required) to deduct the amount of any such repayment obligations from any amounts otherwise payable to Executive by the Company or any of its affiliates.

(i) Relocation. The parties acknowledge that the Company's principal place of business is currently in Watertown, Massachusetts and Executive's primary residence is currently in the state of New York. Executive agrees to relocate his primary residence to the greater Boston, Massachusetts area prior to the first anniversary of the Effective Date. For the avoidance of doubt, Executive's failure to relocate his primary residence to the greater Boston, Massachusetts area prior to the first anniversary of the Effective Date will constitute a breach of a material provision of this Agreement that entitles the Company to terminate Executive's employment for Cause (as defined below) without the requirement that the Executive be provided written notice of, or an opportunity to cure, such breach. Until Executive relocates to the greater Boston, Massachusetts area, Executive will be permitted from time to time to perform his obligations under this Agreement remotely, provided that Executive will spend such time at the Company's principal place of business in Watertown, Massachusetts as the Company's Chief Executive Officer reasonably determines is necessary or appropriate for Executive to perform his duties and responsibilities under this Agreement. During the first twelve months of the Term or until Executive's earlier relocation to the greater Boston, Massachusetts area, notwithstanding any contrary terms of the Company's expense reimbursement Policy, but subject to Section 9(l)(iv) the Company shall reimburse Executive for reasonable expenses incurred by Executive for travel between Massachusetts and New York in performing his duties for the Company, including airfare, lodging accommodations, and local transportation, up to a maximum monthly amount of $6,100, which maximum, for avoidance of doubt, shall not limit amounts otherwise reimbursable under the Company's expense reimbursement Policy. To the extent the Company reasonably determines all or a portion of any such reimbursement constitutes taxable income to Executive, Executive will be liable and responsible for the employee portion of all taxes owed in connection therewith and the Company may (but will not be required to) deduct or withhold such taxes from any compensation payable to Executive by the Company or its affiliates. Further, the Company will reimburse Executive for (or pay directly on Executive's behalf) Executive's reasonable moving expenses incurred in connection with Executive's relocation to the greater Boston, Massachusetts area in an amount not to exceed $75,000 (the "Relocation Allowance"), provided that such relocation occurs prior to the first anniversary of the Effective Date. Documentation reasonably acceptable to the Company of all reimbursable moving expenses must be submitted to the Company promptly following the date such expenses are incurred. All payments of the Relocation Allowance will be provided within 60 days following Executive's submission to the Company of such documentation, except that in no event will any payments of Relocation Allowance be made other than in calendar year

2020. Executive will be liable and responsible for the employee portion of all taxes owed in connection with the Relocation Allowance (to the extent the Company reasonably determines all or a portion of the Relocation Allowance constitutes taxable income to Executive), and the Company may (but will not be required to) deduct or withhold such taxes from any compensation payable to Executive by the Company or its affiliates. If (i) Executive's employment is terminated by the Company for Cause (as defined below) or by Executive other than for Good Reason (as defined below), in either case within 12 months of the date Executive relocates to the greater Boston area, or (ii) Executive fails to relocate to the greater Boston, Massachusetts area prior to the first anniversary of the Effective Date, Executive will repay the Company the full amount of any Relocation Allowance paid to Executive (or paid on Executive's behalf), and the Company will be entitled (but not required) to deduct the amount of any such repayment obligations from any amounts otherwise payable to Executive by the Company or any of its affiliates.

3. Termination.

Executive's employment hereunder may be terminated by the Company or Executive, as applicable, without any breach of this Agreement under the following circumstances:

(a) Circumstances.

(i) *Death*. Executive's employment hereunder shall terminate upon Executive's death.

(ii) *Disability*. If Executive has incurred a Disability, as defined below, the Company may terminate Executive's employment.

(iii) *Termination for Cause*. The Company may terminate Executive's employment for Cause, as defined below.

(iv) *Termination without Cause*. The Company may terminate Executive's employment without Cause.

(v) *Resignation from the Company with Good Reason.* Executive may resign Executive's employment with the Company with Good Reason, as defined below.

(vi) *Resignation from the Company without Good Reason*. Executive may resign Executive's employment with the Company for any reason other than Good Reason or for no reason.

(b) Notice of Termination. Any termination of Executive's employment by the Company or by Executive under this Section 3 (other than termination pursuant to Section 3(a)(i)) shall be communicated by a written notice to the other Party hereto (i) indicating the specific termination provision in this Agreement relied upon, (ii) setting forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of Executive's employment under the provision so indicated, if applicable, and (iii) specifying a Date of Termination which, except in the case of a termination pursuant to Section 3(a)(iii), shall be at least thirty-five (35) days following the date of such notice, but no more than forty-five (45) days following the date of such notice (a "Notice of Termination"); *provided, however*, that in the case of a termination pursuant to Section 3(a)(v) the Date of Termination will be subject to the Company's right to cure pursuant to Section 7(f) and *provided further, however*, that the Company may deliver a Notice of Termination to Executive that specifies any Date of Termination that occurs on or after the date of the Notice of Termination (but no more than forty (40) days following the

date of such notice) and, in the event that Executive delivers a Notice of Termination to the Company, the Company may, in its sole discretion, change the Date of Termination to any date that occurs on or following the date of the Notice of Termination and is prior to the Date of Termination specified in the Notice of Termination, *provided*, in either case , that if the Company selects a Date of Termination that is less than thirty (30) days after the date of the Notice of Termination the Company will pay Executive the base salary Executive would have earned during the period commencing on the Date of Termination selected by the Company and ending thirty (30) days after the date of the Notice of Termination. The failure by either party to set forth in the Notice of Termination any fact or circumstance shall not waive any right of the party hereunder or preclude the party from asserting such fact or circumstance in enforcing the party's rights hereunder.

(c) Company Obligations upon Termination. Upon termination of Executive's employment pursuant to any of the circumstances listed in this Section 3, Executive (or Executive's estate) shall be entitled to receive the sum of: (i) the portion of Executive's Annual Base Salary earned through the Date of Termination, but not yet paid to Executive; (ii) any unpaid Annual Bonus earned by Executive for the year prior to the year in which the Date of Termination occurs, as determined by the Board in its good faith discretion based upon actual performance achieved, which Annual Bonus, if any, shall be paid to Executive when bonuses for such year are paid to actively employed senior executives of the Company but in no event later than March 15 of the year in which the Date of Termination occurs; (iii) any expenses owed to Executive pursuant to Section 2(e); and (iv) any amount accrued and arising from Executive's participation in, or benefits accrued under any employee benefit plans, programs or arrangements, which amounts shall be payable in accordance with the terms and conditions of such employee benefit plans, programs or arrangements (collectively, the "Company Arrangements"). Except as otherwise expressly required by law (e.g., COBRA) or as specifically provided in a benefit plan or herein, all of Executive's rights to salary, severance, benefits, bonuses and other compensatory amounts hereunder (if any) shall cease upon the termination of Executive's employment hereunder.

(d) Deemed Resignation. Upon termination of Executive's employment for any reason, Executive shall be deemed to have resigned from all offices and directorships, if any, then held with the Company or any of its subsidiaries.

4. Severance Payments.

(a) Termination for Cause, or Termination Upon Death, Disability or Resignation from the Company Without Good Reason. If Executive's employment shall terminate as a result of Executive's death pursuant to Section 3(a)(i) or Disability pursuant to Section 3(a)(ii), pursuant to Section 3(a)(iii) for Cause, or pursuant to Section 3(a)(vi) for Executive's resignation from the Company without Good Reason, then Executive shall not be entitled to any severance payments or benefits, except as provided in Section 3(c).

(b) Termination without Cause, or Resignation from the Company with Good Reason. If Executive's employment terminates without Cause pursuant to Section 3(a)(iv), or pursuant to Section 3(a)(v) due to Executive's resignation with Good Reason, then, subject to Executive signing on or before the 60th day following Executive's Separation from Service (as defined below), and not revoking, a release of claims (which Executive will receive no later than ten (10) business days following Executive's Separation from Service) substantially in the form attached as Exhibit A to this Agreement (the "Release"), and Executive's continued compliance with Section 5, Executive shall receive, in addition to payments and benefits set forth in Section 3(c), the following:

(i) an amount in cash equal to the then current Annual Base Salary, payable in the form of salary continuation in regular installments over the 12-month period following the date of Executive's Separation from Service (the "Severance Period") in accordance with the Company's normal payroll practices, commencing on the Company's next regular payday that is at least five days following the effective date of the Release (with the first payment including all amounts accrued to that date) (the "Payment Date");

(ii) the Annual Bonus, payable in the form of a lump sum payment, in an amount equal to the product of (A)(i) the Target Bonus, if the Date of Termination occurs during the first quarter of the calendar year or (ii) the Annual Bonus amount based on actual performance as determined by the Board, if the Date of Termination occurs after the first quarter of the calendar year, multiplied by (B) a fraction, using the number of full months of the year elapsed prior to the Date of Termination as the numerator and 12 as the denominator, payable in either case by the later of March 15 of the year following the year in which the Date of Termination occurs and the Payment Date; and

(iii) if Executive elects to receive continued medical, dental and/or vision coverage under one or more of the Company's group healthcare plans pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), the Company shall directly pay, or reimburse Executive for, the COBRA premiums for Executive and Executive's covered dependents under such plans during the period commencing on Executive's Separation from Service and ending upon the earliest of (X) the last day of the Severance Period, (Y) the date that Executive and/or Executive's covered dependents become no longer eligible for COBRA or (Z) the date Executive becomes eligible to receive medical, dental or vision coverage, as applicable, from a subsequent employer (and Executive agrees to promptly notify the Company of such eligibility). Notwithstanding the foregoing, if the Company determines in its sole discretion that it cannot provide the foregoing benefit without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act) or incurring an excise tax, the Company may alter the manner in which medical, dental or vision coverage is provided to Executive after the Date of Termination so long as such alteration does not increase the after-tax cost to Executive of such benefits.

(c) Change in Control. Notwithstanding anything to the contrary in any applicable Company equity plan or equity agreement, in the event Executive's employment terminates without Cause pursuant to Section 3(a)(iv), or pursuant to Section 3(a)(v) due to Executive's resignation with Good Reason, in either case, within 60 days prior to or on or within 12 months following the date of a Change in Control, subject to Executive signing on or before the 60th day following Executive's Separation from Service, and not revoking, the Release (which Executive will receive no later than ten (10) business days following Executive's Separation from Service) and Executive's continued compliance with Section 5, Executive shall receive, in addition to the payments and benefits set forth in Section 3(c) and Section 4(b), immediate vesting of all unvested equity or equity-based awards held by Executive under any Company equity compensation plans that vest solely based on the passage of time (for the avoidance of doubt, with any such awards that vest in whole or in part based on the attainment of performance-vesting conditions being governed by the terms of the applicable award agreement).

(d) Survival. Notwithstanding anything to the contrary in this Agreement, the provisions of Sections 5 through 9 will survive the termination of Executive's employment and the termination of the Term.

5. Restrictive Covenants. As a condition to the effectiveness of this Agreement, Executive will execute and deliver to the Company contemporaneously herewith the Restrictive Covenant Agreement. Executive agrees to abide by the terms of the Restrictive Covenant Agreement, which are hereby incorporated by reference into this Agreement. Executive acknowledges that the provisions of the Restrictive Covenant Agreement will survive the termination of Executive's employment and the termination of the Term for the periods set forth in the Restrictive Covenant Agreement.

6. Assignment and Successors.

The Company may assign its rights and obligations under this Agreement to any of its affiliates or to any successor to all or substantially all of the business or the assets of the Company (by merger or otherwise). This Agreement shall be binding upon and inure to the benefit of the Company, Executive and their respective successors, assigns, personnel and legal representatives, executors, administrators, heirs, distributees, devisees, and legatees, as applicable. None of Executive's rights or obligations may be assigned or transferred by Executive, other than Executive's rights to payments hereunder, which may be transferred only by will or operation of law. Notwithstanding the foregoing, Executive shall be entitled, to the extent permitted under applicable law and applicable Company Arrangements, to select and change a beneficiary or beneficiaries to receive compensation hereunder following Executive's death by giving written notice thereof to the Company.

7. Certain Definitions.

(a) Cause. The Company shall have "Cause" to terminate Executive's employment hereunder upon:

(i) Executive's willful failure to perform (other than by reason of Disability), or gross negligence in the performance of, Executive's duties and responsibilities to the Company or any of its affiliates;

(ii) Executive's commission of, or indictment or conviction for, any felony or any crime involving dishonesty by Executive;

(iii) Executive's participation in any fraud against the Company or any of its affiliates;

(iv) Any intentional material damage to any property of the Company or any of its affiliates by Executive;

(v) Executive's misconduct which materially and adversely reflects upon the business, operations or reputation of the Company or any of its affiliates, which misconduct has not been cured (or cannot be reasonably cured) within thirty (30) days after the Company gives written notice to Executive regarding such misconduct; or

(vi) Executive's breach of any material provision of this Agreement or any other written agreement between Executive and the Company or any of its affiliates and failure to cure such breach (if reasonably capable of cure) within thirty (30) days after the Company gives written notice to Executive regarding such breach.

(b) Change in Control. "Change in Control" shall have the meaning set forth in the version of the 2018 EIIAP in effect on the Effective Date.

(c) Code. "Code" shall mean the Internal Revenue Code of 1986, as amended, and the regulations and guidance promulgated thereunder.

(d) Date of Termination. "Date of Termination" shall mean (i) if Executive's employment is terminated by Executive's death, the date of Executive's death; or (ii) if Executive's employment is terminated pursuant to Section 3(a)(ii) – (vi) either the date indicated in the Notice of Termination or the date specified by the Company pursuant to Section 3(b), whichever is earlier.

(e) Disability. "Disability" shall mean, at any time the Company or any of its affiliates sponsors a long-term disability plan for the Company's employees, "disability" as defined in such long-term disability plan for the purpose of determining a participant's eligibility for benefits, *provided, however*, if the long-term disability plan contains multiple definitions of disability, "Disability" shall refer to that definition of disability which, if Executive qualified for such disability benefits, would provide coverage for the longest period of time. The determination of whether Executive has a Disability shall be made by the person or persons required to make disability determinations under the long-term disability plan. At any time the Company does not sponsor a long-term disability plan for its employees, "Disability" shall mean Executive's inability to perform, with or without reasonable accommodation, the essential functions of Executive's positions hereunder for a total of six months during any twelve-month period as a result of incapacity due to mental or physical illness as determined by a physician selected by the Company or its insurers and acceptable to Executive or Executive's legal representative, with such agreement as to acceptability not to be unreasonably withheld or delayed. Any unreasonable refusal by Executive to submit to a medical examination for the purpose of determining Disability shall be deemed to constitute conclusive evidence of Executive's Disability.

(f) Good Reason. For the sole purpose of determining Executive's right to severance payments and benefits as described above, Executive's resignation will be with "Good Reason" if Executive resigns within six months after any of the following events, unless Executive consents to the applicable event in writing: (i) a material reduction in Executive's Annual Base Salary or Target Bonus, (ii) a material diminution in Executive's authority, title or duties or areas of responsibility, (iii) the requirement that Executive report to someone other than the Chief Executive Officer of the Company, (iv) the relocation of Executive's primary office to a location more than 40 miles from Watertown, Massachusetts, or (v) a material breach by the Company of this Agreement or any other written agreement with Executive. Notwithstanding the foregoing, no Good Reason event will have occurred unless and until Executive has: (a) provided the Company, within 60 days of Executive's knowledge of the occurrence of the facts and circumstances underlying the Good Reason event, written-notice stating with specificity the applicable facts and circumstances underlying such Good Reason event, and (b) the Company fails to cure the same within 30 days after the receipt of such notice.

8. Parachute Payments.

(a) Notwithstanding any other provisions of this Agreement or any Company equity plan or agreement, in the event that any payment or benefit by the Company or otherwise to or for the benefit of Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise (all such payments and benefits, including the payments and benefits under Section 4(b) and Section 4(c) hereof, being hereinafter referred to as the "Total Payments"), would be subject (in whole or in part) to the excise tax imposed by Section 4999 of the Code (the "Excise Tax"), then the Total Payments shall be reduced (in the order provided in Section 8(b)) to the minimum extent necessary to avoid the imposition of the Excise Tax on the Total Payments, but only if (i) the net amount of such Total Payments, as so reduced (and after subtracting the net amount of federal, state and local income and

employment taxes on such reduced Total Payments and after taking into account the phase out of itemized deductions and personal exemptions attributable to such reduced Total Payments), is greater than or equal to (ii) the net amount of such Total Payments without such reduction (but after subtracting the net amount of federal, state and local income and employment taxes on such Total Payments and the amount of the Excise Tax to which Executive would be subject in respect of such unreduced Total Payments and after taking into account the phase out of itemized deductions and personal exemptions attributable to such unreduced Total Payments).

(b) The Total Payments shall be reduced in the following order: (i) reduction on a pro-rata basis of any cash severance payments that are exempt from Section 409A of the Code ("Section 409A"), (ii) reduction on a pro-rata basis of any non-cash severance payments or benefits that are exempt from Section 409A, (iii) reduction on a pro-rata basis of any other payments or benefits that are exempt from Section 409A, and (iv) reduction of any payments or benefits otherwise payable to Executive on a pro-rata basis or such other manner that complies with Section 409A; provided, in case of clauses (ii), (iii) and (iv), that reduction of any payments attributable to the acceleration of vesting of Company equity awards shall be first applied to Company equity awards that would otherwise vest last in time.

(c) The Company will select an accounting firm or consulting group with experience in performing calculations regarding the applicability of Section 280G of the Code and the Excise Tax (the "Independent Advisors") to make determinations regarding the application of this Section 8. For purposes of such determinations, no portion of the Total Payments shall be taken into account which, in the opinion of the Independent Advisors, (i) does not constitute a "parachute payment" within the meaning of Section 280G(b)(2) of the Code (including by reason of Section 280G(b)(4)(A) of the Code) or (ii) constitutes reasonable compensation for services actually rendered, within the meaning of Section 280G(b)(4)(B) of the Code, in excess of the "base amount" (as defined in Section 280G(b)(3) of the Code) allocable to such reasonable compensation. The costs of obtaining such determination and all related fees and expenses (including related fees and expenses incurred in any later audit) shall be borne by the Company.

(d) If Executive incurs legal fees or other expenses (including expert witness and accounting fees) in an effort to determine the applicability of this Section 8 or establish entitlement to or obtain any portion of the Total Payments that have been reduced under this Section 8 (collectively, "Legal and Other Expenses"), Executive shall be entitled to payment of or reimbursement for such Legal and Other Expenses in accordance with this Section 8(d). Subject to Sections 9(1)(iv) and the other provisions of this Section 8, the Company will reimburse all Legal and Other Expenses on a monthly basis reasonably promptly after presentation of Executive's written request for reimbursement accompanied by evidence reasonably acceptable to the Company that such Legal and Other Expenses were incurred. If the Company establishes before a court of competent jurisdiction that Executive had no reasonable basis for a claim made by Executive hereunder, or acted in bad faith, no further payment of or reimbursement for Legal and Other Expenses shall be due to Executive in respect of such claim, and Executive shall refund any amounts previously paid or reimbursed hereunder with respect to such claim.

(e) In the event it is later determined that to implement the objective and intent of this Section 8, (i) a greater reduction in the Total Payments should have been made, the excess amount shall be returned promptly by Executive to the Company or (ii) a lesser reduction in the Total Payments should have been made, the excess amount shall be paid or provided promptly by the Company to Executive, except to the extent the Company reasonably determines would result in imposition of an excise tax under Section 409A.

9. Miscellaneous Provisions.

(a) Governing Law. This Agreement shall be governed, construed, interpreted and enforced in accordance with its express terms, and otherwise in accordance with the substantive laws of the Commonwealth of Massachusetts without reference to the principles of conflicts of law of the Commonwealth of Massachusetts or any other jurisdiction that would result in application of the laws of a jurisdiction other than the Commonwealth of Massachusetts, and where applicable, the laws of the United States.

(b) Validity. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

(c) Notices. Any notice, request, claim, demand, document and other communication hereunder to any Party shall be effective upon receipt (or refusal of receipt) and shall be in writing and delivered personally or sent by facsimile, a nationally recognized overnight courier service or certified or registered mail, postage prepaid, as follows:

(i) If to the Company, to the General Counsel of the Company at the Company's headquarters,

(ii) If to Executive, to the last address that the Company has in its personnel records for Executive, or

(iii) At any other address as any Party shall have specified by notice in writing to the other Party.

(d) Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed to be an original, but all of which together will constitute one and the same Agreement. Signatures delivered by facsimile or PDF shall be deemed effective for all purposes.

(e) Entire Agreement. The terms of this Agreement, the Restrictive Covenant Agreement incorporated herein by reference as set forth in Section 5, the Indemnification Agreement (defined below) and the 2018 EIIAP and related Award Agreements are intended by the Parties to be the final expression of their agreement with respect to the subject matter hereof and supersede all prior understandings and agreements, whether written or oral, including without limitation any prior employment agreement or offer letter between Executive and the Company. The Parties further intend that this Agreement shall constitute the complete and exclusive statement of their terms and that no extrinsic evidence whatsoever may be introduced in any judicial, administrative, or other legal proceeding to vary the terms of this Agreement.

(f) Indemnification. The Parties acknowledge that they have or will enter into an Indemnification Agreement in substantially the form attached as Exhibit C hereto.

(g) Amendments; Waivers. This Agreement may not be modified, amended, or terminated except by an instrument in writing, signed by Executive and a duly authorized officer of Company. By an instrument in writing similarly executed, Executive or a duly authorized officer of the Company may waive compliance by the other Party with any specifically identified provision of this Agreement that such other Party was or is obligated to comply with or perform; *provided*, *however*, that such waiver shall not operate as a waiver of, or estoppel with respect to, any other or subsequent failure. No failure to

exercise and no delay in exercising any right, remedy, or power hereunder preclude any other or further exercise of any other right, remedy, or power provided herein or by law or in equity.

(h) No Inconsistent Actions. The Parties hereto shall not voluntarily undertake or fail to undertake any action or course of action inconsistent with the provisions or essential intent of this Agreement. Furthermore, it is the intent of the Parties hereto to act in a fair and reasonable manner with respect to the interpretation and application of the provisions of this Agreement.

(i) Construction. This Agreement shall be deemed drafted equally by both the Parties. Its language shall be construed as a whole and according to its fair meaning. Any presumption or principle that the language is to be construed against any Party shall not apply. The headings in this Agreement are only for convenience and are not intended to affect construction or interpretation. Any references to paragraphs, subparagraphs, sections or subsections are to those parts of this Agreement, unless the context clearly indicates to the contrary. Also, unless the context clearly indicates to the contrary, (i) the plural includes the singular and the singular includes the plural; (ii) "and" and "or" are each used both conjunctively and disjunctively; (iii) "any," "all," "each," or "every" means "any and all," and "each and every"; (iv) "includes" and "including" are each "without limitation"; (v) "herein," "hereof," "hereunder" and other similar compounds of the word "here" refer to the entire Agreement and not to any particular paragraph, subparagraph, section or subsection; and (vi) all pronouns and any variations thereof shall be deemed to refer to the masculine, feminine, neuter, singular or plural as the identity of the entities or persons referred to may require.

(j) Enforcement. If any provision of this Agreement is held to be illegal, invalid or unenforceable under present or future laws effective during the Term, such provision shall be fully severable; this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a portion of this Agreement; and the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance from this Agreement. Furthermore, in lieu of such illegal, invalid or unenforceable provision there shall be added automatically as part of this Agreement a provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible and be legal, valid and enforceable.

(k) Withholding. The Company shall be entitled to withhold from any amounts payable under this Agreement any federal, state, local or foreign withholding or other taxes or charges which the Company is required to withhold. The Company shall be entitled to rely on an opinion of counsel if any questions as to the amount or requirement of withholding shall arise.

(l) Section 409A.

(i) *General.* The intent of the Parties is that the payments and benefits under this Agreement comply with or be exempt from Section 409A and, accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance therewith.

(ii) *Separation from Service.* For purposes of any compensation or benefits payable to Executive under this Agreement, all references to "termination of employment" and correlative phrases shall be construed to require a "separation from service" (as defined in Section 1.409A-1(h) of the Treasury regulations after giving effect to the presumptions contained therein) (a "Separation from Service").

(iii) *Specified Employee.* Notwithstanding anything in this Agreement to the contrary, if Executive is deemed by the Company at the time of Executive's Separation from Service to be a "specified employee" for purposes of Section 409A, to the extent delayed commencement of any portion of the benefits to which Executive is entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A, such portion of Executive's benefits shall not be provided to Executive prior to the earlier of (i) the expiration of the six-month period measured from the date of Executive's Separation from Service with the Company or (ii) the date of Executive's death. Upon the first business day following the expiration of the applicable Section 409A period, all payments deferred pursuant to the preceding sentence shall be paid in a lump sum to Executive (or Executive's estate or beneficiaries), and any remaining payments due to Executive under this Agreement shall be paid as otherwise provided herein.

(iv) *Expense Reimbursements.* To the extent that any reimbursements under this Agreement are subject to Section 409A, any such reimbursements payable to Executive shall be paid to Executive no later than December 31 of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, other than medical expenses referred to in Section 105(b) of the Code, and Executive's right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

(v) *Installments.* Executive's right to receive any installment payments under this Agreement, including without limitation any continuation salary payments that are payable on Company payroll dates, shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment as permitted under Section 409A. Except as otherwise permitted under Section 409A, no payment hereunder shall be accelerated or deferred unless such acceleration or deferral would not result in additional tax or interest pursuant to Section 409A. Notwithstanding anything to the contrary contained herein, if the period to consider, return and not revoke the Release crosses two calendar years, any payments or benefits described in Section 4(b) will be paid in the later calendar year.

10. Executive Acknowledgment.

Executive acknowledges that Executive has read and understands this Agreement, is fully aware of its legal effect, has not acted in reliance upon any representations or promises made by the Company other than those contained in writing herein, and has entered into this Agreement freely based on Executive's own judgment.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date and year first above written.

SELECTA BIOSCIENCES, INC.

By: /s/ Carsten Brunn, Ph.D.

Name: Carsten Brunn, Ph.D.

Title: President and Chief Executive Officer

EXECUTIVE

/s/ Bradford D. Dahms

BRADFORD D. DAHMS

EXHIBIT A

Separation Agreement and Release

This Separation Agreement and Release ("Agreement") is made by and between BRADFORD D. DAHMS ("Executive") and Selecta Biosciences, Inc. (the "Company") (collectively referred to as the "Parties" or individually referred to as a "Party"). Capitalized terms used but not defined in this Agreement shall have the meanings set forth in the Employment Agreement (as defined below).

WHEREAS, the Parties have previously entered into that certain Employment Agreement, dated as of _____, 2019 (the "Employment Agreement") and that certain Employee Nondisclosure, Noncompetition and Assignment of Intellectual Property Agreement, dated as of _____, 2019 (the "RCA"); and

WHEREAS, in connection with Executive's termination of employment with the Company or a subsidiary or affiliate of the Company effective _____, 20__, the Parties wish to resolve any and all disputes, claims, complaints, grievances, charges, actions, petitions, and demands that Executive may have against the Company and any of the Releasees as defined below, including, but not limited to, any and all claims arising out of or in any way related to Executive's employment with or separation from the Company or its subsidiaries or affiliates but, for the avoidance of doubt, nothing herein will be deemed to release any rights or remedies in connection with Executive's ownership of vested equity securities of the Company, vested benefits or Executive's right to defense or indemnification by the Company or any of its affiliates pursuant to contract (including, without limitation, the Indemnification Agreement attached to the Employment Agreement) or applicable law (collectively, the "Retained Claims"). The Company agrees not to contest Executive's application for unemployment benefits; provided that nothing herein shall prohibit the Company from responding truthfully to requests for information from, or require the Company to make any false or misleading statements to, any governmental authority.

NOW, THEREFORE, in consideration of the severance payments and benefits described in Section 4 of the Employment Agreement, which, pursuant to the Employment Agreement, are conditioned on Executive's execution and non-revocation of this Agreement, and in consideration of the mutual promises made herein, the Company and Executive hereby agree as follows:

1. Severance Payments; Salary and Benefits. The Company agrees to provide Executive with the severance payments and benefits described in Section 4(b) [and Section 4(c)] of the Employment Agreement, payable at the times set forth in, and subject to the terms and conditions of, the Employment Agreement. In addition, to the extent not already paid, and subject to the terms and conditions of the Employment Agreement, the Company shall pay or provide to Executive all other payments or benefits described in Section 3(c) of the Employment Agreement, subject to and in accordance with the terms thereof.

2. Release of Claims. Executive agrees that, other than with respect to the Retained Claims and subject to the last two sentences of this Section 2, the foregoing consideration represents settlement in full of all outstanding obligations owed to Executive by the Company, any of its direct or indirect subsidiaries and affiliates, and any of their current and former officers, directors, equity holders, managers, employees, agents, investors, attorneys, shareholders, administrators, affiliates, benefit plans, plan administrators, insurers, trustees, divisions, and subsidiaries and predecessor and successor corporations and assigns (collectively, the "Releasees"). Executive, on Executive's own behalf and on behalf of any of Executive's affiliated companies or entities and any of their respective heirs, family members, executors, agents, and assigns, other than with respect to the Retained Claims, except as provided in the last two sentences of this Section 2, hereby and forever releases the Releasees from any

matters of any kind, whether presently known or unknown, suspected or unsuspected, that Executive may possess against any of the Releasees arising from any omissions, acts, facts, or damages that have occurred up until and including the date Executive signs this Agreement, including, without limitation:

(a) any and all claims relating to or arising from Executive's employment or service relationship with the Company or any of its direct or indirect subsidiaries or affiliates and the termination of that relationship;

(b) any and all claims relating to, or arising from, Executive's right to purchase, or actual purchase of any shares of stock or other equity interests of the Company or any of its affiliates, including, without limitation, any claims for fraud, misrepresentation, breach of fiduciary duty, breach of duty under applicable state corporate law, and securities fraud under any state or federal law;

(c) any and all claims for wrongful discharge of employment; termination in violation of public policy; discrimination; harassment; retaliation; breach of contract, both express and implied; breach of covenant of good faith and fair dealing, both express and implied; promissory estoppel; negligent or intentional infliction of emotional distress; fraud; negligent or intentional misrepresentation; negligent or intentional interference with contract or prospective economic advantage; unfair business practices; defamation; libel; slander; negligence; personal injury; assault; battery; invasion of privacy; false imprisonment; conversion; and disability benefits;

(d) any and all claims for violation of any federal, state, or municipal statute, including, but not limited to, Title VII of the Civil Rights Act of 1964; the Civil Rights Act of 1991; the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; the Equal Pay Act; the Fair Credit Reporting Act; the Age Discrimination in Employment Act of 1967; the Older Workers Benefit Protection Act; the Employee Retirement Income Security Act of 1974; the Worker Adjustment and Retraining Notification Act; the Family and Medical Leave Act; and the Sarbanes-Oxley Act of 2002;

(e) any and all claims for violation of the federal or any state constitution;

(f) any and all claims arising out of any other laws and regulations relating to employment or employment discrimination;

(g) any claim for any loss, cost, damage, or expense arising out of any dispute over the non-withholding or other tax treatment of any of the proceeds received by Executive as a result of this Agreement;

(h) any and all claims arising out of the wage and hour and wage payments laws and regulations of the state or states in which Executive has provided service to the Company or any of its affiliates (including without limitation the Massachusetts Payment of Wages Law); and

(i) any and all claims for attorneys' fees and costs.

Executive agrees that the release set forth in this section shall be and remain in effect in all respects as a complete general release as to the matters released. Notwithstanding anything to the contrary contained in this Agreeement, this release does not release claims that cannot be released as a matter of law, including, but not limited to, Executive's right to report possible violations of federal law or regulation to any governmental agency or entity in accordance with the provisions of and rules promulgated under Section 21F of the Securities Exchange Act of 1934 or Section 806 of the Sarbanes-Oxley Act of 2002, or any other whistleblower protection provisions of state or federal law or regulation, Executive's right to

file a charge with or participate in a charge, investigation or proceeding by the Equal Employment Opportunity Commission, or any other local, state, or federal administrative body or government agency that is authorized to enforce or administer laws related to employment, against the Company (with the understanding that Executive's release of claims herein bars Executive from recovering monetary or other individual relief from the Company or any Releasee in connection with any charge, investigation or proceeding, or any related complaint or lawsuit, filed by Executive or by anyone else on Executive's behalf before the federal Equal Employment Opportunity Commission or a comparable state or local agency), claims for unemployment compensation or any state disability insurance benefits pursuant to the terms of applicable state law, claims to continued participation in certain of the Company's group benefit plans pursuant to the terms and conditions of COBRA, non-termination related claims under the Employee Retirement Income Security Act (29 U.S.C. § 1001 et seq.), as amended, claims to any benefit entitlements vested as of the date of separation of Executive's employment, pursuant to written terms of any employee benefit plan of the Company or its affiliates and Executive's right under applicable law, claims for reimbursement of approved business expenses incurred prior to the Date of Termination, rights to vested options under any Award Agreement issued pursuant to the 2018 EIIAP, rights or claims Executive may have as a shareholder of the Company, and any Retained Claims. This release further does not release claims for breach of or to enforce Section 3(c), Section 4(b), Section 4(c) or Section 8 of the Employment Agreement, or claims arising after the date Executive signs this Agreement.

3. Acknowledgment of Waiver of Claims under ADEA. Executive understands and acknowledges that Executive is waiving and releasing any rights Executive may have under the Age Discrimination in Employment Act of 1967 ("ADEA"), and that this waiver and release is knowing and voluntary. Executive understands and agrees that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the date Executive executes this Agreement. Executive understands and acknowledges that the consideration given for this waiver and release is in addition to anything of value to which Executive was already entitled. Executive further understands and acknowledges that Executive is hereby advised by this writing that: (a) Executive should consult with an attorney prior to executing this Agreement; (b) Executive has [21/45] days within which to consider this Agreement, and the parties agree that such time period to review this Agreement shall not be extended upon any material or immaterial changes to this Agreement; (c) Executive has 7 business days following Executive's execution of this Agreement to revoke this Agreement pursuant to written notice to the General Counsel of the Company; (d) this Agreement shall not be effective until after the revocation period has expired; and (e) nothing in this Agreement prevents or precludes Executive from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties, or costs for doing so, unless specifically authorized by federal law. In the event Executive signs this Agreement and returns it to the Company in less than the [21/45] day period identified above, Executive hereby acknowledges that Executive has freely and voluntarily chosen to waive the time period allotted for considering this Agreement.

4. Restrictive Covenants.

(a) Executive acknowledges and agrees that the restrictive covenants and other post-termination obligations set forth in the RCA, including without limitation Executive's obligations relating to confidentiality, non-use and non-disclosure of Confidential Information (as defined in the RCA), non-solicitation, cooperation, and return of property, are hereby incorporated by reference and shall remain in full force and effect pursuant to their terms to the maximum extent permitted by applicable law, except that the parties expressly agree to modify the RCA by removing Section 6, and each subpart thereto, of the RCA, which shall be of no further force or effect upon the Effective Date (as defined below).

Executive represents and warrants that Executive has complied with all provisions of the RCA at all times through the Effective Date.

(b) In consideration for the severance payments and benefits set forth in Section 1 of this Agreement, Executive agrees for a period of 12 months after the Effective Date (the "Noncompetition Restricted Period") to not directly or indirectly, on Executive's own behalf or for the benefit of any other individual or entity: (i) operate, conduct, engage in, or own (except as a holder of not more than three percent (3%) of the stock of a publicly held company), or prepare to operate, conduct, engage in, or own any business that develops, markets, distributes, plans, sells or otherwise provides, or is preparing to develop, market, distribute, plan, sell or otherwise provide, any product or service that is in competition with any of the products or services being developed, marketed, distributed, planned, sold or otherwise provided by the Company or its affiliates at the time of, or during the 12 months preceding, Executive's termination from the Company (a "Competing Business") or (ii) participate in, render services to, or assist any individual or entity that engages in a Competing Business in any capacity (whether as an employee, manager, consultant, director, officer, contractor, or otherwise) (A) which involve the same or similar types of services Executive performed for the Company at any time during the last two years of Executive's employment with the Company or (B) in which Executive could reasonably be expected to use or disclose Confidential Information, in each case (i) and (ii) limited to each city, county, state, territory and country in which (x) Executive provided services or had a material presence or influence at any time during Executive's last two years of employment with the Company or (y) the Company is engaged in or has plans to engage in the Competing Business as of the Effective Date. Without limiting the Company's ability to seek other remedies available in law or equity, if Executive violates this Section 4(b), the Noncompetition Restricted Period shall be extended by one day for each day that Executive is in violation of such provisions, up to a maximum extension equal to the length of the Noncompetition Restricted Period, so as to give the Company the full benefit of the bargained-for length of forbearance.

(c) Executive's continued compliance with the terms of the RCA (as modified in Section 4(a) above) and the noncompetition obligations set forth in Section 4(b) above (collectively, the "Restrictive Covenants") is a material condition to receipt of the severance payments and benefits set forth in Section 1 of this Agreement. In the event Executive breaches any part of such Restrictive Covenants, then, in addition to any remedies and enforcement mechanisms set forth in the RCA and this Agreement and any other remedies available to the Company (including equitable and injunctive remedies), Executive shall forfeit any additional consideration owing and shall be obligated to promptly return to the Company (within two (2) business days of any breach) the full gross amount of all severance payments and benefits provided.

(d) If any provision of the Restrictive Covenants shall be determined to be unenforceable by any court of competent jurisdiction or arbitrator by reason of its extending for too great a period of time or over too large a geographic area or over too great a range of activities, it shall be interpreted to extend only over the maximum period of time, geographic area or range of activities as to which it may be enforceable.

5. Severability. In the event that any provision or any portion of any provision hereof or any surviving agreement made a part hereof becomes or is declared by a court of competent jurisdiction or arbitrator to be illegal, unenforceable, or void, this Agreement shall continue in full force and effect without said provision or portion of provision.

6. No Oral Modification. This Agreement may only be amended in a writing signed by Executive and a duly authorized officer of the Company.

7. Governing Law. This Agreement shall be subject to the provisions of Sections 9(a) and 9(c) of the Employment Agreement.

8. Effective Date. Executive has seven (7) business days after Executive signs this Agreement to revoke it, and this Agreement will become effective on the eighth (8th) business day after Executive signed this Agreement (the "Effective Date"), so long as it has been signed by the Parties and has not been revoked by either Party before such date. For the avoidance of doubt, if Executive revokes this Agreement as provided herein, the Parties' modification to the RCA set forth in Section 4(a) above shall be void and of no effect. Unless the Company has elected or elects to expressly waive Executive's noncompetition obligations set forth in Section 6(a) of the RCA (as amended by this Agreement), the RCA, including without limitation Section 6 of the RCA (as amended by this Agreement), shall remain in full force and effect.

9. Voluntary Execution of Agreement. Executive understands and agrees that Executive executed this Agreement voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Executive's claims against the Company and any of the other Releasees. Executive acknowledges that: (a) Executive has read this Agreement; (b) Executive has not relied upon any representations or statements made by the Company that are not specifically set forth in this Agreement; (c) Executive has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of Executive's own choice or has elected not to retain legal counsel; (d) Executive understands the terms and consequences of this Agreement and of the releases it contains; and (e) Executive is fully aware of the legal and binding effect of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the respective dates set forth below.

EXECUTIVE

Dated: _____

BRADFORD D. DAHMS

SELECTA BIOSCIENCES, INC.

Dated: By: _____

EXHIBIT B

Employee Nondisclosure, Noncompetition and Assignment of Intellectual Property Agreement

[attached]

EXHIBIT C

Form of Indemnification Agreement

[attached]

Exhibit 10.2

[***] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED

Execution Copy

FEASIBILITY STUDY AND LICENSE AGREEMENT

BY AND BETWEEN

ASKLEPIOS BIOPHARMACEUTICAL, INC.

AND

SELECTA BIOSCIENCES, INC.

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FEASIBILITY STUDY AND LICENSE AGREEMENT

This Feasibility Study and License Agreement (this "**Agreement**", as further defined below) is made and entered into as of this 6th day of August, 2019 (the "**Effective Date**"), by and between Asklepios Biopharmaceutical, Inc., a Delaware corporation with an address at 20 TW Alexander Drive, Suite 110, Research Triangle Park, NC 27514 ("**AskBio**"), and Selecta Biosciences, Inc., a Delaware corporation with an address at 480 Arsenal Way, Watertown, MA 27709 ("**Selecta**"). AskBio and Selecta may be referred to herein individually as a "**Party**" and collectively as the "**Parties**."

RECITALS

WHEREAS, AskBio has expertise and intellectual property rights in AAV (as defined below) vector design (including but not limited to inverted capsid and promoter design, and cell lines used for production of AAVs) and manufacturing, and Controls (as defined below) the AskBio Core Technology (as defined below);

WHEREAS, Selecta has expertise and intellectual property rights in antigen-specific biodegradable nanoparticle-based, immune tolerance technology, including such technology comprising synthetic vaccine particle(s) encapsulating the immunomodulator rapamycin ("**ImmTOR**") and Controls the Selecta Core Technology (as defined below);

WHEREAS, AskBio and Selecta desire to develop certain Products (as defined below) and assess the feasibility and benefit of those Products; and

WHEREAS, AskBio and Selecta, upon success of the POC (as defined below), or as agreed by the Parties, desire to collaborate to develop, manufacture, and commercialize Collaboration Products (as defined below) and may, in the future, negotiate and execute definitive agreements to form a joint venture through a to-be formed company, owned in whole or in part by AskBio and Selecta (the "**Joint Venture**" or "**JV**") to develop, manufacture and commercialize such Collaboration Products**.**

NOW, THEREFORE, in consideration of the foregoing and the covenants and promises contained in this Agreement, in accordance with and subject to the terms and conditions specified below, the Parties agree as follows:

AGREEMENT

ARTICLE 1.
DEFINITIONS

Unless otherwise defined in this Agreement, all capitalized terms shall have the meaning ascribed to them in this Article 1.

1.1 "**AAV**" means adeno-associated virus, recombinant adeno-associated virus and all chimerics, hybrids, haploids, polyploids, and derivatives of each of the foregoing.

1.2 "**AAV Product**" means (a) a pharmaceutical product utilizing an AAV vector, transgene and promoter to deliver a gene therapy or (b) any pharmaceutical product incorporating or utilizing ImmTOR for use in conjunction with, or inclusion in, an AAV Product described in (a).

1.3 "**Accounting Standards**" means U.S. Generally Accepted Accounting Principles or International Financial Reporting Standards, as applicable, consistently applied by the applicable Party.

1.4 "**Affiliate**" means, with respect to any person or entity, any other person or entity that directly or indirectly controls, is controlled by, or is under common control with such person or entity, for so long as such control exists. For purposes of this Section 1.4 only, a person or entity shall be deemed to "control" another person or entity if (a) it owns or controls, directly or indirectly, more than fifty percent (50%) of the issued and outstanding voting securities, capital stock, or other comparable equity or ownership interest of the other person or entity, (b) it possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of the person or other entity or (c) it possesses the power to elect or appoint more than fifty percent (50%) of the members of the governing body of the person or other entity. [***]

1.5 "**Agreement**" means this Feasibility Study and License Agreement, including any Exhibits attached hereto, as such may be amended from time to time, in writing, by mutual agreement of the Parties.

1.6 "**Applicable Law**" means any local, state or federal rule, regulation, statute or law in any jurisdiction relevant to the activities undertaken pursuant to this Agreement or applicable to either of the Parties with respect to any matters set forth herein.

1.7 "**Approach**" means the therapeutic approach used to treat a particular [***] targeting a specific gene, whether by mRNA, gene editing, peptide delivery or otherwise, in each case to be delivered using an AAV vector.

1.8 "**AskBio Background Technology**" means all Patent Rights and Know-How: (a) in existence and owned or otherwise Controlled by AskBio or any of its Affiliates as of the Effective Date; or (b) that are created or obtained outside the scope of this Agreement and are owned or otherwise Controlled by AskBio or any of its Affiliates after the Effective Date.

1.9 "**AskBio Core Technology**" means all AskBio Background Technology pertaining to AAV capsids and AAV vectors, including but not limited to any cell lines used for production of AAVs. For the avoidance of doubt, AskBio Core Technology includes, but is not limited to, the Patent Rights listed in Schedule 1.9.

1.10 "**AskBio Licensed Patent Rights**" means any and all Patent Rights licensed by AskBio to Selecta under the AskBio Research License or the AskBio Collaboration Product License, other than Joint Patent Rights.

1.11 "**AskBio Patent Rights**" means any and all Patent Rights that claim an AskBio Invention.

1.12 "**BLA**" means (a) a Biologics License Application as defined by the FDA, 21 CFR § 600 *et. seq.* and applicable regulations promulgated thereunder or (b) the equivalent application to the applicable Competent Authority in any other regulatory jurisdiction, and any amendments to the foregoing (a) or (b), in each case, the filing of which is necessary to request permission to introduce, or deliver for introduction, a biologic product into interstate commerce in such jurisdiction.

1.13 "**Calendar Quarter**" means each of the three (3) month periods ending March 31, June 30, September 30 and December 31; provided, however, that: (a) the first Calendar Quarter of the Term shall extend from the Effective Date to the end of the first complete Calendar Quarter thereafter; and (b) the last Calendar Quarter shall extend from the beginning of the Calendar Quarter in which this Agreement expires or terminates until the effective date of such expiration or termination.

1.14 "**cGMP**" means current good manufacturing practices and standards in relation to the production of pharmaceutical intermediates and active pharmaceutical ingredients (as applicable) as provided for (and as amended from time to time) under the laws, rules or regulations of the applicable Governmental Authority in the country in which the relevant product is manufactured, which, with respect to the European Union, by the standards, rules, principles and guidelines set out in Directive 2001/83/EC (as amended by Directive 2004/27/EC), Directive 2003/94/EC and EudraLex - Volume 4 of the Rules Governing Medicinal Products in the European Union entitled "EU Guidelines to Good Manufacturing Practice Medicinal Products for Human and Veterinary Use" and, with respect to the U.S., is the current Good Manufacturing Practice Regulations to the U.S. Code of Federal Regulations Title 21 (21 CFR, Parts 210, 211, 314 and 600), in each case as applicable.

1.15 "**Change of Control**" means, with respect to a Party, (a) a merger or consolidation of such Party with a Third Party that results in the voting securities of such Party outstanding immediately prior thereto, or any securities into which such voting securities have been converted or exchanged, ceasing to represent more than fifty percent (50%) of the combined voting power of the surviving entity or the parent of the surviving entity immediately after such merger or consolidation, or (b) a transaction or series of related transactions in which a Third Party, together with its Affiliates, becomes the beneficial owner of more than fifty percent (50%) of the combined voting power of the outstanding securities of such Party, or (c) the sale or other transfer to a Third Party of all or substantially all of such Party's business, in each case, other than in connection with the issuance or sale of equity securities for financing purposes.

1.16 "**Clinical Study**" or "**Clinical Studies**" means, respectively, a research study, or research studies, in humans that are (a) designed in accordance with international ethical and scientific quality standards for designing, conducting, recording, and reporting research studies involving investigational medicinal products for human use and that involve the participation of human subjects, which standards are established through Applicable Law, and (b) designed to generate clinical data and results regarding a biological molecule in support of Marketing Approval, including any translational research studies. Clinical Studies include, but are not limited to, any Phase 1 Clinical Study, Phase 2 Clinical Study, or Pivotal Clinical Study.

1.17 "**CMC**" means chemistry, manufacturing, and control.

1.18 "**Commercialization**" means any and all activities related to obtaining pricing and reimbursement approval, marketing, promoting, distributing, importing, exporting, offering for sale, having sold, selling, or conducting any other commercial exploitation activities relating to a Collaboration Product. For clarity, "**Commercialize**" has a correlative meaning.

1.19 "**Commercialization Costs**" means, with respect to a Collaboration Product, the out-of-pocket costs paid by a Party to a Third Party related to Commercialization and FTE Costs actually incurred, after the Effective Date, in connection with Commercialization of such Collaboration Product by or on behalf of a Party in accordance with the applicable Commercialization Plan and Commercialization Plan Budget, as determined from the books and records of the applicable Party and/or its Affiliates maintained in accordance with the Accounting Standards. For clarity, a Product's Commercialization Costs includes the Cost of Goods Sold for such Collaboration Product. Commercialization Costs also include costs associated with Collaboration Product recalls and other field actions and other similar costs associated with the Commercialization of the Collaboration Products that may not be planned for in the Commercialization Plan or Commercialization Plan Budget.

1.20 "**Commercially Reasonable Efforts**" means, with respect to the performance of such activities (including those set forth in the applicable POC Plan, Therapeutic Development Plan or Commercialization Plan, as amended or implemented from time to time) as would reasonably and properly be expended by a Party using efforts and resources comparable to the efforts and resources that a similarly situated company in a similar industry and of similar size and resources to the relevant Party would typically devote in pursuing research and development of products at a similar stage in development or product life, taking into account the safety and efficacy, the product profile, the then current competitive environment for such product and the likely timing of such product's entry into the market, the patent and other proprietary position of the product, the pricing and launching strategy for the respective product, the regulatory environment and status of such product, and other relevant scientific, technical and commercial factors commonly considered in similar circumstance. Commercially Reasonable Efforts shall be determined on a country-by-country (or region-by-region, where applicable) basis, as applicable.

1.21 "**Competent Authority**" means any regulatory agency, department, bureau, commission, council, or other governmental entity of (a) any country, territory, national, federal, state, provincial, county, city, or other political subdivision government, including the FDA, or (b) any supranational body (including the EMA), in any applicable jurisdiction in the world, involved in the granting of Regulatory Approval.

1.22 "**Confidential Information**" means all Know-How, which is generated by or on behalf of a Party under this Agreement or which one Party or any of its Affiliates or contractors has provided or otherwise made available to the other Party pursuant to this Agreement, where made available orally, in writing, or in electronic form, including (a) such Know-How comprising or relating to concepts, discoveries, Inventions, data, designs or formulae arising from this Agreement and (b) any unpublished patent applications disclosed hereunder. The existence and terms of this Agreement constitute Confidential Information of both of the Parties.

1.23 "**Control**" or "**Controlled**" means, with respect to any material, Know-How, or intellectual property right (including Patent Rights), that a Party: (a) owns; or (b) has a license to such material, Know-How, or intellectual property right and, in each case ((a) and (b)), has the power to grant to the other Party access, a license, or a sublicense (as applicable) to the same on the terms and conditions set forth in this Agreement without violating any obligations of the granting Party to a Third Party. Notwithstanding anything to the contrary in this Agreement, the following shall not be deemed to be Controlled by a Party: (i) any material, Know-How, or intellectual property right (including Patent Rights) owned or licensed by any Third Party acquirer of such Party immediately prior to the effective date of the Change of Control of such Party making such Third Party an acquirer; and (ii) any material, Know-How, or intellectual property right (including Patent Rights) that any Third Party acquirer subsequently develops without accessing or practicing the material, Know-How, or intellectual property right (including Patent Rights) Controlled by such Party immediately prior to the effective date of the Change of Control of such Party making such Third Party an acquirer.

1.24 "**Cost of Goods Sold**" means, with respect to a Collaboration Product, actual costs and expenses incurred by the Parties or their Affiliates allocable to the sourcing and Manufacture of such Collaboration Product; provided, however, that with respect to a Collaboration Product acquired by the Parties or their Affiliates from a Third Party, the Cost of Goods Sold for such Collaboration Product shall be deemed to be the amount actually paid therefor to such Third Party or incurred by the Parties or their Affiliates for such Collaboration Product, including the transfer price payable by the Parties or their Affiliates to such Third Party, and all out-of-pocket costs incurred by the Parties and their Affiliates for handling, intake, testing and holding and storing such Collaboration Product, including any special packaging expenses, taxes, inspection fees and other similar out-of-pocket charges applicable to the shipping and transport of such Collaboration Product purchase by the Parties or their Affiliates, in all cases for or allocable to such Collaboration Product in accordance with Accounting Standards.

1.25 "**Critical Matter**" means the following matters, to the extent they are within the scope of the JSC's decision-making authority, (a) approval of a POC Plan and any material changes to a POC Plan; (b) a decision for a Collaboration Product that would cause the Shared Costs to exceed the then current approved Therapeutic Development Plan Budget for such Collaboration Product in excess of the threshold set forth in Section 4.2.2.4.2 (Overages); (c) approval of the protocol (and any substantive amendments thereto) for each clinical trial of the Collaboration Products; (d) approval of elements of the Commercialization Plan related to the price for a given Collaboration Product and whether to launch and the timing for launch of a Collaboration Product; and (e) the determination of whether POC or [***] has been attained (provided that such determination shall not be submitted to mediation until after the POC Determination Deadline); in each case, (a) through (e), except to the extent either Party is expressly granted final decision-making authority under this Agreement.

1.26 "**CRO**" means a contract research organization.

1.27 "**Development**" or "**Develop**" means, with respect to a Product, any and all pre-clinical, non-clinical and clinical research and development activities for such Product, and that are reasonably related to or leading to the development, preparation, and submission of data and information to a Competent Authority for the purpose of obtaining, supporting or expanding Marketing Approval or to the appropriate body for obtaining, supporting or expanding pricing approval, including all activities related to pharmacokinetic profiling, design and conduct of Clinical Studies, those Manufacturing related activities that support the Development of the applicable Product (such as process development, scale up, test method development, formulation development, delivery system development, quality control development, and validation) and CMC activities, medical affairs, regulatory affairs, statistical analysis, report writing, and regulatory filing creation and submission (including the services of outside advisors and consultants in connection therewith).

1.28 "**Development Costs**" means, with respect to a Product, all FTE Costs and out-of-pocket costs actually incurred by a Party to Third Parties (collectively) after the Effective Date in connection with the Development of such Product in accordance with the relevant POC Plan or Therapeutic Development Plan and POC Budget or Therapeutic Development Plan Budget, as determined from the books and records of the applicable Party and/or its Affiliates maintained in accordance with the Accounting Standards and each Party's policies and practices as such may be modified from time to time. For clarity, Development Costs shall include all filing fees and expenses associated with regulatory submissions to a Governmental Authority for the Products. In the event that the Parties mutually agree in a POC Plan or Therapeutic Development Plan to conduct activities separately or in advance with respect to products incorporating the AskBio Core Technology or Selecta Core Technology, but not both together, in connection with, or in preparation for the Development of a Product, the FTE Costs and out-of-pocket costs associated with such activities shall nevertheless be included in Development Costs.

1.29 "**Disclosing Party**" means the Party disclosing Confidential Information to the other Party hereunder.

1.30 "**EMA**" means the European Medicines Agency or any successor entity thereto.

1.31 "**European Union**" or "**EU**" means the member states of the European Union as of the Effective Date (including for the avoidance of doubt, the United Kingdom), and such other countries as may become part of the European Union after the Effective Date. For clarity, to the extent the United Kingdom and/or any other member state of the European Union would not anymore be a member of the European Union after the Effective Date, it shall still be included in this definition of EU for the purposes of this Agreement.

1.32 "**FDA**" means the United States Food and Drug Administration or any successor entity thereto.

1.33 "**FTE**" shall mean, with respect to an applicable Product, a full-time equivalent person-year of work engaged in the direct performance of the applicable research, Development, Manufacturing, or Commercialization activities for such Product, determined using an 1,800-hour annual base. In no circumstance can the work of any given person in a given year exceed one (1) FTE. For clarity, indirect personnel (including supervisors and support functions such as legal, finance or business development) shall not constitute FTEs.

1.34 "**FTE Costs**" means, for a given period and with respect to an applicable Product, the product of (a) the total FTEs (proportionately, on a per-FTE basis) dedicated by a Party or its Affiliates in the particular period to the direct performance of the applicable Development, Manufacturing, or Commercialization activities allocated to such Party hereunder and that are reasonably allocable to such Product and (b) the applicable FTE Rate.

1.35 "**FTE Rate**" means, unless otherwise agreed between the Parties, a rate per FTE not to exceed [***] Dollars ($[***]) per hour. The FTE Rate is "fully burdened" and will cover employee salaries, benefits, and overhead for such facilities and equipment and other materials and services including ordinary laboratory and Manufacturing consumables procured from distributors of relevant products as they may use, to the extent allocable to such FTE. Commencing upon the first (1st) anniversary of the Effective Date and upon every anniversary thereafter, the FTE Rate will be adjusted in accordance with the percentage change over the applicable annual period in the Consumer Price Index (U.S. Bureau of Labor Statistics for all urban consumers, U.S. city average, all items).

1.36 "**GCP**" means Good Clinical Practices, including as set forth in 21 C.F.R., Parts 50 and 56.

1.37 "**GLP**" means Good Laboratory Practices, including as set forth in 21 C.F.R., Part 58.

1.38 "**GLP Tox Study**" means, a study conducted in a species using applicable regulatory good laboratory practices for the purposes of assessing the onset, severity, and duration of toxic effects and their dose dependency with the goal of establishing a safety profile required for a

regulatory submission supporting the dosing of human subjects, as outlined in applicable FDA (or other Competent Authority) or ICH guidance.

1.39 "**Governmental Authority**" means any court, agency, department, authority (including any regulatory authority) or other instrumentality of any national, state, county, city or other political subdivision.

1.40 "**ICH**" means International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use

1.41 "**IND**" or "**IND/IMPD**" means (a) an Investigational New Drug Application as defined in the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 301 *et. seq*. and applicable regulations promulgated thereunder by the FDA, (b) the Investigational Medicinal Product Dossier in the European Union, or (c) the equivalent application to the applicable Competent Authority in any other regulatory jurisdiction, and any amendments to the foregoing (a), (b) or (c), in each case, the filing of which is necessary to initiate or conduct clinical testing of an investigational drug or biological product in humans in such jurisdiction.

1.42 "**Inventions**" means any Know-How, composition of matter, article of manufacture or other subject matter, whether patentable or not, that is conceived or reduced to practice under and as a result of any work performed pursuant to a POC Plan or Therapeutic Development Plan or Commercialization Plan.

1.43 "**Joint Patent Rights**" means any and all Patent Rights that claim a Joint Invention.

1.44 "**Know-How**" means all technical information, know-how, data, inventions, discoveries, trade secrets, specifications, instructions, processes, formulae, methods, protocols, expertise and other technology, and all biological, chemical, pharmacological, biochemical, toxicological, pharmaceutical, physical and analytical, safety, quality control, manufacturing, preclinical and clinical data relevant to any of the foregoing. For clarity, Know-How excludes Patent Rights and materials.

1.45 "**MAA**" means a Marketing Authorization Application, in relation to any Collaboration Product, filed or to be filed with the FDA, EMA, or other Competent Authority, for authorization to place a medicinal product on the market in the United States, European Union or any other territory, including a BLA, or any equivalent application that is filed with the relevant Competent Authority in such country or regulatory jurisdiction.

1.46 "**Manufacture**" or "**Manufacturing**" means, with respect to a Product, all activities related to the manufacture of the Product, including, but not limited to, manufacturing supplies for Development or Commercialization, packaging, in-process and finished product testing, release of product or any component or ingredient thereof, quality assurance and quality control activities related to manufacturing and release of product, ongoing stability tests, storage, shipment, import and export as needed, improvement of production, improvement of manufacturing processes, and regulatory activities related to any of the foregoing.

1.47 "**Marketing Approval**" means all approvals, licenses, registrations or authorizations of the Competent Authorities in a country, necessary for the commercial marketing and sale of a Product in such country, including (a) the approval of a MAA or a BLA, and (b) a determination or decision establishing prices for a Product that can be charged or reimbursed in regulatory jurisdictions where the applicable Competent Authorities approve or determine the price or reimbursement of pharmaceutical products.

1.48 "[***]" means the determination by the JSC, based on the results of the POC Studies with respect to [***] (and such other studies deemed reasonably necessary by the Parties following completion of the POC Studies with respect to the [***], including in response to input from Regulatory Authorities, and set forth in the POC Plans), that the use of ImmTOR in conjunction with AAV capsids using the AskBio Core Technology or other AAV capsids as mutually agreed by both Parties can serve to mitigate the formation of neutralizing anti-AAV capsid antibodies in [***].

1.49 "**Net Profits**" means, with respect to a Calendar Quarter and a Collaboration Product, Net Sales for such Collaboration Product less Shared Costs for such Collaboration Product.

1.50 "**Net Sales**" means the gross amount invoiced with respect to the sale of Collaboration Products, less the following deductions solely to the extent such deduction: (a) is reasonable and customary, (b) is included in the gross invoiced sales price for such Collaboration Product or otherwise directly paid or actually incurred by the seller with respect to the sale of such Collaboration Product, (c) is applicable and in accordance with standard allocation procedures, (d) has not already been deducted or excluded, (e) is incurred in the ordinary course of business in type and amount consistent with good industry practice, and (f) is determined in accordance with, and as recorded in revenues under GAAP ("**Permitted Deductions**"):

1.50.1 trade, cash, and credit allowances for such Collaboration Product; price reductions (retroactive or otherwise);

1.50.2 any tax, tariff, duty (including custom duty) or other governmental charge (such as excise, sales or use taxes or value added tax), levied on the sale, transportation or delivery of such Collaboration Product;

1.50.3 customary freight, insurance, packing costs and other transportation charges added to the sales price that are incurred in delivering such Collaboration Product;

1.50.4 amounts repaid or credits taken by reason of rejections, defects, or returns of such Collaboration Product or because of retroactive price reductions, or due to recalls or rebates required by Applicable Laws; and

1.50.5 any fees for services provided by wholesalers and warehousing chains related to the distribution of such Collaboration Product and the portion of administrative fees paid during the relevant time period to group purchasing organizations, pharmaceutical

benefit managers and/or Medicare Prescription Drug Plans relating specifically to such Collaboration Product.

"Net Sales" shall not include any consideration received with respect to a sale, use or other disposition of any Collaboration Product in a country for purposes of conducting Clinical Studies in the course of Development of the Collaboration Product in accordance with this Agreement or as samples (reasonable in number), for compassionate use, or for other pre-clinical, clinical, or regulatory purposes, in each case to the extent such Collaboration Product is sold at or below cost.

1.51 "**Other Joint Venture**" means any joint venture entity formed by AskBio, or in which AskBio otherwise holds at least a fifty percent (50%) ownership issue, which does not develop or commercialize AAV Products for use in Collaboration Indications, by targeting the gene specified in Schedule 4.1 for such Collaboration Indication, and with respect to each [***] utilizing the associated Approach specified in Schedule 4.1.

1.52 "**Patent Rights**" means any and all issued patents and pending patent applications (which, for purposes of this Agreement, include certificates of invention, applications for certificates of invention and priority rights) in any country or region, including all provisional applications, substitutions, continuations, continuations-in-part, continued prosecution applications including requests for continued examination, divisional applications and renewals, and all letters patent or certificates of invention granted thereon, and all reissues, reexaminations, extensions (including pediatric exclusivity patent extensions), term restorations, renewals, substitutions, confirmations, registrations, revalidations, revisions and additions of or to any of the foregoing, in each case, in any country or jurisdiction.

1.53 "**Phase 1 Clinical Study**" means a clinical study of a product in human subjects which provides for the first introduction into humans of a product, conducted in healthy volunteers or patients to obtain information on product safety, tolerability, pharmacological activity, or pharmacokinetics, as described in 21 C.F.R. § 312.21(a) (or the non-United States equivalent thereof), and may also include a Phase 1 Clinical Study Expansion Cohort.

1.54 "**Phase 1 Clinical Study Expansion Cohort**" means the expansion of a Phase 1 Clinical Study to include additional patient(s) following the selection of a dose during the dose escalation part of the Phase 1 Clinical Study (such as a maximum tolerated dose).

1.55 "**Phase 2 Clinical Study**", "**Phase 2a Clinical Study**" or "**Phase 2b Clinical Study**" means a clinical study of a product that is prospectively designed to establish the safety, dose ranging and efficacy of a product as further defined in 21 C.F.R. § 312.21(b) (or the non-United States equivalent thereof).

1.56 "**Pivotal Clinical Study**" means a clinical study of a product that is designed to generate statistically significant evidence of the efficacy of a product for a particular indication or use (as well as additional safety information) and that is intended to form the primary scientific

support for filing a BLA to obtain Marketing Approval to market the product (or any MAA for the non-United States equivalent thereof).

1.57 "**POC**" means, through the conduct of the POC Studies, the determination in human clinical studies that the use of ImmTOR in conjunction with (a) AAV [***] or (b) [***] as mutually agreed by both Parties for the treatment of Methylmalonic Acidemia (MMA), based on Selecta's product candidate SEL-302, in each case, (a) and (b), using both the Selecta Core Technology and the AskBio Core Technology, serves to mitigate the formation of neutralizing anti-AAV capsid antibodies; provided, however, that if the FDA does not approve the conduct of the POC Studies with respect to the [***] or otherwise withdraws such approval, then POC shall also mean, through the conduct of other studies mutually agreed to by the Parties, the determination in human clinical studies that the use of ImmTOR serves to mitigate the formation of neutralizing anti-AAV capsid antibodies. For clarification, the Parties may elect to conduct the POC Studies in territories outside of the United States.

1.58 "**Profit Share**" means Net Profits multiplied by the Profit Share Percentage.

1.59 "**Recipient**" means the Party receiving Confidential Information hereunder.

1.60 "**Regulatory Approval**" means any and all approvals, licenses, registrations, or authorizations by a Competent Authority necessary for the Development activities (including any IND/IMPD approval), Manufacturing activities or Commercialization activities (including, where applicable, Marketing Approval, pricing, labeling and reimbursement determinations or approvals).

1.61 "**Selecta Background Technology**" means all Patent Rights and Know-How: (a) in existence and owned or otherwise Controlled by Selecta or any of its Affiliates as of the Effective Date; or (b) that are created or obtained outside the scope of this Agreement and are owned or otherwise Controlled by Selecta or any of its Affiliates after the Effective Date.

1.62 "**Selecta Core Technology**" means all Selecta Background Technology pertaining to ImmTOR. For the avoidance of doubt, Selecta Core Technology includes, but is not limited to, the Patent Rights listed in Schedule 1.62.

1.63 "**Selecta Licensed Patent Rights**" means any and all Patent Rights licensed by Selecta to AskBio under the Selecta Research License or the Selecta Collaboration Product License, other than Joint Patent Rights.

1.64 "**Selecta Patent Rights**" means any and all Patent Rights that claim a Selecta Invention.

1.65 "**Shared Costs**" means, with respect to a Collaboration Product, (a) Development Costs incurred pursuant to the applicable Therapeutic Development Plan, (b) Cost of Goods Sold for such Collaboration Product Manufactured for purposes of Developing such Collaboration Product in accordance with the relevant Therapeutic Development Plan and Commercializing

such Collaboration Product in accordance with the applicable Commercialization Plan, (c) Commercialization Costs, and (d) any Third Party Intellectual Property Payments.

1.66 "**Third Party**" means any person or entity other than AskBio or Selecta or an Affiliate of AskBio or Selecta.

1.67 "**Third Party Intellectual Property Payments**" means, with respect to a Collaboration Product, any royalties, license fees, maintenance fees or other monetary payments made by a Party or its Affiliates to any Third Party in consideration of a license(s) under Patent Rights or Know-How or other intellectual property rights that are owned or Controlled by such Third Party, where such license is included in the Therapeutic Development Plan or otherwise determined by the JSC to be necessary to Develop, Manufacture or Commercialize such Collaboration Product without infringing such Third Party's Patent Rights, Know-How or other intellectual property rights, but in all cases, excluding all monetary payments owed by the Parties or their Affiliates to a Third Party in consideration of such license(s) to the extent such license is under intellectual property rights (including Patent Rights) owned or Controlled by a Third Party that were valid and enforceable as of the Effective Date and would be infringed or misappropriated by either Party's use or practice of the AskBio Core Technology or the Selecta Core Technology, as it existed as of the Effective Date, in accordance with the Research Licenses or the Collaboration Product Licenses; provided that any such licenses obtained (a) by Selecta or its Affiliates with respect to the AskBio Core Technology or (b) by AskBio or its Affiliates with respect to the Selected Core Technology, shall require approval by the JSC prior to execution.

1.68 **Additional Definitions.** Each of the following definitions is set forth in the section of this Agreement as indicated below.

Definition	Section
AskBio	Preamble
AskBio Collaboration Product License	8.1.3.1.2
AskBio Improvements	8.2.1
AskBio Indemnified Party	10.2
AskBio Inventions	8.2.2
AskBio Research License	8.1.2
Clinical Feasibility Activities	3.6.1.1
Clinical Feasibility Budget	3.6.1.2
Clinical Feasibility Plan	3.6.1.1
Clinical Feasibility Plan Timeline	3.6.1.1
Code	11.8

Definition	Section
Collaboration	4.1
Collaboration Indication	4.1
Collaboration Product Licenses	8.1.3.1.2
Collaboration Products	4.1
Collaboration Start Date	3.8
Commercialization Lead Party	4.2.5
Commercialization Plan	4.2.5
Commercialization Plan Budget	4.2.5
Committees	5.1.2
Deadlocked Matter	5.1.4
Definitive JV Agreements	4.2.8.1
Effective Date	Preamble
[***]	[***]

Definition	Section
Enforcement Notice	8.4.1
Enforcing Party	8.4.2
Failed Indication	11.5
FCPA	13.18
Final Clinical Feasibility Report	3.6.2.1
Final POC Trial Report	3.6.2.1
Final Pre-Clinical Report	3.5.2.2
ImmTOR	Recitals
IND Enabling Studies	3.5.1.1
Indemnified Party	10.3.1
Indemnifying Party	10.3.1
Initial POC Trial Report	3.6.2.1
JAMS	12.4
JCC	5.2.3
JDC	5.2.2
JFC	5.2.4
Joint Commercialization Committee	5.2.3
Joint Development Committee	5.2.2
Joint Finance Committee	5.2.4
Joint Improvements	8.2.1
Joint Inventions	8.2.2
Joint Patent Right Infringement	8.4.1
Joint Steering Committee	5.1.1
Joint Venture	Recitals
JSC	5.1.1
JSC Co-Chairs	5.1.2
JV	Recitals
KOL	4.2.3.1
Licensed Patent Right Infringement	8.4.1
[***]	[***]
Losses	10.1
[***]	[***]
Non-Proposing Party	4.2.2.5

Definition	Section
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Opt-Out Option	6.3.1
Parties	Preamble
Partnering Notice	4.2.8.2
Party	Preamble
Patent Prosecution and Enforcement Committee	5.2.1
Permitted Deductions	1.50
Pharmacovigilance Agreement	4.2.3.7
POC Budget	3.6.1.2
POC Candidate(s)	3.1
POC Clinical Trials	3.5.1.1
POC Cost Report	3.4
POC Costs	3.3
POC Determination Deadline	3.7.3
POC Notice	3.8
POC Plans	3.6.1.1
POC Studies	3.1
POC Trial Reports	3.6.2.1
Potential Partnership	4.2.8.2
PPEC	5.2.1
Pre-Clinical Plan	3.5.1.1
Pre-Clinical Plan Budget	3.5.1.3
Pre-Clinical Plan Timeline	3.5.1.2
Preliminary Pre-Clinical Report	3.5.2.1
Preparing Party	6.2.3
Product	3.1
Profit Share Percentage	6.2.1
Proposed Study(ies)	4.2.2.5
Proposing Party	4.2.2.5
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Publications Policy	7.4
Reconciliation Report	6.2.3
Regulatory Lead Party	4.2.3.1

Definition	Section
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Research Licenses	8.1.2
Rules	12.4
Selecta	Preamble
Selecta Collaboration Product License	8.1.3.1.1
Selecta Improvements	8.2.1
Selecta Indemnified Party	10.1
Selecta Inventions	8.2.2
Selecta Research License	8.1.2
Study Data	4.2.3.2
Study Results	3.7.2

Definition	Section
Subcommittee	5.1.2
Summary Statement	6.2.2
Term	11.1
Therapeutic Development Plan	4.2.2.1
Therapeutic Development Plan Budget	4.2.2.1
Therapeutic Development Plan Timeline	4.2.2.1
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Third Party Claims	10.1
Viralgen	1.4
Withholding Party	6.5
Working Group	5.3

ARTICLE 2.
COLLABORATION OVERVIEW

Subject to the terms and conditions of this Agreement, the Parties will conduct the POC Studies (as defined below) and undertake the related activities set forth in Article 3 in furtherance of seeking to determine whether POC is met. If POC is achieved, or the Parties mutually agree, the Parties will thereafter collaborate in the development and commercialization of certain AAV-mediated therapeutics which use ImmTOR and other Selecta Core Technology in combination with the AskBio Core Technology. Such further development and commercialization will be conducted pursuant to the terms and conditions of this Agreement unless, following attainment of POC, the Parties elect to conduct their collaboration through a separate entity and form a Joint Venture or pursuant to another structure mutually agreed by the Parties.

ARTICLE 3.
FEASIBILITY POC

3.1 **Overview**. In order to demonstrate POC, the Parties will conduct certain IND Enabling Studies and POC Clinical Trials of certain AAV-mediated therapeutics which use Selecta Core Technology in combination with the AskBio Core Technology (each such therapeutic, a "**Product**"), as set forth in the applicable POC Plan and in further detail below in this Article 3. Such IND Enabling Studies and POC Clinical Trials may be referred to herein, individually or collectively, as the "**POC Studies**". The POC Studies will be conducted with respect to: (a) a Product consisting of [***] developed using the AskBio Core Technology and powered by ImmTOR [***]; and (b) a Product intended for the treatment of Methylmalonic Acidemia (MMA), based on Selecta's product candidate SEL-302 in an [***] as mutually agreed by both

Parties (the "**Therapeutic POC Candidate**"). The [***] and Therapeutic POC Candidate may be referred to herein, individually or collectively, as the "**POC Candidate(s)**".

3.2 **Manufacturing.** Selecta shall be responsible for, and shall use Commercially Reasonable Efforts to conduct, the manufacture and supply of ImmTOR and all other Selecta Core Technology, necessary or useful for the conduct of the POC Studies, in accordance with the applicable POC Plan. Similarly, AskBio shall be responsible for, and shall use Commercially Reasonable Efforts to conduct, the manufacture and supply of AAV capsids and all other AskBio Core Technology necessary or useful for the conduct of the POC Studies, in accordance with the applicable POC Plan. For clarity, such supply by each Party shall include, without limitation, supplying ImmTOR and AAV capsids to the applicable CRO for purposes of conducting any studies included in the Pre-Clinical Plan. Each Party shall conduct its manufacturing and supply activities pursuant to this Section 3.2 in accordance with Applicable Law (including cGMPs for all clinical supply) and this Agreement.

3.3 **POC Costs.** Each Party shall bear its own costs for the [***] activities conducted pursuant to the Pre-Clinical Plans (other than [***]), including such costs associated with the IND Enabling Studies, unless otherwise explicitly agreed in writing. All other Development Costs and Cost of Goods Sold for POC Candidate activities conducted pursuant to the POC Plans that are set forth in the applicable POC Budget, including such costs associated with the POC Studies, (collectively, the "**POC Costs**") shall be shared equally by the Parties, unless otherwise explicitly agreed in writing. The POC Costs shall be reported and trued up in accordance with Section 3.4.

3.4 **Reporting and POC Cost Sharing.** In addition to any reporting requirements set forth elsewhere in this Agreement or the POC Plans, each Party will report to the other Party, within thirty (30) days of the end of each calendar month, a summary of its progress under each POC Plan, as well as an itemization of its POC Costs incurred during such calendar quarter under each of the Pre-Clinical Plan and the Clinical Feasibility Plan for each Therapeutic POC Candidate (each, a "**POC Cost Report**"). Within thirty (30) days after provision of the last POC Cost Report for the Pre-Clinical Plan, AskBio shall reconcile all such POC Cost Reports and issue to Selecta a statement of any amounts owed by a Party to the other Party to ensure that the Parties have shared the POC Costs from the Pre-Clinical Plan equally. Within thirty (30) days of the provision of such statement, the Party owing pre-clinical POC Cost amounts to the other Party shall pay such amounts. Similarly, within thirty (30) days after provision of the last POC Cost Report for the Clinical Feasibility Plan, AskBio shall reconcile all such POC Cost Reports and issue to Selecta a statement of any amounts owed by a Party to ensure that the Parties have shared the POC Costs from the Clinical Feasibility Plan equally. Within thirty (30) days of the provision of such statement, the Party owing clinical POC Cost amounts to the other Party shall pay such amounts.

3.5 **Pre-Clinical Feasibility Activities**

3.5.1 **Pre-Clinical Plan**.

3.5.1.1 Within sixty (60) days following the Effective Date of this Agreement, the JSC will develop a plan (the "**Pre-Clinical Plan**"), based on a preliminary plan attached hereto as Schedule 3.5.1.1, setting forth all of the pre-clinical tests, studies and activities to be conducted by each Party (the "**IND Enabling Studies**") to support the filing of an IND for a Clinical Study of the [***] and an IND for a Phase 1 Clinical Study of the Therapeutic POC Candidate selected by the Parties (as set forth in more detail in the Clinical Feasibility Plan, the "**POC Clinical Trials**"), for approval by the JSC. The purpose of the IND Enabling Studies is to enable the filing of an IND to conduct certain Clinical Studies (as described above) to test POC. Such Pre-Clinical Plan may include pharmacology studies and GLP Tox Studies deemed necessary to support an IND filing, subject to further guidance from the FDA. All modifications to the Pre-Clinical Plan, including the Pre-Clinical Plan Timeline and Pre-Clinical Plan Budget, shall be subject to approval in writing by the JSC.

3.5.1.2 The Pre-Clinical Plan shall set forth a timeline for the conduct of activities thereunder (the "**Pre-Clinical Plan Timeline**"). Without limiting the foregoing, the Pre-Clinical Plan will include good faith estimates for critical development milestones for each POC Candidate, such as completion of the GLP Tox Study, manufacturing of pre-clinical materials under cGMP, and preparation of documentation for submission of an IND (e.g., toxicity, CMC, and initial stability). Subject to further guidance from the FDA, the IND Enabling Studies may include pharmacology studies and GLP Tox Studies deemed necessary to support an IND filing.

3.5.1.3 As part of the Pre-Clinical Plan, the Parties shall agree upon a budget for performance of the Pre-Clinical Plan, including performance of the IND Enabling Studies (the "**Pre-Clinical Plan Budget**").

3.5.1.4 Each Party shall cooperate with the other Party in the determination of the IND Enabling Studies and finalization of the Pre-Clinical Plan, including by participating in related discussions with the Competent Authorities. AskBio shall lead all discussions with the Competent Authorities regarding the Pre-Clinical Plan, provided, however, that Selecta shall have the right to actively participate in any interactions with such Competent Authorities and shall have ultimate decision-making authority with respect to any communications with, or submissions to, such Competent Authorities that relate primarily to Selecta Background Technology. To facilitate the foregoing, AskBio shall provide prompt prior written notice to Selecta, and in any case no less than fifteen (15) days prior to such interactions (to the extent practicable), in order to provide Selecta sufficient time to prepare to participate in such

interactions or to revise such communications or submissions. AskBio shall have ultimate decision-making authority with respect to any communications with, or submissions to, such Competent Authorities regarding the Pre-Clinical Plan that relate primarily to any matter other than Selecta Background Technology. All disputes regarding the content of the Pre-Clinical Plan shall be resolved by the JSC.

3.5.1.5 Each Party shall use Commercially Reasonable Efforts to perform the activities allocated to it in the Pre-Clinical Plan, in accordance with the Pre-Clinical Plan Timeline, the Pre-Clinical Plan Budget and this Agreement. Except for the manufacture and supply of ImmTOR and other necessary Selecta Core Technology, and subject to the foregoing sentence, AskBio shall conduct and complete all IND Enabling Studies set forth in the Pre-Clinical Plan. Notwithstanding the foregoing, AskBio may, at its sole discretion, elect to have selected IND Enabling Studies performed by its Affiliates and/or subcontract standard tasks and services to Third Party providers of such services, including, without limitation, CROs and other subcontractors; provided that AskBio shall be and remain responsible for ensuring that the performance of all such IND Enabling Studies by its Affiliates or such Third Parties complies with the terms of this Agreement and Applicable Law, and in no event shall any such delegation or subcontract release AskBio from any of its obligations under this Agreement. The Parties agree that any Third Party CRO contracted to conduct any pharmacology studies or GLP Tox Studies in accordance with the Pre-Clinical Plan will use materials provided by Selecta and AskBio, and that such Third Party CRO shall be selected and engaged by AskBio.

3.5.2 **Pre-Clinical Studies Reporting Requirements**

3.5.2.1 Within thirty (30) days after completion of any studies set forth in the Pre-Clinical Plan, and at such earlier time points mutually agreed upon by the Parties in the Pre-Clinical Plan or otherwise through the JSC, AskBio shall provide Selecta with a written progress report which shall describe the activities under the IND Enabling Studies that AskBio has performed to date, all results generated to date, and evaluate the work performed in relation to the goals of the Pre-Clinical Plan and the POC Studies (the "**Preliminary Pre-Clinical Report**"). Upon Selecta's request, AskBio shall promptly provide any data, results or reports generated, prepared or received in the performance of the Pre-Clinical Plan or POC Studies.

3.5.2.2 Within thirty (30) days after completion of the Pre-Clinical Plan, AskBio shall provide Selecta with a final written report which shall describe the activities under the Pre-Clinical Plan that AskBio performed, the results

of those activities, and an evaluation of the work performed in relation to the Pre-Clinical Plan goals and the POC Studies (the "**Final Pre-Clinical Report**"). Within thirty (30) days of Selecta's receipt of the Final Pre-Clinical Report, the Parties shall meet, at such time and place as the Parties may agree, to review the Final Pre-Clinical Report, including the results of the Pre-Clinical Plan contained therein. Upon Selecta's request, AskBio shall promptly provide any data, results or reports generated, prepared or received in the performance of the Pre-Clinical Plan or POC Studies.

3.5.2.3 In addition to the written reports specified in Section 3.5.2.1 and Section 3.5.2.2 above, the Parties shall provide such other information as may be reasonably requested by the other Party or the JSC relating to the Pre-Clinical Plan from time to time.

3.5.3 **Pre-Clinical Performance Representations, Warranties and Covenants.** Each Party represents, warrants and covenants that it shall perform its assigned activities under the Pre-Clinical Plan in good scientific manner and in compliance in all material respects with all Applicable Laws and good, professional clinical and laboratory practices and under such regulatory standards (for example GCP, GLP or cGMP) as shall be specified in the Pre-Clinical Plan, and shall endeavor to achieve the objectives of the Pre-Clinical Plan efficiently and expeditiously. Moreover, each Party shall proceed diligently with the IND Enabling Studies by allocating sufficient time, effort, equipment, and skilled personnel to complete the IND Enabling Studies successfully and promptly. Notwithstanding the foregoing, the Parties acknowledge and agree that there can be no assurances that the objectives of the Pre-Clinical Plan can be achieved, or that they can be achieved in accordance with the Pre-Clinical Plan Timeline.

3.5.4 [***]. If, based on the results of the POC Studies with respect to the [***], the JSC determines that [***] has not been obtained, or if the Parties otherwise determine that additional data would be beneficial in obtaining [***], the Parties may include in the POC Plans and associated budgets additional pre-clinical and clinical activities determined by the Parties to be reasonably necessary to achieve [***]. The Parties shall share the Development Costs associated therewith equally and will use Commercially Reasonable Efforts to complete such activities in accordance with the applicable timelines set forth in the POC Plans. Upon completion of such activities the JSC will promptly determine whether [***] has been achieved and provide the Parties with notice of such determination.

3.6 **Clinical POC Activities**

3.6.1 **Clinical Feasibility Plan**

3.6.1.1 Within sixty (60) days of completion of the Pre-Clinical Plan, the JSC shall develop a written plan (the "**Clinical Feasibility Plan**" and, together

with the Pre-Clinical Plan, the "**POC Plans**") that sets forth (a) activities that are necessary or desirable to enable the Parties to commence and complete the POC Clinical Trials for the attainment of POC (the "**Clinical Feasibility Activities**"), (b) the Party responsible for performing each Clinical Feasibility Activity, and (c) an estimated timeline for completion of critical Clinical Feasibility Activities (the "**Clinical Feasibility Plan Timeline**"). The Clinical Feasibility Plan shall be subject to the approval of the JSC. In the event of any dispute between the Parties with respect to the contents of the Clinical Feasibility Plan, such dispute will be submitted to the JSC and resolved by the JSC in accordance with Section 5.1. The Clinical Feasibility Plan, including the Clinical Feasibility Plan Timeline and Clinical Feasibility Budget, may be amended from time to time by the JSC in accordance with Section 5.1.

3.6.1.2 As part of the Clinical Feasibility Plan, the Parties shall agree upon a budget for performance of the Clinical Feasibility Plan, including performance of the Clinical Feasibility Activities (the "**Clinical Feasibility Budget**" and, together with the Pre-Clinical Plan Budget, the "**POC Budget**").

3.6.1.3 The Clinical Feasibility Plan shall allocate to AskBio the responsibility to obtain the IND for, and conduct, each POC Clinical Trial contemplated in the Clinical Feasibility Plan. Accordingly, AskBio, as IND holder, shall be the sponsor of the applicable POC Clinical Trial conducted in connection with the Clinical Feasibility Plan, provided, however, that Selecta shall have the right to actively participate in any interactions with any Competent Authorities and shall have ultimate decision-making authority with respect to any communications with, or submissions to, such Competent Authorities that relate primarily to Selecta Background Technology. To facilitate the foregoing, AskBio shall provide prompt prior written notice to Selecta, and in any case no less than fifteen (15) days prior to such interactions (to the extent practicable), in order to provide Selecta sufficient time to prepare to participate in such interactions or to revise such communications or submissions. AskBio shall have ultimate decision-making authority with respect to any communications with, or submissions to, such Competent Authorities regarding the Clinical Feasibility Plan that relate primarily to any matter other than Selecta Background Technology. AskBio may engage the services of one or more reputable Third Party CROs and transfer regulatory obligations to such CROs as is reasonable and customary in furtherance of the conduct of the applicable Clinical Study(ies).

3.6.1.4 Each of AskBio and Selecta shall use Commercially Reasonable Efforts to conduct and complete all tests, studies and other activities for which

it is assigned responsibility in the Clinical Feasibility Plan; provided that each Party may, at its sole discretion, elect to have certain Clinical Feasibility Activities allocated to it under the Clinical Feasibility Plan be performed by its Affiliates and further may subcontract standard tasks and services to Third Party providers of such services; and provided further that each Party shall be responsible for ensuring that the performance of all Clinical Feasibility Activities by its Affiliates or Third Parties complies with the terms of this Agreement and Applicable Law, and in no event shall any such delegation or subcontract release the delegating Party from any of its obligations under this Agreement.

3.6.1.5 Each of AskBio and Selecta represents, warrants and covenants that it shall perform the Clinical Feasibility Activities for which it is assigned responsibility in the Clinical Feasibility Plan in good scientific manner and in compliance in all material respects with all requirements of Applicable Laws and good, professional clinical and laboratory practices and under such regulatory standards (for example GCP, GLP or cGMP) as shall be specified in the Clinical Feasibility Plan, and shall endeavor to achieve the objectives of the Clinical Feasibility Plan efficiently and expeditiously. Moreover, each of AskBio and Selecta shall proceed diligently with the Clinical Feasibility Plan by promptly allocating sufficient time, effort, equipment, and skilled personnel to complete the Clinical Feasibility Activities for which it is assigned responsibility.

3.6.2 **Reporting Requirements**

3.6.2.1 Within thirty (30) days after completion of any studies set forth in the Clinical Feasibility Plan, and at such earlier time points mutually agreed upon by the Parties in the Clinical Feasibility Plan or otherwise through the JSC, AskBio shall provide Selecta with a written progress report which shall describe the activities under the Clinical Feasibility Plan that AskBio has performed to date and evaluate the work performed in relation to the goals of the Clinical Feasibility Plan. AskBio shall provide Selecta with an initial report of the results of such POC Clinical Trial, including top-line data ("**Initial POC Trial Report**"), within fifteen (15) days after completion of each POC Clinical Trial, and a final report of the results of such POC Clinical Trial within thirty (30) days of completion of each POC Clinical Trial ("**Final POC Trial Report**" and, together with the Initial POC Trial Report, the "**POC Trial Reports**"). Within sixty (60) days after completion of the Clinical Feasibility Plan and receipt of all POC Trial Reports, AskBio shall provide to Selecta a written report, which shall describe the Clinical Feasibility Activities performed, evaluate the work performed in relation to the goals of the Clinical Feasibility Plan, and provide such other information as may be reasonably

requested by Selecta with respect to the Clinical Feasibility Activities (the "**Final Clinical Feasibility Report**"). Within thirty (30) days of Selecta's receipt of the Final Clinical Feasibility Report, the Parties shall meet, at such time and place as the Parties may agree, to review the Final Clinical Feasibility Report, including the results of the Clinical Feasibility Plan contained therein.

3.6.2.2 In addition to the written reports specified in Section 3.6.2.1 above, the Parties shall provide such other information as may be reasonably requested by the other Party or the JSC relating to the Clinical Feasibility Plan from time to time.

3.7 **Feasibility Study Results**

3.7.1 **Regulatory Records**. Each Party shall maintain records of all IND Enabling Studies and Clinical Feasibility Activities conducted by it in sufficient detail and in good scientific manner in form and substance (including data being provided in a readily usable and appropriate format) appropriate for all patent and regulatory purposes (including, without limitation, Marketing Approval, pricing, and reimbursement purposes), which shall be substantially complete and materially accurate and shall reflect all work done and results achieved in the performance of the IND Enabling Studies and Clinical Feasibility Activities by or on behalf of such Party, and which shall be retained by such Party during the term of this Agreement and for at least five (5) years thereafter, or for such longer period as may be required by Applicable Law. The other Party shall have the right, during normal business hours and upon reasonable notice, to inspect and copy any such records maintained by the other Party for legitimate business purposes.

3.7.2 **Study Results**. All data, reports, and other information (excluding patentable Inventions, which are subject to Article 8 below) generated by the Parties during performance of the IND Enabling Studies or the POC Clinical Trials (the "**Study Results**") shall be jointly owned by the Parties. Each Party hereby grants to the other Party the right to reference and use for all lawful purposes all Study Results effective after delivery of the Final Clinical Feasibility Report; provided that, prior to delivery of the Final Clinical Feasibility Report, neither Party may use the Study Results to, directly or indirectly, develop, manufacture or commercialize (or aid in such activities) any product with or for a Third Party outside of this Agreement. For clarity, prior to delivery of the Final Clinical Feasibility Report, neither Party shall use the Study Results, except for research, Development, Manufacture or Commercialization of POC Candidates or in connection with deciding whether to proceed with the Collaboration prior to achievement of POC. Notwithstanding anything to the contrary in this Section 3.7.2, (a) AskBio may use any Study Results (i) comprising safety data solely with respect to AskBio Core Technology as is reasonably necessary to satisfy its regulatory obligations with respect thereto, and (ii) after delivery of the Final Clinical Feasibility Report to secure equity or debt

financing for its activities under this Agreement, including sharing such Study Results with Third Parties in order to secure such financing, in each case, as long as such Third Parties are under written obligations of confidentiality, non-disclosure and non-use consistent with this Agreement and (b) Selecta may use any Study Results (i) comprising safety data solely with respect to Selecta Core Technology as is reasonably necessary to satisfy its regulatory obligations with respect thereto, and (ii) after delivery of the Final Clinical Feasibility Report to secure equity or debt financing for its activities under this Agreement, including sharing such Study Results with Third Parties in order to secure such financing, in each case, as long as such Third Parties are under written obligations of confidentiality, non-disclosure and non-use consistent with this Agreement. Neither Party shall publish the Study Results without the express written consent of the other Party (which consent shall not be unreasonably withheld, conditioned, or delayed). Each Party shall promptly provide the other Party with accurate copies of all Study Results. Neither Party shall withhold any Study Results from the other Party.

3.7.3 **Analysis of Feasibility Study**. Upon completion of the Clinical Feasibility Plan, the Parties through the JSC shall review the Study Results to determine if POC was successfully attained. The JSC shall use Commercially Reasonable Efforts to make such assessment within sixty (60) days following Selecta's receipt of the Final Clinical Feasibility Report, or such longer period as may be agreed by the Parties in writing ("**POC Determination Deadline**").

3.8 **Election to Co-Develop Products.** Based on the results of the POC Studies with respect to the [***], the Parties may mutually agree in writing to proceed with the Collaboration. In the event that the JSC determines that POC is attained [***], it shall send written notice (the "**POC Notice**") to each of the Parties stating such determination and the basis therefor prior to the expiration of the POC Determination Deadline. If the JSC determines that POC is not achieved, then this Agreement shall terminate on the POC Determination Deadline, unless the Parties mutually agree in writing to proceed with the Collaboration. Upon receipt of the POC Notice or upon a mutual agreement in writing to proceed with the Collaboration (the date of receipt of such POC Notice or the execution of such mutual agreement in writing to proceed with the Collaboration, the "**Collaboration Start Date**"), the Parties will collaborate in the Development and Commercialization of the Collaboration Products in accordance with Article 4 below.

ARTICLE 4.
COLLABORATION

4.1 **Scope.** Following the Collaboration Start Date, the Parties shall pursue the Development and Commercialization of Products intended for use to treat [***], targeting a specific gene, listed in Schedule 4.1 (each, a "[***]"), and following determination by the JSC that [***] has been attained, the Parties shall pursue the Development and Commercialization of Products intended for use to treat [***], targeting a specific gene, listed in Schedule 4.1 (each, a "[***]," and together with the [***], the "**Collaboration Indications**"). For

clarification, (a) each Collaboration Indication listed in Schedule 4.1 includes the specific gene listed in Schedule 4.1 alongside such Collaboration Indication, and in the case of each [***], includes the specific Approach listed in Schedule 4.1 alongside such [***] and (b) Schedule 4.1 is intended to only be a preliminary list of Collaboration Indications, and the Parties shall, within sixty (60) days of the Effective Date, meet and finalize the list of Collaboration Indications (including associated genes and Approaches, as applicable), which updated list shall replace Schedule 4.1 hereto. For clarity, within such sixty (60) day period, the Parties shall determine the order in which the Parties should commence activities under any Therapeutic Development Plan with respect to the [***] and [***] that are Collaboration Indications. If the JDC cannot reach such determination within such sixty (60) day period, then the order in which the Collaboration Indications will be developed shall be determined as follows: [***]. Products targeting the gene specified in Schedule 4.1 and intended for use to treat such Collaboration Indication, and with respect to each [***] utilizing the associated Approach specified in Schedule 4.1, shall be "**Collaboration Products**" and the Parties' Development, Manufacturing and Commercialization activities under this Agreement with respect to such Collaboration Indication and Collaboration Products may be referred to as the "**Collaboration**." Notwithstanding anything herein to the contrary, if POC is achieved for MMA, such indication may also be a Collaboration Indication for purposes of this Agreement if included in Schedule 4.1, but shall not count toward the total number of Collaboration Indications permitted in the first sentence of this Section 4.1.

4.2 **Collaboration Indications**

4.2.1 **Scope.** The Parties shall be jointly responsible for the research and Development of each Collaboration Product Developed hereunder in accordance with the applicable Therapeutic Development Plan unless and until, where applicable, a Party exercises an Opt-Out Option as described below with respect to the Collaboration Indication for which such Collaboration Product is being Developed. The Parties shall be jointly responsible for all Shared Costs associated with the Development, Manufacture, and Commercialization of Collaboration Products, subject to the cost sharing provisions for a Collaboration Product which is subject to the exercise of an Opt-Out Option. In the event that a Party exercises an Opt-Out Option for a Collaboration Indication, and the Parties agree that the Party exercising such Opt-Out Option should continue to conduct activities for the research, Development or Manufacture of a Collaboration Product for such Collaboration Indication, then the Party requesting such activities shall (a) directly pay when due any Third Parties for all out-of-pocket costs and expenses incurred by the Party exercising the Opt-Out Option, and (b) reimburse the Party exercising the Opt-Out Option for all FTE Costs and other internal costs and expenses, in connection with such agreed activities within thirty (30) days of receiving an invoice detailing such costs and expenses.

4.2.2 **Development**.

4.2.2.1 **Development Plan.** The JDC shall develop a plan for the Development of Collaboration Products for each of the Collaboration Indications (each,

a "**Therapeutic Development Plan**"), which shall be subject to the approval of the JSC and may be supplemented and amended from time to time by the JSC. Each Therapeutic Development Plan shall include a work plan and budget ("**Therapeutic Development Plan Budget**") for the activities to be conducted by each Party for the Collaboration Indications. Each

Therapeutic Development Plan shall allocate activities and responsibilities between the Parties, and shall include a timeline for the completion of all activities included therein ("**Therapeutic Development Plan Timeline**"). Each Party shall use Commercially Reasonable Efforts to complete the activities assigned to it in each Therapeutic Development Plan in accordance with the applicable Therapeutic Development Plan Timeline. Each Party shall ensure that its performance under each Therapeutic Development Plan is at all times in compliance with all Applicable Laws and in accordance with professional and ethical standards customary in the biopharmaceutical industry.

4.2.2.2 **Updates.** Each Therapeutic Development Plan (together with the corresponding budget) shall be updated by the JDC annually (on an annual cycle ending on September 30th) for the upcoming calendar year, such update subject to review and approval by the JSC. Either Party can propose amendments to a Therapeutic Development Plan, each of which shall be subject to review by the JDC and approval by the JSC.

4.2.2.3 **Development Funding.** The Parties shall fund the conduct of the activities under each Therapeutic Development Plan in accordance with the Therapeutic Development Plan Budget set forth therein, with the Shared Costs of performing such activities being borne by the Parties equally pursuant to the cost and profit sharing provisions of Section 6.2, other than with respect to Collaboration Indications for which one Party has exercised the Opt-Out Option. Each Party shall be solely responsible for costs it incurs in connection with the Development of a Collaboration Product that are outside of the applicable Therapeutic Development Plan Budget, subject to Section 4.2.2.4 below.

4.2.2.4 **Overages.** For a Product, neither Party shall be required to commit resources or funds towards activities that are not included in a POC Budget and POC Plan, or a Therapeutic Development Plan Budget and Therapeutic Development Plan, provided that:

4.2.2.4.1 In the event that a Party anticipates that the actual amount of aggregate annual Development Costs for the Development activities included in the current applicable POC Plan or

Therapeutic Development Plan will exceed the amounts set forth in the then-current POC Budget or Therapeutic Development Plan Budget for such year by up to [***], such Party shall bring such information to the JDC, which will engage in a good faith discussion of the reason(s) for such anticipated increase but approval of the JDC shall not be required and such increased amount shall be shared equally by the Parties.

4.2.2.4.2 In the event that a Party anticipates that the actual amount of aggregate annual Development Costs for the Development activities included in the current applicable POC Plan or Therapeutic Development Plan will exceed the amounts set forth in the then-current POC Budget or Therapeutic Development Plan Budget for such year by more than [***], such Party shall bring such information to the JDC for approval, and if approved such increased amount shall be shared equally by the Parties. If not approved, such matter shall be escalated to the JSC, and such amounts over [***] of the Therapeutic Development Plan Budget shall be borne by the Party incurring such costs unless otherwise determined by the JSC; provided, however, that to the extent such additional amounts are borne at the direction of any Competent Authority, then such amounts shall be shared equally, whether or not approved by the JSC. For clarity, if a Party incurs any such overage amount that is not approved by the JSC, the Party incurring such overage amounts may elect to proceed with the activities that would result in such overage and the determination as to whether that overage amount shall be equally shared by the Parties as Development Costs shall be deemed a Deadlocked Matter and subject to the dispute resolution provisions described in Section 5.1.4.

4.2.2.5 Additional Studies. If a Party (including its Affiliates or sublicensees) wishes to conduct one or more additional Clinical Studies or other Development activities for a Collaboration Product beyond the Clinical Studies included in the then-current Therapeutic Development Plan, such Party (the "**Proposing Party**") shall notify the other Party (the "**Non-Proposing Party**") of such proposed studies (the "**Proposed Study(ies)**") and provide the Non-Proposing Party with any data or publications supporting any such proposal. In such event, the Non-Proposing Party shall consider such proposal and evaluate the supporting data and information in good faith. If the Parties both wish to collaborate in the conduct of such Proposed Study(ies), the Proposing Party shall

prepare an amendment to a Therapeutic Development Plan and Therapeutic Development Plan Budget for the Collaboration Indication for which such Collaboration Product is intended to be used, to include the Proposed Study(ies) for review by the JDC, and subsequent approval by the JSC.

4.2.2.6 **Reporting; Development Records.** Each Party shall provide to the other quarterly written reports regarding the progress and results of their activities under a Therapeutic Development Plan through the JDC. Each Party shall (and shall cause its Affiliates, sublicensees, subcontractors and consultants to) maintain complete and accurate records (in the form of technical

notebooks and/or electronic files where appropriate) of all work conducted by it or on its behalf (including by its Affiliates, sublicensees, subcontractors and consultants) under a Therapeutic Development Plan. Such records, including any electronic files where such data may also be contained, shall fully and properly reflect all work done and results achieved in sufficient detail and in a good scientific manner appropriate for patent and regulatory purposes. Each Party shall have the right to review and receive a copy of such records (including a copy of the databases) maintained by the other Party (including its Affiliates, sublicensees, subcontractors and consultants) at reasonable times, but no more than twice in any one calendar year, and to obtain access to source documents to the extent needed for patent or regulatory purposes or for other legal proceedings. For each Clinical Study pursuant to a Therapeutic Development Plan, the Parties shall use the applicable regulatory database format in order to fulfill both FDA and EMA, or other Competent Authority, requirements under Applicable Law.

4.2.3 **Regulatory Matters**

4.2.3.1 **Responsibilities.** Subject to the specific activities allocated to each Party under a Therapeutic Development Plan, the JSC shall allocate primary responsibility for obtaining Regulatory Approvals for each Collaboration Product to a Party (the "**Regulatory Lead Party**"), on a Collaboration Product-by-Collaboration Product basis. Unless otherwise agreed by the JSC, [***]. The Regulatory Lead Party for each Collaboration Product shall be the sponsor of the Clinical Studies conducted under the Therapeutic Development Plan for such Collaboration Product, unless the Parties agree otherwise. For each Collaboration Product Clinical Study, the Regulatory Lead Party shall have and maintain operational control and responsibility for such Clinical Study, provided, however, that the non-sponsoring Party shall have equal input and participation in strategic level decisions (including via participation and membership in

all major global program teams and sub-teams) relating to such Clinical Study, including the right to actively participate in any interactions with Competent Authorities and key opinion leader ("**KOL**") interactions. To facilitate the foregoing, the Regulatory Lead Party shall provide prompt prior written notice, and in any case no less than [***] days prior to such interactions, of all such interactions with Competent Authorities and all KOL interactions, investigator meetings and advisory board meetings regarding Clinical Studies of the applicable Collaboration Product, in order to provide the non-sponsoring Party sufficient time to prepare to participate in such interactions or meetings, or to revise any communications or submissions. Notwithstanding the foregoing, Selecta shall have ultimate decision-making authority with respect to any communications with, or submissions to, any Competent

Authorities that primarily relate to Selecta Background Technology and AskBio shall have ultimate decision-making authority with respect to any communications with, or submissions to, any Competent Authorities that primarily relate to AskBio Background Technology.

4.2.3.2 Ownership. The applicable Regulatory Lead Party shall own all INDs, BLAs, or other Regulatory Approvals and related regulatory documentation submitted to any Competent Authority in the Territory with respect to the applicable Collaboration Product. No Regulatory Lead Party shall transfer any right, title, interest, or option in or to any such Regulatory Approvals or documentation without the prior written consent of the other Party (except in accordance with Section 13.1). No Regulatory Lead Party shall authorize or permit or grant access to any compassionate use for a Collaboration Product without the written approval of the other Party hereto. All information, data, and reports generated in connection with each Clinical Study of a Collaboration Product pursuant to a Therapeutic Development Plan ("**Study Data**") shall be jointly owned by the Parties; provided that any patentable Inventions arising therefrom shall be subject to Article 8. Each Party hereby grants to the other Party the right to reference and use all Study Data for all lawful purposes; provided that, such purpose is not inconsistent with this Agreement, and provided further that, prior to delivery of the Final Clinical Feasibility Report, neither Party may use the Study Data to, directly or indirectly, develop, manufacture or commercialize (or aid in such activities) any product with or for a Third Party outside of this Agreement without the prior written consent of the other Party. Notwithstanding anything to the contrary in this Section 4.2.3.2 (a) AskBio may use any Study Data comprising safety data solely with respect to AskBio Core Technology as is reasonably necessary to satisfy its regulatory obligations with respect thereto and (b) Selecta may

use any Study Results comprising safety data solely with respect to Selecta Core Technology as is reasonably necessary to satisfy its regulatory obligations with respect thereto. Neither Party shall publish the Study Data without the express written consent of the other Party (which consent shall not be unreasonably withheld, conditioned, or delayed). Each Party shall promptly provide the other Party with accurate copies of all Study Data. Neither Party shall withhold any Study Data from the other Party.

4.2.3.3 **Communications.** Within [***] days after receipt of any communication from a Competent Authority with respect to a Product, the recipient Party will provide the other Party with a brief written description of the principal issues raised in such communication and will also simultaneously provide complete copies of such correspondence. The recipient Party will additionally allow such other Party a reasonable opportunity to review and comment on any proposed response to such communications in advance of

the transmission of such response, and will reasonably consider all comments timely provided in connection therewith.

4.2.3.4 **Clinical Hold.** Without limiting the foregoing, with respect to each Product, within [***] after receipt of any communications from a Competent Authority related to a Clinical Study hold or potential Clinical Study hold for safety reasons or for a potential withdrawal from the market for a safety issue or a report of a serious safety finding by a Competent Authority, the recipient Party will provide the other Party with a brief written description of the principal issues raised in such communication and will also simultaneously provide complete copies of such correspondence. The recipient Party will additionally allow such other Party a reasonable opportunity to review and comment on any proposed response to such communications in advance of the transmission of such response and will reasonably consider all comments timely provided in connection therewith. AskBio shall not make any public disclosures regarding any Clinical Study holds or potential Clinical Study holds without the prior written consent of Selecta.

4.2.3.5 **Meetings.** Each Party shall provide the other Party with reasonable advance notice of all meetings and teleconferences with a Competent Authority pertaining to a Product, or with as much advance notice as practicable under the circumstances. The notifying Party shall use reasonable efforts to permit the other Party to have, at such other Party's expense, mutually acceptable representatives attend as participants, such meetings and teleconferences with Competent Authorities pertaining to such Product, provided that for any meetings and teleconferences with

Competent Authorities that address any CMC-related issues for such Product, each Party shall have representatives attend such meetings and teleconferences and such representatives shall be primarily responsible for addressing any CMC-related questions, as well as for defending the CMC section of the BLA of such Product which pertains to their respective technologies.

4.2.3.6 **Submissions.** With respect to a Product, each Party shall allow the other Party a reasonable opportunity to review and comment on all filings and other submissions to a Competent Authority related to such Product in advance of such submission or filing, and such first Party shall reasonably consider in good faith all comments timely provided by such other Party in connection therewith. Notwithstanding the foregoing, Selecta shall have ultimate decision-making authority with respect to any filings and submissions to a Competent Authority that primarily relate to Selecta Background Technology and AskBio shall have ultimate decision-making authority with respect to any filings or submissions to a Competent Authority that primarily relate to AskBio Background Technology.

Notwithstanding the foregoing, each Party shall prepare and defend the CMC section of each MAA, which pertains to their respective technology for such Product, provide the other Party with a reasonable opportunity to review and comment on such CMC section, and reasonably consider in good faith all comments timely provided by such Party in connection therewith.

4.2.3.7 **Agreement/Safety Data Exchange Agreement.** Prior to initiation of the first Clinical Study for each Product, the Parties shall negotiate in good faith and enter into an agreement setting forth the worldwide pharmacovigilance procedures for the Parties with respect to such Product (each, a "**Pharmacovigilance Agreement**"). When executed, the Pharmacovigilance Agreement shall remain a stand-alone document, independent from this Agreement to enable amendment thereto as required independently of this Agreement. The Parties acknowledge that the prompt exchange of safety data is important to support the Parties' regulatory reporting obligations, and therefore, the Pharmacovigilance Agreement shall contain provisions to ensure that adverse event and other pharmacovigilance information is exchanged in accordance with, and in a manner enabling both Parties to fulfill, all local, national, and regional regulatory reporting obligations under Applicable Laws. For clarity, the Pharmacovigilance Agreement shall continue to apply to Collaboration Indications for which a Party has exercised its Opt-Out Option.

4.2.4 **Manufacturing**.

4.2.4.1 Selecta shall be responsible for, and shall use Commercially Reasonable Efforts to conduct, the manufacture and supply of ImmTOR and all other Selecta Core Technology, necessary or useful (a) for the conduct of Clinical Studies of the Collaboration Products, in accordance with the applicable Therapeutic Development Plan, and (b) for use with or for inclusion in Collaboration Products. AskBio shall be responsible for, and shall use Commercially Reasonable Efforts to conduct, the manufacture and supply of AAV capsids, AAV vectors, AAV particles, AAV production cells, and all other AskBio Core Technology necessary or useful (y) for the conduct of Clinical Studies, in accordance with the Therapeutic Development Plans, and (z) for use with or for inclusion in Collaboration Products. Each Party shall conduct its manufacturing and supply activities pursuant to this Section 4.2.4 in accordance with Applicable Law (including cGMPs for all clinical supply) and this Agreement. The costs of such manufacture and supply set forth in the Therapeutic Development Plan shall be shared equally, as Shared Costs. AskBio shall be responsible, itself or through Viralgen, for the manufacturing of all Collaboration Products excluding the manufacture of ImmTOR for use with or for inclusion in such Collaboration

Products, and shall be paid for such manufacture of Collaboration Products based on mutually agreed upon rates, which rates shall include all of AskBio's costs incurred with such manufacture of Collaboration Products without any markup.

4.2.4.2 Except as otherwise agreed by the Parties in writing, AskBio shall not exercise AskBio Collaboration Product License to make and have made ImmTOR for use with or for inclusion in Collaboration Products unless and until: (a) Selecta fails, or AskBio reasonably believes that Selecta will fail, to supply AskBio or its Affiliates' requirements of ImmTOR in connection with the Collaboration, including as ordered pursuant to the supply agreement described in Section 4.2.4.4, (b) the Parties fail to enter into a supply agreement pursuant to Section 4.2.4.4 prior to the initiation of the first Pivotal Clinical Study of such Collaboration Product if AskBio is the Lead Commercialization Party. If Selecta exercises the Opt-Out Option with respect to any Collaboration Indication or AskBio enters into a Partnership Agreement for a Collaboration Product, Selecta shall supply ImmTOR to AskBio or its designee for use in such Collaboration Indication or Collaboration Products at a price not to exceed Manufacturing Costs plus [***] and if Selecta does not supply ImmTOR for such purposes at such pricing AskBio may exercise its right to make and have made ImmTOR for use with or for inclusion in Collaboration

Products pursuant to the AskBio Collaboration Product License for use in such Collaboration Indication.

4.2.4.3 Except as otherwise agreed by the Parties in writing, Selecta shall not exercise the Selecta Collaboration Product License to make and have made AAV vectors, transgenes or promoters for use with or for inclusion in Collaboration Products unless and until: (a) AskBio fails, or Selecta reasonably believes that AskBio will fail, to supply AskBio or its Affiliates' requirements of AAV vectors, transgenes or promoters, in connection with the Collaboration, including as ordered pursuant to the supply agreement described in Section 4.2.4.4, (c) the Parties fail to enter into a supply agreement pursuant to Section 4.2.4.4 prior to the initiation of the first Pivotal Clinical Study of such Collaboration Product if Selecta is the Lead Commercialization Party. If AskBio exercises the Opt-Out Option with respect to any Collaboration Indication or Selecta enters into a Partnership Agreement for a Collaboration Product, AskBio shall supply AAV vectors, transgenes and promoters to Selecta or its designee for use in such Collaboration Indication or Collaboration Products, and if AskBio does not supply AAV vectors, transgenes or promoters for such purposes, , Selecta may exercise its right to make and have made AAV vectors, transgenes or promoters for use with or for inclusion in Collaboration Products pursuant to the Selecta Collaboration Product License for use in such Collaboration Indication. In the event that either AskBio exercises the Opt-Out Option

with respect to any Collaboration Indication or if Selecta is allocated responsibility for the Manufacture of any Collaboration Product, then Selecta may engage with Viralgen directly to manufacture any relevant Collaboration Products and AskBio will use reasonable efforts to facilitate such discussions.

4.2.4.4 Prior to initiation of the first Pivotal Clinical Study of a Collaboration Product or in connection with a Potential Partnership upon request of the Commercialization Lead Party for such Collaboration Product, or upon earlier request by either Party as reasonably necessary to support the Development or Commercialization of the Collaboration Products in accordance with this Agreement, the Parties shall negotiate, promptly and in good faith, a supply agreement or manufacturing technology transfer arrangement, as is reasonably necessary or useful for such Commercialization Lead Party to support such Pivotal Clinical Studies and the Commercialization of such Collaboration Products.

4.2.5 **Commercialization.** Prior to initiation of the first Pivotal Clinical Study of a Collaboration Product, the JCC shall develop a commercialization plan for such Collaboration Product and submit such plan to the JSC for approval (such approved

plan, the "**Commercialization Plan**"). The Commercialization Plan may be amended from time to time by the JCC, subject to approval of the JSC. As part of such initial Commercialization Plan, the Parties shall determine which Party will have the right to Commercialize such Collaboration Product (the "**Commercialization Lead Party**"), and the Parties shall agree upon a budget for performance of the Commercialization Plan, as well as pricing and reimbursement strategy for such Collaboration Product (the "**Commercialization Plan Budget**"). If the Parties cannot agree on which Party should be the Commercialization Lead Party with respect to a Collaboration Product, the Party that bears a majority of the Shared Costs incurred prior to submission of the first MAA for such Collaboration Product shall be the Commercialization Lead Party. The Commercialization Lead Party shall use Commercially Reasonable Efforts to Commercialize each Collaboration Product in accordance with the applicable Commercialization Plan. The Party that is not the Commercialization Lead Party with respect to a given Collaboration Product shall have the right, but not the obligation, to co-promote such Collaboration Product. All Commercialization activities conducted by the Parties shall be conducted in accordance with Applicable Law and this Agreement.

4.2.6 **Subcontractors.** Each Party will have the right to use its Affiliates or Third Parties to perform the research, Development, Manufacturing, or Commercialization activities for the benefit of such Party under this Agreement; provided that: (a) such Party remains responsible for the work allocated to such Party hereunder to the same extent it would if it had done such work itself; and (b) such Party will enter into a binding written agreement with each such Affiliate and/or Third Party, prior to commencing

such activities, which agreement includes the following terms (i) the subcontractors undertake in writing all compliance obligations, and agree to comply with the terms of this Agreement and Applicable Law, (ii) the subcontractors undertake in writing all obligations of confidentiality and non-use regarding Confidential Information that are substantially the same as those undertaken by the Parties pursuant to Article 7 (except for a commercially reasonable term for confidentiality obligations), and (iii) such Party Controls all intellectual property rights developed by the subcontractors in the course of performing any such work and owns all such intellectual property that is related to, or otherwise necessary for research, Development, Manufacture, or Commercialization of a Collaboration Product. Without limiting the foregoing, prior to commencing any such activities, each such subcontractor shall execute an agreement exclusively licensing or assigning any Inventions and related intellectual property rights to the Party by whom they are employed or for whom they are providing services (or its designated Affiliate). Notwithstanding the foregoing in this Section 4.2.6, where the Third Party is an academic or academic institution, the Parties shall consider in good faith to agree to waive clause (iii). Notwithstanding the foregoing, neither Party may license the

right to Commercialize a Collaboration Product to a Third Party without the other Party's consent.

4.2.7 **Cost/Profit Sharing**. Each Collaboration Product will be subject to the cost/profit sharing structure set forth in Section 6.2.

4.2.8 **Joint Venture Formation; Partnering; Asset Sale**

4.2.8.1 **Joint Venture.** The Parties may, in the future, mutually agree to the establishment of a Joint Venture to Develop, Manufacture and Commercialize one or more Collaboration Products. In the event that the Parties agree to conduct such activities in a Joint Venture, the Parties shall cooperate in the formation of a newly incorporated entity and shall negotiate in good faith the terms of the Joint Venture, which terms shall be set forth in one or more definitive agreements (collectively, the "**Definitive JV Agreements**"). The Parties shall use commercially reasonable efforts to negotiate and execute such Definitive JV Agreements within [***] days following agreement to establish a Joint Venture. Unless and until the Definitive JV Agreements are executed, this Agreement shall govern the Parties' Development and Commercialization of the Collaboration Products.

4.2.8.2 **Partnering/Asset Sale.** The Parties may, upon mutual written agreement, out-license, partner or sell the rights or assets, in whole or in part, necessary to Develop, Manufacture and Commercialize any Collaboration Product (each, a "**Potential Partnership**"). A Party proposing a Potential Partnership shall provide prompt written notice to the other Party ("**Partnering Notice**"), which shall include the Collaboration Product(s)

and scope for rights or assets to be partnered or sold, the potential partner(s), the proposed financial structure of such Potential Partnership, and all material terms. Upon receipt of a Partnering Notice, the Parties shall discuss the Potential Partnership in good faith and reach agreement as to whether to proceed in the negotiation of such Potential Partnership. If the Parties mutually agree in writing to negotiate a Potential Partnership, each Party shall cooperate in good faith to ensure that exclusive rights (including as to the licensor) under AskBio Core Technology, Selecta Core Technology and Inventions to Develop, Manufacture and Commercialize the Collaboration Product(s) being partnered can be transferred to the partner as necessary, including by authorizing any necessary sublicenses under the Research Licenses and Collaboration Product Licenses. If the Parties do not mutually agree in writing to negotiate a Potential Partnership within [***] days after provision of a Partnering Notice for a Collaboration Product(s), then the

Commercialization Lead Party (or, if the Commercialization Lead Party has not yet been determined, the Regulatory Lead Party) for such Collaboration Product(s) shall have the final decision-making authority as to whether to proceed in the negotiation of such Potential Partnership; provided that such Party has borne at least [***] of the Shared Costs incurred prior to submission of the Partnering Notice for such Collaboration Product, and such Party proposed the Potential Partnership. In such case, each Party shall also cooperate in good faith to ensure that exclusive rights (including as to the licensor) under AskBio Core Technology, Selecta Core Technology and Inventions to Develop, Manufacture and Commercialize the Collaboration Product(s) being partnered can be transferred to the partner as necessary, including by authorizing any necessary sublicenses under the Research Licenses and Collaboration Product Licenses. The final agreements governing such Potential Partnership shall be subject to the prior written approval of both Parties. Unless otherwise agreed by the Parties, immediately upon execution of any such final agreement, the Research Licenses and the Collaboration Product Licenses granted by the Party entering to such agreement to the other Party hereunder (and associated intellectual property rights) shall terminate with respect to any Collaboration Product covered by such final agreement, to enable such Party to instead grant the new partner or acquirer exclusive rights to such Collaboration Product.

4.2.8.3 **Sharing of Proceeds.** The proceeds from any license, partnership or asset sale entered into pursuant to Section 4.2.8.2 shall be shared between the Parties according to the Profit Share Percentage after each Party recovers its reasonable transactions costs associated therewith.

4.3 **Exclusivity.**

4.3.1 During the Term for the applicable Collaboration Indication, (a) neither Party, nor their Affiliates, shall, directly or indirectly, Develop or Commercialize AAV Products or ImmTOR for use in the Collaboration Indications that are [***] targeting the same gene listed in Schedule 4.1 alongside such [***], other than pursuant to this Agreement; and (b) neither Party, nor their Affiliates, shall, directly or indirectly, Develop or Commercialize AAV Products or ImmTOR for use in the Collaboration Indications that are [***] targeting the same gene and using the Approach designated for such [***] in Schedule 4.1, other than pursuant to this Agreement. Notwithstanding the foregoing, (w) no arrangement or agreement listed in Schedule 4.3.1(w) (as such schedule may be updated by AskBio in good faith by written notice to AskBio within five (5) Business Days of the Effective Date) entered into by AskBio prior to the effective date that grants a Third Party rights to Develop, Manufacture or Commercialize AAV Products or utilize the Pro10 cell line, or activities conducted

pursuant to such arrangement or agreements, shall be deemed to be in violation of this Section 4.3; (x) no arrangement or agreement listed in Schedule 4.3.1(x) entered into by Selecta prior to the effective date that grants a Third Party rights to Develop, Manufacture or Commercialize AAV Products or utilize ImmTOR, or activities conducted pursuant to such arrangement or agreements, shall be deemed to be in violation of this Section 4.3; (y) nothing in this Section 4.3 shall restrict AskBio or any of its Affiliates from entering into any transaction or arrangement with respect to (i) the Pro10 cell line or otherwise using the Pro10 cell line for any purpose whatsoever, (ii) the manufacturing of AAV cassettes, or components thereof (excluding AskBio's proprietary capsids), including authorizing others to use Pro10 cell line for such purposes; (iii) AAV Products, which do not incorporate or utilize ImmTOR, for use in the Collaboration Indications that are [***] if they target a gene or use an Approach other than the specific gene or Approach listed in Schedule 4.1 alongside such [***], (iv) AAV Products, which do not incorporate or utilize ImmTOR, for use in the Collaboration Indications that are [***] if they target a gene other than the specific gene listed in Schedule 4.1 alongside such [***], (v) AAV Products (which do not incorporate or utilize ImmTOR) or AskBio Background Technology, in each case for use in any indications that are not Collaboration Indications, or (vi) any Other Joint Venture; provided that such transaction or arrangement does not conflict with, or limit, AskBio's express obligations under this Section 4.3.1(a) and (b); and (z) nothing in this Section 4.3 shall restrict Selecta or any of its Affiliates from entering into any transaction or arrangement with respect to (i) the manufacture of ImmTOR, provided that such manufacture of ImmTOR does not conflict with, or limit, Selecta's express obligations under this Section 4.3.1(a) and (b), (ii) AAV Products or ImmTOR for use in the Collaboration Indications that are [***] if they target a gene or use an Approach other than the specific gene or Approach listed in Schedule 4.1 alongside such [***], (iii) AAV Products or ImmTOR for use in the Collaboration Indications that are [***] if they target a gene other than the specific gene listed in Schedule 4.1 alongside such [***], and (iv) AAV Products or ImmTOR, or Selecta Background Technology, in each case for use in any indications that are not Collaboration Indications.

4.3.2 **Acquisition of Competing Product Pursuant to Merger or Acquisition.** Neither Party will be deemed to be in breach of the restrictions set forth in this Section 4.3 if such Party or any of its Affiliates acquires an AAV Product intended for use in a Collaboration Indication, or the right to develop, manufacture or commercialize such an AAV Product (in each case, the Development or Commercialization of which would otherwise be a violation of Section 4.3.1), through an acquisition of or a merger with the whole or substantially the whole of the business or assets of another person, so long as such Party (or its Affiliate) notifies the other Party in writing within thirty (30) days after the closing of such acquisition or merger and:

4.3.2.1 enters into a definitive agreement with a Third Party to divest such acquired AAV Product within [***] (or such longer period that is required under Applicable Law) after the closing of such acquisition or merger; or

4.3.2.2 discontinues the development and commercialization of such acquired AAV Product no later than [***] (or such longer period that is required under Applicable Law) after the closing of such acquisition or merger.

4.3.3 **Acquisition by a Third Party with a Competing AAV Product**. In the event that a Party (or all or substantially all of its assets and business related to this Agreement) is acquired by a Third Party, Section 4.3.1 shall not apply with respect to any AAV Product that such Third Party of its Affiliates is developing or commercializing for use in a Collaboration Indication as of the date of such acquisition, or subsequently develops or commercializes without the use of (a) the AskBio Background Technology in existence as of the date of such of such acquisition or any Invention, with respect to an acquirer of AskBio or (b) the Selecta Background Technology in existence as of the date of such acquisition or any Invention, with respect to an acquirer of Selecta.

ARTICLE 5.
COMMITEES & GOVERNANCE

5.1 **Joint Steering Committee.**

5.1.1 **JSC Functions**. Within ten (10) days after the Effective Date, the Parties shall establish a joint steering committee (the "**Joint Steering Committee**" or "**JSC**"). The JSC will assume a general role of oversight of the POC Plans, Therapeutic Development Plans and the Commercialization Plans, to oversee the other Committees and guide the implementation of the strategic objectives of the POC Studies and the Collaboration and will be responsible for:

5.1.1.1 reviewing and approving the POC Plans, Therapeutic Development Plans, and Commercialization Plans for each Product and Collaboration Product, as applicable, and any annual or interim updates and proposed amendments thereto;

5.1.1.2 establishing, as appropriate, any Subcommittees and Working Groups;

5.1.1.3 resolving matters presented to it by any Subcommittee or Working Group that are within the scope of responsibilities delegated to such Subcommittee or Working Group by the JSC or otherwise pursuant to this Agreement;

5.1.1.4 making such other determinations as are expressly delegated to it under this Agreement, including whether POC or [***] has been attained;

5.1.1.5 determining whether, based on the results of activities conducted pursuant to the applicable Therapeutic Development Plan, the Development, Manufacture or Commercialization of Collaboration Products for a Collaboration Indication is not scientifically or therapeutically viable;

5.1.1.6 discussing and approving any licenses to be obtained (a) by Selecta or its Affiliates under Third Party Patent Rights or Know-How covering the AskBio Core Technology or (b) by AskBio or its Affiliates under Third Party Patent Rights or Know-How covering the Selected Core Technology; and

5.1.1.7 fulfilling such other responsibilities as may be allocated to the JSC under this Agreement or by mutual written agreement of the Parties.

5.1.2 **JSC Membership**. The JSC shall be comprised of three (3) employee representatives of AskBio and three (3) employee representatives of Selecta (or such other equal number of representatives as the Parties may agree). Representatives from each Party shall be employees of such Party, and have appropriate technical credentials, experience and knowledge pertaining to and ongoing familiarity with the POC Plans, the Therapeutic Development Plans and Commercialization Plans. One (1) of the members of the JSC appointed by AskBio and one (1) of the members of the JSC appointed by Selecta shall be designated the JSC co-chairpersons (the "**JSC Co-Chairs**"). Each JSC Co-Chairs will alternatively be responsible for calling meetings of the JSC, circulating agenda and performing administrative tasks required to assure efficient operation of the JSC. The JSC may from time to time establish one (1) or more subcommittees (each, a "**Subcommittee**", and together with the JSC, the "**Committees**"), in addition to the PCC, JDC and JCC, to perform certain duties and exercise certain powers of the JSC as expressly delegated by the JSC to such Subcommittee. Either Party may replace its respective Committee representatives at any time with prior written notice to the other Party. In the event a Committee member from either Party is unable to attend or participate in a Committee meeting, the Party who designated such representative may designate a substitute representative for the meeting in its sole discretion. The JSC and each Subcommittee shall be promptly disbanded following the end of the Term.

5.1.3 **JSC Meetings**. The JSC shall meet in accordance with a schedule established by mutual written agreement of the Parties no less frequently than [***]. The JSC shall meet by means of teleconference, videoconference or other similar virtual means, unless if otherwise agreed to by the Parties. As appropriate, additional employees, consultants, or counsel of each Party may from time to time attend the JSC meetings as nonvoting observers; provided, that any such consultant, if not already bound by fiduciary obligations, shall agree in writing to comply with the confidentiality obligations substantially similar to those under this Agreement; and provided, further, that no Third Party personnel may attend unless otherwise agreed by both Parties or otherwise reasonably necessary to facilitate discussion between the Parties. Each Party shall bear its own expenses related to the attendance of the JSC meetings by its representatives. Each Party may also call for special meetings to resolve particular matters requested by such Party upon ten (10) Business Days' prior written notice to the other Party. The applicable JSC Co-Chair or his/her designee shall keep

minutes of each JSC meeting that record in writing all decisions made, action items assigned or completed and other appropriate matters. The applicable JSC Co-Chair or his/her designee shall send meeting minutes to all members of the JSC promptly after a meeting for review. Each member shall have five (5) business days from receipt in which to comment on and to approve/provide comments to the minutes (such approval not to be unreasonably withheld, conditioned or delayed). If a member, within such time period, does not notify the applicable JSC Co-Chair that s/he does not approve of the minutes, the minutes shall be deemed to have been approved by such member. Each Party's JSC members may designate another staff member of such Party, who will coordinate the administrative work surrounding JSC, including sending the notice of holding JSC meetings, creating the draft of minutes, or distributing the minutes.

5.1.4 **JSC Decision Making**. The JSC will endeavor to make decisions by consensus, with each of AskBio's and Selecta's representatives having, collectively, one vote. If, despite using reasonable efforts, the JSC does not reach consensus on any matter within its decision-making authority (a "**Deadlocked Matter**") within a period of [***] (or such other period as the Parties may agree in writing) after it has met and attempted to reach such consensus, then either Party may, by written notice to the other Party, invoke the dispute resolution procedures pursuant to Section 12.2 Notwithstanding the foregoing, day-to-day operational level decisions concerning tasks or activities shall be made by the Party to which responsibility for such task or activity has been allocated under this Agreement; *provided that* such decisions are not inconsistent with the POC Plans, Therapeutic Development Plans or Commercialization Plans, or the express terms and conditions of this Agreement.

5.2 **Subcommittees**

5.2.1 **Patent Prosecution and Enforcement Committee**. Promptly after establishing the JSC, the Parties shall establish a Patent Prosecution and Enforcement Committee (the "**Patent Prosecution and Enforcement Committee**" or "**PPEC**"). Unless otherwise

agreed upon between the Parties, the PPEC shall be comprised of an equal number of representatives from each of AskBio and Selecta, which unless otherwise agreed upon between the Parties, shall be comprised of two (2) members of each Party. The PPEC will meet at least two (2) times per year (and upon generation or reduction to practice of any Invention). As appropriate, additional employees or consultants of each Party may from time to time attend the PPEC meetings as nonvoting observers; provided, that any such consultant, if not already bound by fiduciary obligations, shall agree in writing to comply with the confidentiality obligations substantially similar to those under this Agreement; and provided, further, that no Third Party personnel may attend unless otherwise agreed by both Parties. The PPEC will be responsible for:

5.2.1.1 reviewing, discussing, and recommending to the JSC the classification of any Invention as an AskBio Invention, Selecta Invention or Joint Invention;

5.2.1.2 to the extent an Invention is a Joint Invention, reviewing, discussing and recommending to the JSC what Party is the Prosecuting Party for such Joint Invention and the patent strategy for such Joint Invention; and

5.2.1.3 coordinate the conduct of enforcement of AskBio Licensed Patent Rights and Selecta Licensed Patent Rights, and oversee and coordinate the conduct of enforcement of Joint Patent Rights pursuant to Section 8.4; provided, however, that in the event of a disagreement as to which Party should control an enforcement action, AskBio shall have final decision-making authority over the conduct of enforcement of AskBio Licensed Patent Rights and Selecta shall have final decision-making authority over the conduct of enforcement of Selecta Licensed Patent Rights.

5.2.2 **Joint Development Committee**. Within [***] after the Collaboration Start Date, and in any event, prior to commencing activities under a Therapeutic Development Plan, the Parties shall establish a joint development committee for the development of the Collaboration Products (the "**Joint Development Committee**" or "**JDC**"). Unless otherwise agreed upon between the Parties, the JDC shall be comprised of an equal number of representatives from each of AskBio and Selecta, which unless otherwise agreed upon between the Parties, shall be comprised of [***] members of each Party. The JDC will meet at least [***] times per year (or more if agreed upon in good faith if needed). The JDC will be responsible for:

5.2.2.1 receiving and discussing updates for each Therapeutic Development Plan;

5.2.2.2 coordinating the sharing of, reviewing and discussing any material data generated by either Party in the course of performing any activities under each Therapeutic Development Plan;

5.2.2.3 reviewing and discussing ongoing and anticipated Manufacturing activities with respect to each Therapeutic Development Plan;

5.2.2.4 initiating, implementing and overseeing the conduct of each Therapeutic Development Plan;

5.2.2.5 conducting annual review of each Therapeutic Development Plan and related Therapeutic Development Plan Budget for each Therapeutic Development Plan and prepare any annual or interim updates and proposed amendments thereto to be submitted to the JSC;

5.2.2.6 establishing a core joint development and regulatory team to ensure work under each Therapeutic Development Plan is executed efficiently;

5.2.2.7 coordinating the activities of the Parties under each Therapeutic Development Plan, including facilitating communications between the Parties with respect to the Development and Manufacture of a Collaboration Product;

5.2.2.8 providing a forum for discussion of the Development, Manufacture, and regulatory strategies of the Collaboration Product covered under each Therapeutic Development Plan;

5.2.2.9 preparing and approving a global medical affairs plan that addresses, for example, study recruitment, enhancement, and disease awareness, as well as corresponding medical affairs plans in connection with the activities to be performed under a Therapeutic Development Plan; and

5.2.2.10 making such determinations as are expressly delegated to it under the terms of this Agreement.

5.2.3 **Joint Commercialization Committee**. The Parties shall establish a joint commercialization committee (the "**Joint Commercialization Committee**" or "**JCC**") at an appropriate time, reasonably in advance of the first potential Marketing Approval of a Collaboration Product and reasonably in advance of the time required for the strategy for Commercialization. Selecta and AskBio shall have equal membership on the JCC.

5.2.4 **Joint Finance Committee**. The Parties may establish a joint finance committee (the "**Joint Finance Committee**" or "**JFC**") at an appropriate time, to facilitate disclosure and sharing of Shared Costs to enable the cost/profit sharing structure described in Section 6.2. Selecta and AskBio shall have equal membership on the JFC.

5.2.5 **Operation of Subcommittees**. Each Subcommittee shall operate in a manner to be agreed by the JSC; provided, that, except as expressly set forth herein,

Subcommittees shall have no decision-making authority, but shall instead operate by consensus and make recommendations to the JSC with respect to matters within its authority. Any

matter within a Subcommittee's authority with respect to which it cannot reach consensus will be escalated to the JSC for resolution.

5.3 **Working Groups.** From time to time, a Committee may establish and delegate duties to sub-committees or teams (each, a "**Working Group**") to oversee projects or activities within their respective authority. Each Working Group and its activities shall be subject to the oversight, review, and approval of, and shall report to, the Committee that established such Working Group. In no event shall the authority of any Working Group exceed that specified for the Committee under which such Working Group is established.

5.4 **Scope of Committee Authority.** For clarity and notwithstanding the creation of the JSC or any Subcommittee, each Party shall retain the rights, powers and discretion granted to it hereunder, and none of the JSC or any Subcommittee shall be delegated or vested with such rights, powers or discretion unless such delegation or vesting is expressly provided herein, or the Parties expressly so agree in writing. Neither the JSC nor any Subcommittee shall have the power to (A) resolve any dispute regarding the existence or amount of any payment owed under this Agreement, or (B) amend, waive or modify any term of this Agreement, and no decision of the JSC or any Subcommittee shall be in contravention of any terms and conditions of this Agreement. It is understood and agreed that issues to be formally decided by the JSC are limited to those specific issues that are expressly provided in Section 5.1.1 of this Agreement and the disputes which relate to the subjects other than those set forth in Section 5.1.1 will be handled according to Article 12. Once a Committee is disbanded, such Committee shall have no further obligations under this Agreement and, thereafter, each Party shall designate a contact person for the exchange of information under this Agreement or such exchange of information shall be made through the JSC Co-Chairs. In the event a Committee is disbanded, any decisions that are designated under this Agreement as being subject to the review or approval of such Committee shall be made by the Parties directly, subject to the other terms and conditions of this Agreement.

ARTICLE 6.
FINANCIAL PROVISIONS

6.1 **Overview.** With respect to each Collaboration Product, the Parties shall share all Shared Costs and Net Profits for such Collaboration Product in accordance with Section 6.2. All Shared Costs and Net Profits for each Collaboration Product shall be subject to reconciliation, reimbursement and payment pursuant to Section 6.2.2, Section 6.2.3 and Section 6.2.4. For clarity, all Shared Costs shall be accounted for only once when calculating the Profit Share, even if the activity with respect to which such expense is incurred is described in more than one subcategory of Shared Costs. POC Costs shall be shared by the Parties in accordance with Section 3.4 and 3.5.

6.2 **Sharing of Profits and Costs for Collaboration Products.**

6.2.1 **Cost/Profit Share**. The Parties shall share Shared Costs for the Collaboration Products equally; provided that if one Party is unable to bear its share of Shared Costs for a

Collaboration Product as incurred on a Calendar Quarter-by-Calendar Quarter basis, the other Party shall have the right to bear the excess Shared Costs. Each Party shall receive a percentage of Net Profits for each Collaboration Product equal to the percentage of Shared Costs borne by such Party with respect to such Collaboration Product as of the date of submission of the first MAA for such Collaboration Product to the applicable Competent Authority (such percentage, the "**Profit Share Percentage**"). Notwithstanding the foregoing, each Party's Profit Share Percentage shall never fall below [***]%, even if such Party contributes less than [***]% in Shared Costs, as a minimum payment for such Party's intellectual property contribution to the Collaboration pursuant to the Collaboration Product Licenses; provided that if a Party contributes at least [***]% in Shared Costs, such Party's Profit Share Percentage shall not fall below [***]%.

6.2.2 **Payment of Shared Costs; Summary Statements**. Except as expressly provided otherwise in this Agreement and subject to reconciliation, reimbursement and payment as provided in Section 6.2.3 and Section 6.2.4, the Party initially incurring Shared Costs will be responsible for and pay for all such Shared Costs so incurred. Each Party will maintain the books and records referred to in Section 6.4 and will accrue all Shared Costs and Net Sales in accordance with the terms and conditions hereof and in accordance with applicable Accounting Standards. Within fifteen (15) business days after the end of each Calendar Quarter, each Party will submit to the other Party a written report reflecting the accrual of Shared Costs and Net Sales during the just-ended Calendar Quarter on a Collaboration Product-by-Collaboration Product basis, including any overage amounts pursuant to Section 4.2.2.4 (each a "**Summary Statement**"). Such Summary Statements shall specify in reasonable detail (as agreed by the JSC) all expenses included in such Shared Costs and overage amounts during such Calendar Quarter and, upon the reasonable request of the other Party, shall be accompanied by invoices, and/or such other appropriate supporting documentation as may be required by the JSC. Each Party shall report the Shared Costs and overage amounts incurred by it in comparison to the Therapeutic Development Plan and Commercialization Plan, as applicable. The Parties shall seek to resolve any questions related to such Summary Statements within fifteen (15) days following receipt by each Party of the other Party's report hereunder. The JSC shall facilitate the resolution of any questions concerning such Summary Statements, as appropriate. Each Party shall have the right at reasonable times and upon reasonable prior notice to audit the other Party's records as provided in Section 6.4 to confirm the accuracy of the other Party's costs and reports with respect to Shared Costs that are shared under this Agreement. Upon the request of either Party

from time to time, the JSC will discuss any questions or issues arising from the Summary Statements, including the basis for the accrual of specific Shared Costs.

6.2.3 **Reconciliation Report**. As soon as practicable after the end of the Calendar Quarter, but in any event within thirty (30) business days after receipt by the Preparing Party of the other Party's Summary Statement, the Preparing Party (as defined below) will

prepare a reconciliation report (accompanied with reasonable supporting documentation and calculations sufficient to support each Party's associated financial reporting obligations, independent auditor requirements and obligations under the Sarbanes-Oxley Act) that reconciles each Party's Summary Statement and the Net Profits to be allocated to each Party for such Calendar Quarter on a Collaboration Product-by-Collaboration Product basis in accordance with Section 6.2 (the "**Reconciliation Report**"). The Regulatory Lead Party for a particular Collaboration Product shall be the Party to prepare the Reconciliation Report (the "**Preparing Party**") with respect to such Collaboration Product. Without limiting the foregoing, following the first commercial sale of a Collaboration Product, the Reconciliation Report shall include:

6.2.3.1 the gross sales of all Collaboration Products on a Collaboration Product-by-Collaboration Product and country-by-country basis, sold by each Party and its Affiliates during the Calendar Quarter, including the amount of each Collaboration Product sold and the gross amount invoiced for each Collaboration Product;

6.2.3.2 calculation of Net Sales of each Collaboration Product from gross sales, including itemized information on deductions allowed to be taken pursuant to Section 1.50, along with a description of the applicable accounting policies, methodologies and calculations for such deductions; and

6.2.3.3 the calculation of Net Profits, including detailed information on the (a) Cost of Goods Sold, including itemized information on standard cost of goods sold, production and purchase price variances, inventory reevaluations and write-offs and any other applicable components, along with applicable accounting policies, methodologies and calculations for such components; (b) Development Costs and Commercialization Costs, including itemized information on applicable components of such costs, along with applicable accounting policies, methodologies and calculations for such components; and (c) all other Shared Costs.

6.2.3.4 any other information reasonably requested by a Party or its independent certified accounting firm related to the calculation of Shared Costs, Net Sales, Net Profits and each Party's Profit Share.

6.2.4 **Payments of Shared Costs and Profit Share**. Based on the Reconciliation Report, the applicable Party (to whom a net amount is owed to achieve the Profit Share) will invoice the other Party after such Reconciliation Report is complete, and the receiving Party will pay such undisputed amount of the invoice within thirty (30) days of receipt of such invoice. For clarity, in Calendar Quarters where there are no Net Sales of Collaboration Products or Shared Costs exceed Net Sales, the Parties will share the Shared Costs (or negative Net Profits) in accordance with this Section 6.2.

6.3 **Opt-Out Right**

6.3.1 **Generally**. On a Collaboration Indication-by-Collaboration Indication basis, each Party shall have the right, at any time, and for any reason, or for no reason, to opt-out of the obligation of contributing its share of the Shared Costs, upon written notice to the other Party ("**Opt-Out Option**"). No exercise by a Party of such opt-out right for any Collaboration Indication shall constitute a breach of this Agreement by such Party, but in the case of any such exercise, the Parties' respective shares in Net Profits from all Collaboration Product for use in such Collaboration Indication shall be adjusted based on the applicable Profit Share Percentage.

6.3.2 **Control**. On a Collaboration Indication-by-Collaboration Indication basis, in the event of any exercise by either Party (the "**Opting Out Party**") of its opt-out right under Section 6.3.1 with respect to paying its portion of the Shared Costs with respect to any Collaboration Product for use in such Collaboration Indication, the other Party's Collaboration Product License shall automatically become exclusive (with respect to such other Party) with respect to Collaboration Products for use in such Collaboration Indication, upon its receipt of the opt-out notice from the other Party and, notwithstanding anything hereunder the Opting Out Party shall have no review, comment or approval rights with respect to such Collaboration Products, other than as reasonably necessary to comply with Applicable Laws and other than as provided in the Pharmacovigilance Agreement covering such Collaboration Product, which shall continue in full force and effect after such exercise of such opt-out right. Rather, the other Party shall keep the Opting Out Party reasonably informed with respect to the Development and Commercialization of such Collaboration Product. The Opting Out Party shall continue to be entitled to its Profit Share for such Collaboration Product and shall reasonably cooperate to complete the transfer of the Development, Manufacture and Commercialization responsibilities of such Collaboration Product to the other Party.

6.4 **Audits and Interim Reviews.** Each Party will maintain accurate books and records regarding POC Costs, Shared Costs and Net Sales, as applicable, sufficient to enable the calculation of amounts payable hereunder to be verified and will retain such books and records for each quarterly period for three (3) years after submission of the corresponding report pursuant to this Agreement. Either Party will have the right to request that an independent certified public accountant selected by it (but excluding its own accountant)

and reasonably acceptable to the other Party (such reasonable acceptance shall not be unreasonably withheld, conditioned, or delayed) perform an audit, not more than once in any four (4) consecutive Calendar Quarters during the Term, but including one post-termination audit and, if any such audit results in a material restatement of records (*i.e.,* a discrepancy of [***]% or more for any calendar year), such Party will be permitted an additional examination within such four (4) quarter period, of the other Party's books of accounts covering the preceding three (3) year period for the sole purpose of verifying compliance with the payment provisions of this Agreement. Such audits will be conducted at the expense of the requesting Party at reasonable times during regular

business hours and upon at least twenty (20) business days' prior notice. Audit results, but not the underlying books and records, will be shared with both Parties, subject to Article 7. Any inspection or audit pursuant to this Section 6.4 will be at the expense of the Party initiating the audit; *provided, however,* that if the Party's accountants reasonably determine that Net Sale or Net Profits have been understated or Shared Costs have been overstated by an amount equal to or greater than [***] for any calendar year, the audited Party will pay the reasonable fees of such accountants for such audit.

6.5 **Withholding Taxes.** If Applicable Law requires that taxes be withheld from payments made hereunder, or from Net Profits, the Party making such payments or otherwise responsible for such withholding (the "**Withholding Party**") will promptly notify the other Party, and shall reasonably cooperate with the other Party to claim any benefits or reduce and/or eliminate any such withholding taxes. The Withholding Party will (a) deduct such taxes from any payments to which they relate or in the case of taxes withheld from the other Party's share of Net Profits account for such taxes as amounts paid on behalf of the other Party, (b) timely pay such taxes to the proper authority in accordance with Applicable Law, and (c) send written evidence of payment to the Party with respect to which such taxes were withheld or paid within sixty (60) days after payment. Taxes withheld from payments made hereunder will be treated as amounts received by the Party with respect to which such taxes were withheld for all purposes under this Agreement.

ARTICLE 7.
CONFIDENTIALITY

7.1 **Confidentiality Protection.** Except as otherwise provided in this Agreement, during the Term and for [***] years thereafter (or, with respect to Confidential Information that is a trade secret of the Disclosing Party, until such trade secret no longer qualifies as a trade secret under Applicable Law), the Recipient shall maintain in confidence all of the Disclosing Party's Confidential Information. Without limiting the generality of the foregoing, the Recipient shall take all reasonable steps to maintain the confidentiality of the Disclosing Party's Confidential Information, which steps shall be no less protective than those that Recipient takes to protect its own information and materials of a similar nature, but in no event less than a reasonable degree of care. The Recipient shall not use or permit the use of any of the Disclosing Party's Confidential Information except for the purposes of carrying out its obligations or exercising its rights under this Agreement. Recipient shall not disclose

any of the Disclosing Party's Confidential Information other than to those of its directors or managers, officers, Affiliates, employees, licensors, independent contractors, permitted assignees, agents, and external advisors (collectively, "**Representatives**") directly involved with the carrying out of this Agreement, on a strictly applied "need to know" basis, in each case only to the extent such persons have been informed of the confidential nature of the information and such persons are bound by written confidentiality and non-use obligations with respect to the Disclosing Party's Confidential Information consistent with the confidentiality and non-use provisions of this Agreement. The Recipient will be responsible to the Disclosing Party for any breach by the Recipient's Representatives of such confidentiality and non-use obligations.

7.2 **Exceptions.** Notwithstanding the foregoing, the Recipient shall have no obligations under Section 7.1 with respect to any of the Disclosing Party's Confidential Information that the Recipient can demonstrate by contemporaneous written records was:

7.2.1 known by the Recipient, or in the Recipient's possession, prior to disclosure (other than as a result of the prior disclosure under this Agreement) by the Disclosing Party;

7.2.2 known to the general public at the time of its disclosure to the Recipient, or thereafter became generally known to the general public, other than as a result of actions or omissions of the Recipient in violation of this Agreement;

7.2.3 disclosed to the Recipient on an unrestricted basis from a source unrelated to the Disclosing Party and not known by the Recipient to be under a duty of confidentiality to the Disclosing Party; or

7.2.4 independently developed by the Recipient without the use of or reference to the Confidential Information of the Disclosing Party.

7.3 **Permitted Disclosures.** The obligations set forth in this Article 7 shall not apply to the extent that Recipient is required to disclose the Disclosing Party's Confidential Information under Applicable Law, judicial order or court decision by a court of competent jurisdiction, administrative order, arbitration award, the rules of a securities exchange or to a patent office for the purposes of filing, prosecuting, or maintaining Patent Rights as permitted in this Agreement; provided, however, that the Recipient shall, to the extent practicable, provide prior written notice thereof to the Disclosing Party and sufficient opportunity for the Disclosing Party to review and comment on such required disclosure and request confidential treatment thereof or a protective order therefor. In addition, the Recipient may disclose the Disclosing Party's Confidential Information to: (a) the Recipient's or the Recipient's Affiliates' attorneys, independent accountants or financial advisors for the sole purpose of enabling such attorneys, independent accountants or financial advisors to provide advice regarding this Agreement to the Recipient or such Affiliates, on the condition that such attorneys, independent accountants and financial advisors are bound by confidentiality and non-use obligations consistent with the confidentiality provisions of this Agreement as they apply to the Recipient; and (b) the Recipient's actual or potential investors, acquirers or

sublicensees, and their advisors, in connection with due diligence or similar investigation by Third Parties, on the condition that such investors, acquirers and sublicensees, and their advisors, are bound by confidentiality and non-use obligations consistent with the confidentiality provisions of this Agreement as they apply to the Recipient.

7.4 **Publications**. Each Party shall submit to the JSC for review and approval all proposed academic, scientific and medical publications and public presentations relating to a Collaboration Product or any POC Studies for review in connection with preservation of related patent rights and trade secrets, to determine whether Confidential Information should be modified or deleted from the proposed publication or public presentation, and to ensure compliance with any publications policy adopted by the JSC (the "**Publications Policy**").

Written copies of such proposed publications and presentations shall be submitted to the JSC no later than [***] days before submission for publication or presentation, and the JSC shall provide its comments with respect to such publications and presentations within [***] days of its receipt of such written copy. The publishing or presenting Party shall remove any Confidential Information from such publication or presentation as requested by the JSC. The review period may be extended for an additional [***] days if a representative of the non-publishing Party on the JSC can demonstrate a reasonable need for such extension including, but not limited to, the preparation and filing of patent applications. Without limiting the foregoing, each publication or presentation regarding a Collaboration Product or POC Study shall be subject to the prior written approval of both Parties; provided that the first approval of the contents of a proposed academic, scientific or medical publication or public presentation relating to a Collaboration Product or any POC Study under this Agreement shall, in each case, constitute permission to use such contents subsequently without submission to the other Party for approval.

ARTICLE 8.
INTELLECTUAL PROPERTY

8.1 **Licenses**

8.1.1 **Selecta Research License**. Subject to the terms and conditions set forth in this Agreement, AskBio hereby grants to Selecta, during the Term, a non-exclusive, non-transferable (except in accordance with Section 13.1), royalty-free, fully paid-up, worldwide license under the AskBio Core Technology and AskBio Inventions for the sole purpose of performing the POC Studies in accordance with the POC Plans (the "**Selecta Research License**"). AskBio agrees to promptly disclose to Selecta all AskBio Inventions that are necessary or useful for Selecta's performance or decision making under the POC Plans. Except as expressly permitted under Section 8.1.5 or Section 13.1, Selecta shall not sublicense or assign the Selecta Research License, and any attempt to do so shall be null and void, *ab initio*.

8.1.2 **AskBio Research License**. Subject to the terms and conditions set forth in this Agreement, Selecta hereby grants to AskBio, during the Term, a non-exclusive, non-

transferable (except in accordance with Section 13.1), royalty-free, fully paid-up, worldwide license under the Selecta Core Technology and Selecta Inventions for the sole purpose of performing the POC Studies in accordance with the POC Plans (the "**AskBio Research License**" and, together with the Selecta Research License, the "**Research Licenses**"). Selecta agrees to promptly disclose to AskBio all Selecta Inventions that are necessary or useful for AskBio's performance or decision making under the POC Plans. Except as expressly permitted under Section 8.1.5 or Section 13.1, AskBio shall not sublicense or assign the AskBio Research License, and any attempt to do so shall be null and void, *ab initio*.

8.1.3 **Commercial Licenses**. Effective on the Collaboration Start Date, the Parties shall grant, and hereby grant, each other the following licenses:

8.1.3.1 Collaboration Indications.

8.1.3.1.1 With respect to each Collaboration Indication, AskBio shall grant, and hereby grants, to Selecta (a) an exclusive (except as to AskBio and its Affiliates and as set forth in Section 8.1.4), non-transferable (except in accordance with Section 13.1), worldwide license under the AskBio Core Technology, AskBio Inventions, and AskBio's interest in the Joint Inventions, including the right to grant and authorize sublicenses (subject to Section 8.1.5), to develop, use, offer for sale, sell, import, and otherwise exploit (but not make or have made) Collaboration Products for use in such Collaboration Indication and (b) a non-exclusive, non-transferable (except in accordance with Section 13.1), worldwide license under the AskBio Core Technology, AskBio Inventions, and AskBio's interest in the Joint Inventions, including the right to grant and authorize sublicenses (subject to Section 8.1.5), to make and have made Collaboration Products for use in such Collaboration Indication; provided that with respect to Joint Inventions that do not relate to the Pro10 cell line, such license in this clause (b) shall be exclusive ((a) and (b) collectively, the "**Selecta Collaboration Product License**").

8.1.3.1.2 With respect to each Collaboration Indication, Selecta shall grant, and hereby grants, to AskBio an exclusive (except as to Selecta and its Affiliates and as set forth in Section 8.1.4), non-transferable (except in accordance with Section 13.1), worldwide license under the Selecta Core Technology, Selecta Inventions, and Selecta's interest in the Joint Inventions, including the right to grant and authorize sublicenses (subject to Section 8.1.5), to develop, make, have

made, use, offer for sale, sell, import and otherwise exploit Collaboration Products for use in such Collaboration Indication (the **"AskBio Collaboration Product License**" and, together with the Selecta Collaboration Product License, the "**Collaboration Product Licenses**").

8.1.4 **Retention of Rights**.

8.1.4.1 AskBio retains the right under the AskBio Background Technology, AskBio Inventions and its interest in the Joint Inventions to make, have made, use, offer for sale, sell, import and otherwise exploit Collaboration

Products for use in Collaboration Indications solely under this Agreement (and to grant licenses under the AskBio Background Technology, AskBio Inventions and its interest in the Joint Inventions to its Affiliates and Third Parties who are acting with or on behalf of AskBio and/or Selecta in connection with this Agreement to make, have made, use, offer for sale, sell, import and otherwise exploit Collaboration Products for use in Collaboration Indications solely under this Agreement). Selecta retains the right under the Selecta Background Technology, Selecta Inventions and its interest in the Joint Inventions to make, have made, use, offer for sale, sell, import and otherwise exploit Collaboration Products for use in Collaboration Indications solely under this Agreement (and to grant licenses under the Selecta Background Technology, Selecta Inventions and its interest in the Joint Inventions to its Affiliates and Third Parties who are acting with or on behalf of AskBio and/or Selecta in connection with this Agreement to make, have made, use, offer for sale, sell, import and otherwise exploit Collaboration Products for use in Collaboration Indications solely under this Agreement). Except as otherwise expressly granted under the Research Licenses and the Collaboration Product Licenses and subject to Section 4.3, as between the Parties, (a) AskBio reserves all rights, title and interest in and to the AskBio Background Technology, AskBio Inventions and its interest in the Joint Inventions, and (b) Selecta reserves all rights, title, and interest in and to the Selecta Background Technology, Selecta Inventions and its interest in the Joint Inventions.

8.1.4.2 Notwithstanding anything to the contrary in this Agreement, nothing in this Agreement (including Section 8.1.3) shall limit or contravene any rights granted, directly or indirectly, by AskBio to (a) its Affiliates or Third Parties with respect to manufacture or supply of AAV vectors or capsids, or components thereof, including without limitation such rights granted to, or agreements with, Viralgen, Touchlight AAV Limited and any other affiliate of AskBio that is principally in the business of manufacturing or (b) Other Joint Ventures, other than to make, have made,

use, offer for sale, sell, import and otherwise exploit Collaboration Products for use in Collaboration Indications.

8.1.4.3 Except as otherwise expressly set forth in this Agreement, this Agreement does not confer upon any Party any rights, whether by implication, estoppel or otherwise, in or under the other Party's intellectual property rights.

8.1.5 **Sublicenses**.

8.1.5.1 **Research Licenses.** The Research Licenses shall include the right to grant and authorize sublicenses to Affiliates or Third Parties, subject to the prior

written consent of the other Party, not to be unreasonably withheld, conditioned or delayed, to the extent reasonably necessary to have activities performed under the POC Plans on the applicable Party's behalf; provided that for any sublicense grant (a) the Party requesting the right to grant the sublicense shall notify the other Party of such request, which notice shall identify the particular sublicensee and the activities to be performed thereby, (b) if approved, the Party granting the sublicense shall notify the other Party within ten (10) days of the execution or grant of such sublicense, and shall provide a copy of such sublicense with such notice, and (c) the Party granting the sublicense shall be and remain responsible to the other Party for the compliance of each sublicensee with the applicable terms and conditions hereunder.

8.1.5.2 **Collaboration Product Licenses.** The Collaboration Product Licenses shall include the right to grant and authorize sublicenses to Affiliates or Third Parties, subject to the prior written consent of the other Party, not to be unreasonably withheld, conditioned or delayed; provided that for any sublicense grant (a) the Party requesting the right to grant the sublicense shall notify the other Party of such request, which notice shall identify the particular sublicensee and the activities to be performed thereby, (b) if approved, the Party granting the sublicense shall notify the other Party within ten (10) days of the execution or grant of such sublicense, and shall provide a copy of such sublicense with such notice, and (c) the Party granting the sublicense shall be and remain responsible to the other Party for the compliance of each sublicensee with the applicable terms and conditions hereunder.

8.2 **Ownership of Inventions.** Ownership of all Inventions, including Patent Rights and other intellectual property rights with respect to such Inventions, shall be as set forth in this Article 8. Determination of inventorship of Inventions shall be made in accordance with U.S. patent laws. Without limiting the foregoing, as between the Parties, AskBio will continue to own

all AskBio Background Technology, and Selecta will continue to own all Selecta Background Technology.

8.2.1 **Improvements to AskBio Core Technology and Selecta Core Technology**. As between the Parties, and notwithstanding anything in this Agreement to the contrary, (a) AskBio shall retain all rights in any and all Inventions (whether made solely by or on behalf of either Party or jointly by or on behalf of the Parties) solely comprising any improvements to AskBio Core Technology, and all intellectual property rights therein ("**AskBio Improvements**"), (b) Selecta shall retain all rights in any and all Inventions (whether made solely by or on behalf of either Party or jointly by or on behalf of the Parties) solely comprising any improvements to Selecta Core Technology, and all intellectual property rights therein ("**Selecta Improvements**"), and (c) the Parties shall jointly own all rights in any and all Inventions (whether made solely by or on behalf of

either Party or jointly by or on behalf of the Parties) comprising improvements to both AskBio Core Technology and Selecta Core Technology, and all intellectual property rights therein ("**Joint Improvements**").

8.2.2 **Ownership by Inventorship**. Except as otherwise provided in Section 8.2.1 with respect to AskBio Improvements, Selecta Improvements and Joint Improvements, (a) any Invention conceived or reduced to practice solely by one or more employees of AskBio or its Affiliates or a Third Party acting under authority of AskBio or its Affiliates (and all intellectual property rights therein, including the Patent Rights claiming them) shall be solely owned by AskBio (together with AskBio Improvements, "**AskBio Inventions**"), (b) any Invention conceived or reduced to practice solely by one or more employees of Selecta or its Affiliates or a Third Party acting under authority of Selecta or its Affiliates (and all intellectual property rights therein, including the Patent Rights claiming them) shall be solely owned by Selecta (together with Selecta Improvements, "**Selecta Inventions**"), and (c) any Invention conceived or reduced to practice by one or more employees of AskBio or its Affiliate or a Third Party acting under the authority of AskBio or its Affiliate, on the one hand, and one or more employees of Selecta or its Affiliate or a Third Party acting under authority of Selecta or its Affiliate, on the other hand (and all intellectual property rights therein, including the Patent Rights claiming them), shall be owned jointly by the Parties (together with Joint Improvements, "**Joint Inventions**"). Except as otherwise set forth in Section 8.1, neither Party shall have the right to make, use, manufacture, grant licenses to, or otherwise exploit the Joint Inventions for any purposes without the prior written consent of the other Party.

8.2.3 **Assignment; Further Assurances**. Each Party shall assign, and hereby assigns, to the other Party all rights, title and interest it may have in and to any Invention or improvement that is to be owned by the other Party pursuant to this Section 8.2, if any, and agrees to sign, execute and acknowledge or cause to be signed, executed and acknowledged any and all documents and to perform such acts as may be

reasonably requested by the other Party for the purposes of perfecting the foregoing assignments to the extent necessary to give effect to the ownership allocation set forth in this Section 8.2.

8.3 **Patent Prosecution and Maintenance.**

8.3.1 **Definition**. As used in this Section 8.3, "prosecution" includes (a) all communication and other interaction with any patent office or patent authority having jurisdiction over a patent application in connection with pre-grant proceedings and (b) post-grant proceedings, including interferences, reexaminations, reissues, oppositions, and the like.

8.3.2 **AskBio Patent Rights and Selecta Patent Rights**. AskBio, at AskBio's expense, shall have the sole right to control the preparation, filing, prosecution and maintenance of

AskBio Patent Rights using patent counsel of AskBio's choice. Selecta, at Selecta's expense, shall have the sole right to control the preparation, filing, prosecution and maintenance of Selecta Patent Rights using patent counsel of Selecta's choice.

8.3.2.1 With respect to any AskBio Patent Rights pertaining to a Collaboration Product, if AskBio elects not to prosecute, or elects to discontinue prosecution, (whether worldwide or with respect to any particular country), AskBio shall promptly notify Selecta in writing (which notice shall be at least [***] calendar days prior to the lapse or abandonment of any such prosecution). In the event that Selecta elects to assume prosecution of such AskBio Patent Rights (whether worldwide or with respect to any particular country, as applicable), Selecta shall notify AskBio in writing within [***] days after Selecta's receipt of AskBio's written notice. In the event that AskBio has not received written notice from Selecta within such [***] day period, Selecta will be deemed to have waived the right to assume prosecution of such AskBio Patent Rights. If Selecta assumes prosecution of such AskBio Patent Rights, Selecta may undertake, but shall not be required to undertake, at its sole expense and in its sole discretion, the prosecution of such AskBio Patent Rights; *provided, however,* that in the event that Selecta undertakes such prosecution, AskBio, at Selecta's expense, shall cooperate with and assist Selecta as set forth in Section 8.3.3.6 (with such AskBio Patent Rights being treated similar to Joint Patent Rights for purposes of Section 8.3.3.6).

8.3.2.2 With respect to any Selecta Patent Rights pertaining to a Collaboration Product, if Selecta elects not to prosecute, or elects to discontinue prosecution, (whether worldwide or with respect to any particular country), Selecta shall promptly notify AskBio in writing (which notice

shall be at least [***] calendar days prior to the lapse or abandonment of any such prosecution). In the event that AskBio elects to assume prosecution of such Selecta Patent Rights (whether worldwide or with respect to any particular country, as applicable), AskBio shall notify Selecta in writing within [***] days after AskBio's receipt of Selecta's written notice. In the event that Selecta has not received written notice from AskBio within such [***] day period, AskBio will be deemed to have waived the right to assume prosecution of such Selecta Patent Rights. If AskBio assumes prosecution of such Selecta Patent Rights, AskBio may undertake, but shall not be required to undertake, at its sole expense and in its sole discretion, the prosecution of such Selecta Patent Rights; *provided, however,* that in the event that AskBio undertakes such prosecution, Selecta, at AskBio's expense, shall cooperate with and assist AskBio as set forth in Section 8.3.3.6 (with such Selecta Patent Rights being treated similar to Joint Patent Rights for purposes of Section 8.3.3.6).

8.3.3 **Joint Patent Rights.**

8.3.3.1 With respect to any Joint Invention, each Party shall promptly exchange with the other Party all relevant information, including without limitation the identity of any and all inventors. The PPEC shall meet periodically, prior to the filing of any patent application, to discuss strategies for filing such a patent application, if any, on such Joint Inventions.

8.3.3.2 Except as otherwise provided in Section 8.3.3.4 and Section 8.3.3.5, the costs of prosecution for any and all Joint Patent Rights shall be borne equally by the Parties.

8.3.3.3 Upon the identification of a Joint Invention, the PPEC shall confer to determine which Party would be best suited to prosecute Joint Patent Rights covering such Joint Invention. Such determination shall be made by the JSC after recommendation made by the PPEC, which recommendation shall consider the nature of the Joint Invention, each Party's relative contribution towards such Joint Invention and the experience of each of the Parties with respect to prosecution of Joint Patent Rights covering inventions other than such Joint Invention but based on similar technology features.

8.3.3.4 With respect to any Joint Patent Rights that the Parties determine should be prosecuted by AskBio, if AskBio elects not to prosecute, or elects to discontinue prosecution, (whether worldwide or with respect to any particular country), AskBio shall promptly notify Selecta in writing (which notice shall be at least [***] calendar days prior to the lapse or abandonment of any such prosecution). In the event that Selecta elects

to assume prosecution of such Joint Patent Rights (whether worldwide or with respect to any particular country, as applicable), Selecta shall notify AskBio in writing within [***] days after Selecta's receipt of AskBio's written notice. In the event that AskBio has not received written notice from Selecta within such [***] day period, Selecta will be deemed to have waived the right to assume prosecution of such Joint Patent Rights. If Selecta assumes prosecution of such Joint Patent Rights, Selecta may undertake, but shall not be required to undertake, at its sole expense and in its sole discretion, the prosecution of such Joint Patent Rights and, as of the date of AskBio's receipt of Selecta's written notice of Selecta's intent to assume prosecution of such Joint Patent Rights, AskBio shall have no further obligation with respect to such Joint Patent Rights, and the Joint Invention covered by such Joint Patent Rights; *provided, however,* that in the event that Selecta undertakes such prosecution, AskBio, at Selecta's expense, shall cooperate with and assist Selecta as set forth in Section 8.3.3.6.

8.3.3.5 With respect to any Joint Patent Rights that the Parties determine should be prosecuted by Selecta, if Selecta elects not to prosecute, or elects to discontinue prosecution, (whether worldwide or with respect to any particular country), Selecta shall promptly notify AskBio in writing (which notice shall be at least [***] calendar days prior to the lapse or abandonment of any such prosecution). In the event that AskBio elects to assume prosecution of such Joint Patent Rights (whether worldwide or with respect to any particular country, as applicable), AskBio shall notify Selecta in writing within [***] days after AskBio's receipt of Selecta's written notice. In the event that Selecta has not received written notice from AskBio within such [***] day period, AskBio will be deemed to have waived the right to assume prosecution of such Joint Patent Rights. If AskBio assumes prosecution of such Joint Patent Rights, AskBio may undertake, but shall not be required to undertake, at its sole expense and in its sole discretion, the prosecution of such Joint Patent Rights and, as of the date of Selecta's receipt of AskBio's written notice of AskBio's intent to assume prosecution of such Joint Patent Rights, Selecta shall have no further obligation with respect to such Joint Patent Rights, and the Joint Invention covered by such Joint Patent Rights; *provided, however,* that in the event that AskBio undertakes such prosecution, Selecta, at AskBio's expense, shall cooperate with and assist AskBio as set forth in Section 8.3.3.6.

8.3.3.6 Each Party, as the non-prosecuting Party, shall cooperate with the Party prosecuting a Joint Patent Right ("**Prosecuting Party**"), including without limitation, (a) making scientists and scientific records reasonably available, (b) making reasonably available its respective authorized

attorneys, agents or representatives, and (c) signing or use its best efforts to have signed and delivered, at no charge to the Prosecuting Party, all documents necessary in connection with such prosecution. The non-Prosecuting Party will be provided in a timely manner with copies of all correspondence with the U.S. Patent & Trademark Office (or the applicable foreign patent office) and with the opportunity to review and comment upon any papers, responses or other filings prepared by the Prosecuting Party for submission to the said offices in advance of their filing, and the Prosecuting Party will reasonably consider any reasonable comments that are provided by the non-Prosecuting Party in a timely manner.

8.4 **Enforcement**

8.4.1 **Notice**. Each Party shall promptly notify the other Party in writing upon learning of any (a) actual or suspected infringement of any and all Joint Patent Rights by a Third Party, or of any claim of invalidity, unenforceability, or non-infringement of the Joint Patent Rights ("**Joint Patent Right Infringement**") and (b) actual or suspected infringement of any and all AskBio Licensed Patent Rights and Selecta Licensed Patent

Rights by a Third Party through the research, development, making, using selling, offering for sale, import or export of a product intended for use in a Collaboration Indication (such infringement, "**Licensed Patent Right Infringement**", and such notice, "**Enforcement Notice**"), and, in each case, (a) and (b), shall, along with such Enforcement Notice, supply the other Party with all evidence in its possession pertaining materially thereto.

8.4.2 **Defense**. Promptly after delivery of an Enforcement Notice by a Party to the other Party, but in any event within [***] days of such delivery, the PPEC shall meet to discuss which Party shall have the first right, but not the obligation, to initiate a suit or take other appropriate action that it believes is reasonably required to prevent or abate the Joint Patent Right Infringement or Licensed Patent Right Infringement, as applicable (the "**Enforcing Party**"). After such determination, the Enforcing Party shall have the first right, but not the obligation, to initiate a suit or take other appropriate action that it believes is reasonably required to prevent or abate the Joint Patent Right Infringement or Licensed Patent Right Infringement. The non-Enforcing Party agrees to be joined as a party plaintiff, if necessary, to prosecute the action or proceeding and to give reasonable assistance and authority to file and prosecute the action or proceeding at no charge to the Enforcing Party, in each case with the aim to preserve the integrity of the Joint Patent Rights, AskBio Licensed Patent Rights or Selecta Patent Rights, as applicable. In the event that the Enforcing Party does not initiate a suit or take other appropriate action to prevent or abate such Joint Patent Right Infringement or Licensed Patent Right Infringement, as applicable, within [***] days after knowledge of such infringement, then the non-Enforcing

Party shall have the right, but not the obligation, to initiate a suit or take other appropriate action that it believes is reasonably required to prevent or abate such Joint Patent Right Infringement or Licensed Patent Right Infringement, as applicable. In such a case, the Enforcing Party agrees to be joined as a party plaintiff, if necessary, to prosecute the action or proceeding and to give reasonable assistance and authority to file and prosecute the action or proceeding at no charge to the non-Enforcing Party, in each case with the aim to preserve the integrity of the Joint Patent Rights, AskBio Licensed Patent Rights or Selecta Patent Rights, as applicable. Each Party shall provide the other Party in a timely manner with copies of all material correspondence and documents regarding such Joint Patent Right Infringement, and with the opportunity to review and comment upon any material correspondence or documents prepared by such Party, and such Party will reasonably consider any reasonable comments that are provided by the other Party in a timely manner.

8.4.3 **Recovery**. Unless otherwise mutually agreed by the Parties, all monies recovered upon the final judgment or settlement of any action described in this Section 8.4, shall be used first to reimburse the Parties for their respective out-of-pocket expenses relating to the action, and any remaining balance shall be shared between the Parties equally; provided that if the Joint Patent Right Infringement or Licensed Patent Right Infringement is primarily related to a Collaboration Indication, the remaining balance

shall be shared by the Parties in accordance with the Profit Share Percentage for such Collaboration Indication.

8.5 **Defense Against Third Party Infringement Claims**.

8.5.1 **Core Technology**. In the event that a Third Party makes any claim or brings any suit or other proceeding for infringement or misappropriation of any intellectual property rights of such Third Party in the research, development, making, using selling, offering for sale, import or export of Collaboration Product against (a) AskBio, or any of their respective Affiliates or sublicensees, (i) based on the use of the AskBio Core Technology, AskBio shall have the sole right, at its expense, to defend and control the defense of such claim, suit or other proceeding as well as to initiate and control any counterclaim or other similar action with respect to AskBio Core Technology, or (ii) based on the use of the Selecta Core Technology, Selecta and AskBio shall cooperate, at each Party's own expense, to defend such claim, suit or other proceeding as well as to initiate any counterclaim or other similar action with respect to Selecta Core Technology; and (b) Selecta, or any of their respective Affiliates or sublicensees, (i) based on the use of the Selecta Core Technology, Selecta shall have the sole right, at its expense, to defend and control the defense of such claim, suit or other proceeding as well as to initiate and control any counterclaim or other similar action with respect to Selecta Core Technology, or (ii) based on the use of the AskBio Core Technology, Selecta and AskBio shall cooperate, at each Party's own expense, to defend such claim, suit or other proceeding as well as to initiate any counterclaim or other similar action with respect to AskBio Core Technology.

Any disputes among the Parties as to how the claim, suit or other proceeding is controlled or handled shall be resolved by the PPEC.

8.5.2 **Other Claims**. In the event that a Third Party makes any claim or brings any suit or other proceeding against a Party, or any of their respective Affiliates or sublicensees, for infringement or misappropriation of any intellectual property rights of such Third Party based on the research, development, making, using selling, offering for sale, import or export of any Collaboration Products, other than as set forth in Section 8.5.1, the Party first obtaining knowledge of such a claim shall immediately provide written notice to the other Party of such claim along with the related facts in reasonable detail. Unless the Parties otherwise agree, the Party against which such claim is brought shall have the first right, but not the obligation, at its expense, to defend and control the defense of such claim, suit or other proceeding. In the event that the Party against which such claim is brought does not defend such claim, suit or other proceeding or take other appropriate action within thirty (30) days after acquiring knowledge of such claim, suit or other proceeding, then the other Party shall have the right, but not the obligation, to be joined as a party and to defend and control such claim, suit or other proceeding or take other appropriate action that it believes is reasonably required. Each Party shall fully cooperate with the defending Party, at the defending Party's reasonable request and expense, in defense of such claim, suit or other proceeding, including by

being joined as a party, and shall have the right to be represented separately by counsel of its own choice but at its own expense. The defending Party shall also control settlement of such claim; provided, however, that no settlement shall be entered into without the prior written consent of the other Party if such settlement would adversely affect the rights and benefits of, or impose or adversely affect any obligations on, the other Party. To the extent appropriate, the Parties shall enter into a joint defense agreement with respect to the common interest privilege protecting communications regarding such claim in a form reasonably acceptable to the Parties.

ARTICLE 9.
REPRESENTATIONS AND WARRANTIES

9.1 **Mutual Representations and Warranties.** Each Party hereby represents and warrants to the other Party that as of the Effective Date:

9.1.1 it is duly organized, validly existing, and in good standing under the laws and regulations of the jurisdiction in which it is organized;

9.1.2 it (a) has the requisite power and authority and the legal right to enter into this Agreement and to perform its obligations hereunder, and (b) has taken all requisite action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

9.1.3 that this Agreement has been duly executed and delivered by such Party and constitutes a legal, valid, and binding obligation of such Party, enforceable against such Party in accordance with its terms;

9.1.4 it has obtained all necessary consents, approvals, and authorizations of all Governmental Authorities and other persons or entities required to be obtained by such Party in connection with the execution and delivery of this Agreement;

9.1.5 the execution, delivery and performance by such Party of this Agreement and its compliance with the terms and provisions hereof does not and will not conflict with or result in a breach of any of the terms and provisions of or constitute a default under (a) a loan agreement, guaranty, financing agreement, agreement relating to one or more Patent Rights or other agreement or instrument binding or affecting it or its property; or (b) any order, writ, injunction or decree of any court or Governmental Authority entered against it or by which any of its property is bound; and

9.1.6 it has not, and will not, during the Term, grant any right to any Third Party that would conflict with the rights granted to the other Party or would be inconsistent with its obligations hereunder.

9.2 **Additional Representations and Warranties of AskBio**. As of the Effective Date, AskBio hereby represents and warrants to Selecta that as of the Effective Date: (a) to AskBio's actual

knowledge (which, for clarity, does not include obtaining any legal opinions or freedom to operate analysis), (i) there is no known infringement or threatened infringement of the AskBio Core Technology by any Third Party, (ii) AskBio has not received any written claims alleging that the AskBio Core Technology is invalid or unenforceable, and (iii) AskBio has not taken any action or failed to take any action since January 1, 2018 that would reasonably be expected to result in the abandonment, cancellation, forfeiture, relinquishment, invalidation or unenforceability of any of the Patent Rights listed on Schedule 1.9, and all filing, examination, issuance, post registration and maintenance fees, annuities and the like that have come due between January 1, 2018 and the Effective Date and are required to maintain, preserve or renew any such Patent Rights have been timely paid; (b) there are no valid and enforceable intellectual property rights (including Patent Rights) owned or Controlled by a Third Party that would be infringed or misappropriated by Selecta's use or practice of the AskBio Core Technology in accordance with the Selecta Research License or the Selecta Collaboration Product License; (c) AskBio has not granted any licenses or covenants not to sue, or similar rights under the AskBio Core Technology with respect to any AAV Products for use in a Collaboration Indication that conflict with the rights granted to Selecta hereunder; (d) neither AskBio nor any of its employees or contractors performing activities hereunder has been debarred under Article 306 of the FDCA, 21 U.S.C. §335a(a) or (b), or any equivalent foreign or local law, rule or regulation, and neither appears on the United States Food and Drug debarment list; (e) neither AskBio nor any of its employees

or contractors performing activities hereunder has committed any crime or conduct that could result in such debarment or exclusion from any governmental healthcare program; and (f) to AskBio's actual knowledge (which, for clarity, does not include obtaining any legal opinions or freedom to operate analysis), no investigations, claims or proceedings with respect to any such crimes or conduct are pending or threatened against AskBio or any of its employees or contractors performing activities hereunder. AskBio agrees and undertakes to promptly notify Selecta if AskBio or any of its employees or contractors performing activities hereunder becomes debarred or excluded, or proceedings have been initiated against either of them with respect to debarment or exclusion, whether such debarment or exclusion, or initiation of proceedings, occurs during or after the Term.

9.3 **Additional Representations and Warranties of Selecta**. As of the Effective Date, Selecta hereby represents and warrants to AskBio that as of the Effective Date: (a) to Selecta's actual knowledge (which, for clarity, does not include obtaining any legal opinions or freedom to operate analysis), (i) there is no known infringement or threatened infringement of the Selecta Core Technology by any Third Party, (ii) Selecta has not received any written claims alleging that the Selecta Core Technology is invalid or unenforceable, and (iii) Selecta has not taken any action or failed to take any action since January 1, 2018 that would reasonably be expected to result in the abandonment, cancellation, forfeiture, relinquishment, invalidation or unenforceability of any of the Patent Rights listed on Schedule 1.62, and all filing, examination, issuance, post registration and maintenance fees, annuities and the like that have come due between January 1, 2018 and the Effective Date and are required to maintain, preserve or renew any such Patent Rights have been timely paid; (b) there are no valid and enforceable intellectual property rights (including Patent Rights) owned or Controlled by a

Third Party that would be infringed or misappropriated by AskBio's use or practice of the Selecta Core Technology in accordance with the AskBio Research License or the AskBio Collaboration Product License; (c) Selecta has not granted any licenses or covenants not to sue, or similar rights under the Selecta Core Technology with respect to any AAV Products or ImmTOR for use in a Collaboration Indication that conflict with the rights granted to AskBio hereunder; (d) neither Selecta nor any of its employees or contractors performing activities hereunder has been debarred under Article 306 of the FDCA, 21 U.S.C. §335a(a) or (b), or any equivalent foreign or local law, rule or regulation, and neither appears on the United States Food and Drug debarment list; (e) neither Selecta nor any of its employees or contractors performing activities hereunder has committed any crime or conduct that could result in such debarment or exclusion from any governmental healthcare program; and (f) to Selecta's actual knowledge (which, for clarity, does not include obtaining any legal opinions or freedom to operate analysis), no investigations, claims or proceedings with respect to any such crimes or conduct are pending or threatened against Selecta or any of its employees or contractors performing activities hereunder. Selecta agrees and undertakes to promptly notify AskBio if Selecta or any of its employees or contractors performing activities hereunder becomes debarred or excluded, or proceedings have been initiated

against either of them with respect to debarment or exclusion, whether such debarment or exclusion, or initiation of proceedings, occurs during or after the Term.

9.4 **Disclaimer of Warranty**. Each Party acknowledges that any tangible materials provided by the other Party may be experimental in nature, may have hazardous properties, and are provided "as-is." EXCEPT AS OTHERWISE EXPRESSLY SET FORTH HEREIN, NEITHER PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY REPRESENTATION OR WARRANTY OF (A) MERCHANTABILITY, (B) FITNESS FOR A PARTICULAR USE OR PURPOSE, (C) NON-INFRINGEMENT BY THIRD PARTIES, (D) INFRINGEMENT OR MISAPPROPRIATION OF THIRD PARTIES' INTELLECTUAL PROPERTY RIGHTS, (E) VALIDITY OR ENFORCEABILITY OF THE ASKBIO BACKGROUND TECHNOLOGY, ASKBIO PATENT RIGHTS, SELECTA BACKGROUND TECHNOLOGY, OR SELECTA PATENT RIGHTS; (F) COMMERCIAL UTILITY, (G) THAT ANY PATENT APPLICATION INCLUDED IN THE ASKBIO BACKGROUND TECHNOLOGY, ASKBIO PATENT RIGHTS, SELECTA BACKGROUND TECHNOLOGY, OR SELECTA PATENT RIGHTS WILL ULTIMATELY ISSUE, (H) THAT ANY MATERIALS PROVIDED BY EITHER PARTY WILL NOT POSE A SAFETY OR HEALTH RISK, OR (I) SUCCESS OF THE FEASIBILITY STUDY OR COLLABORATION, AND EACH PARTY HEREBY EXPRESSLY DISCLAIMS THE FOREGOING SET FORTH IN SUBSECTIONS (A)-(I).

ARTICLE 10.
INDEMNIFICATION AND LIABILITY

10.1 **Indemnification by AskBio.** AskBio shall indemnify, defend (subject to Section 10.3) and hold Selecta and its Affiliates, and their respective officers, directors, employees, contractors,

agents and assigns (each, a "**Selecta Indemnified Party**"), harmless from and against losses, expenses, fees, damages and liability of any nature, including reasonable legal expenses and attorneys' fees, (collectively, "**Losses**") to which any Selecta Indemnified Party may become subject as a result of any Third Party demands, claims, suits, actions, proceedings, causes of action, or judgments ("**Third Party Claims**") against any Selecta Indemnified Party to the extent: (a) arising or resulting from the negligence or willful misconduct of AskBio or any of its Affiliates, or their licensees, employees, contractors or agents under this Agreement, (b) arising or resulting from the material breach by AskBio of this Agreement, or (c) arising or resulting from the infringement or misappropriation of any intellectual property rights (including Patent Rights) owned or Controlled by a Third Party to the extent such infringement or misappropriation arises or results from Selecta's use or practice of the AskBio Core Technology in accordance with this Agreement. AskBio's obligations to so indemnify and hold the Selecta Indemnified Parties harmless shall not apply to the extent that such Third Party Claims result from any Loss (i) for which Selecta is obligated to indemnify, defend and hold AskBio Indemnified Parties harmless under Section 10.2 or (ii) arising out of or relating to such Selecta Indemnified Parties' fraud, willful misconduct or gross negligence.

10.2 **Indemnification by Selecta.** Selecta shall indemnify, defend (subject to Section 10.3) and hold AskBio and its Affiliates, and their respective officers, directors, employees, contractors, agents and assigns (each, a "**AskBio Indemnified Party**"), harmless from and against Losses to which any AskBio Indemnified Party may become subject as a result of any Third Party Claims against any AskBio Indemnified Party to the extent: (a) arising or resulting from the negligence or willful misconduct of Selecta or any of its Affiliates, or their licensees, employees, contractors or agents under this Agreement, (b) arising or resulting from the material breach by Selecta of this Agreement, or (c) arising or resulting from the infringement or misappropriation of any intellectual property rights (including Patent Rights) owned or Controlled by a Third Party to the extent such infringement or misappropriation arises or results from AskBio's use or practice of the Selecta Core Technology or use of Selecta's product candidate SEL-302 in accordance with this Agreement. Selecta's obligations to so indemnify and hold the AskBio Indemnified Parties harmless shall not apply to the extent that such Third Party Claims result from any Loss (i) for which AskBio is obligated to indemnify, defend and hold Selecta Indemnified Parties harmless under Section 10.1 or (ii) arising out of or relating to such AskBio Indemnified Parties' fraud, willful misconduct or gross negligence.

10.3 **Indemnification Procedure.**

10.3.1 Any Selecta Indemnified Party or AskBio Indemnified Party seeking indemnification hereunder ("**Indemnified Party**") shall notify the Party against whom indemnification is sought ("**Indemnifying Party**") in writing reasonably promptly after the assertion against the Indemnified Party of any Third Party Claim in respect of which the Indemnified Party intends to base a claim for indemnification hereunder, but the failure or delay to so notify the Indemnifying Party shall not relieve the Indemnifying Party of any obligation or liability that it may have to the Indemnified Party except to the extent

that the Indemnifying Party demonstrates that its ability to defend or resolve such Third Party Claim is adversely affected thereby.

10.3.2 Subject to the provisions of Section 10.3.3 below, the Indemnifying Party shall have the right, upon providing notice to the Indemnified Party of its acceptance of responsibility to indemnify the Indemnified Party and its intent to do so within thirty (30) days after receipt of the notice from the Indemnified Party of any Third Party Claim, to assume the defense and handling of such Third Party Claim, at the Indemnifying Party's sole expense.

10.3.3 The Indemnifying Party shall select counsel reasonably acceptable to the Indemnified Party in connection with conducting the defense and handling of such Third Party Claim, and the Indemnifying Party shall defend or handle the same in consultation with the Indemnified Party, and shall keep the Indemnified Party timely apprised of the status of such Third Party Claim. The Indemnifying Party shall not, without the prior written consent of the Indemnified Party, agree to a settlement of

any Third Party Claim which imposes any liability or obligation on the Indemnified Party other than financial obligations which are fully assumed by the Indemnifying Party, would involve any admission of wrongdoing on the part of the Indemnified Party, or does not include a release of all claims against the Indemnified Party. The Indemnified Party shall cooperate with the Indemnifying Party (at the Indemnifying Party's request and subject to reimbursement of associated out-of-pocket expenses by the Indemnifying Party), shall be entitled to participate in the defense and handling of such Third Party Claim with its own counsel and at its own expense and shall not make any admission or other communication regarding such Third Party Claim or agree to a settlement of any Third Party Claim without the consent of the Indemnifying Party.

10.4 **Collaboration Product Claims.** In the event of any Third Party Claim that results in Losses being incurred by any AskBio Indemnified Party or any Selecta Indemnified Party, where such Third Party Claim and associated Losses (a) are not within the indemnification obligations described in Section 10.1 or Section 10.2 and (b) arise as a result of, or in connection with, the Development, Manufacture or Commercialization activities conducted by either Party on or after the Effective Date with respect to any Collaboration Product, each Party shall be responsible for its Profit Share Percentage of such Losses, regardless of which Party's indemnitees initially bear such Losses. Appropriate indemnification shall be made by the Party bearing less than its Profit Share Percentage to the other Party to effect the foregoing allocation of applicable Losses.

10.5 **Limitation of Liability.** EXCEPT FOR LIABILITY INCURRED AS A RESULT OF A PARTY'S BREACH OF ARTICLE 7, A PARTY'S MISUSE OR MISAPPROPRIATION OF THE OTHER PARTY'S INTELLECTUAL PROPERTY RIGHTS, A PARTY'S BREACH OF SECTION 13.18 OR A PARTY'S GROSS NEGLIGENCE, WILLFUL MISCONDUCT, OR FRAUD, IN NO EVENT SHALL A PARTY BE LIABLE TO THE OTHER PARTY FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR

INDIRECT DAMAGES ARISING OUT OF OR RELATING TO THIS AGREEMENT ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGES. NOTHING IN THIS SECTION 10.5 IS INTENDED TO OR SHALL LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF ANY PARTY UNDER SECTION 10.1, SECTION 10.2 OR SECTION 10.4.

10.6 **Insurance.** Each Party shall maintain insurance (which may include any self-insured arrangements), including product liability insurance, with respect to its activities under this Agreement. Such insurance or self-insurance shall be in such amounts and subject to such deductibles as are prevailing in the industry from time to time, provided that, each Party shall maintain a minimum of an aggregate of [***] in general comprehensive liability insurance and an aggregate of: (a) [***] in product liability insurance until the Collaboration

Start Date and (b) [***] in product liability insurance no later than thirty (30) days following the Collaboration Start Date. Each Party shall provide written proof of the existence of such insurance to the other Party upon request. For clarity, either Party shall have the right to provide the total limits required under this Section 10.6 by any combination of primary and umbrella/excess coverage and may provide all or part of the required coverage through its insurance captive. Further, each Party sponsoring any clinical trials of the Products shall maintain clinical trial insurance that is in compliance with the local laws of each country in which such clinical trials are being completed. Each Party shall name the other Party as an additional insured under its general comprehensive and product liability policies, as well as under its clinical trial policies.

ARTICLE 11.
TERM AND TERMINATION

11.1 **Term.** The term of this Agreement (the "**Term**") will commence as of the Effective Date, and will expire as follows, unless earlier terminated in accordance with this Article 11:

11.1.1 If the activities under the POC Plans fail to demonstrate POC, no POC Notice is provided by the JSC pursuant to Section 3.8, and the Parties do not mutually agree in writing to proceed with the Collaboration despite such failure, then the Term shall expire on the POC Determination Deadline or earlier as mutually agreed in writing.

11.1.2 If the POC Notice is provided or the Parties mutually agree in writing to proceed with the Collaboration, then this Agreement shall continue in effect on a Collaboration Indication-by-Collaboration Indication basis, until the Parties are no longer Developing or Commercializing any Collaboration Product for use in such Collaboration Indication, or earlier as mutually agreed in writing.

11.2 **Termination for Cause**. Either Party may terminate this Agreement if the other Party materially breaches any provision of this Agreement and fails to remedy such breach within [***] days, or [***] days if such breach is with respect to a payment obligation hereunder, after receipt of written notice of such breach; provided that if such breach is specific to a particular

Collaboration Indication (or a Collaboration Product for a particular Collaboration Indication), such termination shall apply only with respect to such Collaboration Indication. In addition, either Party shall have the right to immediately terminate this Agreement upon notice to the other Party if the other Party or any of its officers, directors, employees, contractors, subcontractors, Third Party vendors, or agents, violates, or is investigated, indicted, or charged by any governmental or regulatory authority for, violating any anti-corruption or anti-bribery laws, rules, or regulations, including, without limitation, the FCPA, in which case the effective date of any such termination shall be the date stated on such notice of termination given by such Party.

11.3 **Termination for Insolvency.** Notwithstanding anything contained in this Agreement to the contrary, either Party may terminate this Agreement immediately by written notice in the event: (a) the other Party voluntarily enters into bankruptcy proceedings; (b) the other Party

makes an assignment for the benefit of creditors; (c) a petition is filed against the other Party under a bankruptcy law, a corporate reorganization law, or any other law for relief of debtors or similar law analogous in purpose or effect, which petition is not stayed or dismissed within [***] days of filing thereof; or (d) the other Party enters into liquidation or dissolution proceedings or a receiver is appointed with respect to any assets of the other Party, which appointment is not vacated within one hundred and twenty (120) days.

11.4 **Challenge of Patent Rights.**

11.4.1 If Selecta commences any legal proceeding (or if Selecta assists any Third Party in commencing any legal proceeding) that challenges the validity or enforceability of any Patent Rights within the AskBio Core Technology or AskBio Patent Rights, AskBio shall have the right to terminate this Agreement upon thirty (30) days' prior written notice; provided, however, that if Selecta or such Third Party withdraws such challenge during such thirty (30)-day period, AskBio may not terminate this Agreement for such challenge. In the event that at least one claim of a patent that is subject to a challenge survives the challenge by not being found invalid or unenforceable, regardless of whether the claim is amended as part of the challenge, Selecta shall pay all reasonable costs and expenses incurred by AskBio (including attorneys' fees and expert witness fees) in connection with defending such challenge.

11.4.2 If AskBio commences any legal proceeding (or if AskBio assists any Third Party in commencing any legal proceeding) that challenges the validity or enforceability of any Patent Rights within the Selecta Core Technology or Selecta Patent Rights, Selecta shall have the right to terminate this Agreement upon thirty (30) days' prior written notice; provided, however, that if AskBio or such Third Party withdraws such challenge during such thirty (30)-day period, Selecta may not terminate this Agreement for such challenge. In the event that at least one claim of a patent that is subject to a challenge survives the challenge by not being found invalid or unenforceable, regardless of whether the claim is amended as part of the challenge, AskBio shall pay all reasonable

costs and expenses incurred by Selecta (including attorneys' fees and expert witness fees) in connection with defending such challenge.

11.4.3 Notwithstanding anything to the contrary in this Section 11.4, termination under this Section 11.4 is not permitted for any counterclaim or defense made, filed or maintained by a Party in any patent infringement claim, demand, lawsuit, cause of action or other action made, filed or maintained by the other Party or its Affiliate.

11.5 **Termination for Failure of a Collaboration Indication.** On a Collaboration Indication-by-Collaboration Indication basis, if (a) the JSC determines that based on the results of activities under the applicable Therapeutic Development Plan, Development, Manufacture or Commercialization of Collaboration Products for such Collaboration Indication is not scientifically or therapeutically viable, or (b) Regulatory Approval is not granted within

[***] of filing of the BLA for such Collaboration Product, or withdrawn by a Competent Authority for any reason (in each case, a "**Failed Indication**"), then either Party may, upon written notice to the other Party, terminate this Agreement with respect to such Failed Indication, in which case such Failed Indication will cease to be a Collaboration Indication and all Collaboration Products for use in such Failed Indication shall cease to be Collaboration Products. For clarity, the Agreement shall otherwise continue with respect to all other Collaboration Indications.

11.6 **General Effects of Termination or Expiration.** Upon termination or expiration of this Agreement, unless otherwise agreed in writing:

11.6.1 termination of this Agreement for any reason will not release either Party from any liability which, at the time of such expiration or termination, has already accrued to the other Party or which is attributable to a period prior to such termination nor preclude either Party from pursuing all rights and remedies it may have at law or in equity with respect to any breach of this Agreement;

11.6.2 each Party shall promptly return or destroy, at the Disclosing Party's option, to the other Party all Confidential Information received from the other Party (except to the extent reasonably necessary to exercise any remaining rights under this Agreement and, in all cases, except that one copy of which may be retained by legal counsel for archival purposes and ensuring compliance with the confidentiality obligations imposed by this Agreement, and which such copy shall not be accessed for any other purpose);

11.6.3 termination of this Agreement for any reason will not affect either Party's ownership of or rights to Joint Inventions or Joint Patent Rights as set forth in this Agreement;

11.6.4 the Research Licenses and Collaboration Product Licenses shall automatically terminate with respect to all terminated Collaboration Indications and Collaboration Products for use in such Collaboration Indications (which, in the case of termination or expiration of this Agreement in its entirety shall be all Collaboration Indications, Collaboration Products, and POC Candidates); and

11.6.5 Except as expressly set forth in this Agreement, including this Section 11.6 and Section 11.7, all rights and obligations of the Parties hereunder shall terminate, with respect to this Agreement (in the case of expiration of this Agreement or termination in its entirety) or the terminated Collaboration Indications and Collaboration Products for use in such Collaboration Indications (in the case of termination of one or more Collaboration Indications).

11.7 **Survival.** Notwithstanding any provision of this Agreement to the contrary, the provisions of Article 1, Section 3.7.2, Section 4.2.3.2, Section 6.4 (for three (3) years after submission of the applicable Party's last quarterly report), Article 7 (for five (5) years after the Term), Section 8.2, Section 8.3.3, Section 8.4 (with respect to Joint Patent Rights), Article 10, this

Section 11.7, Article 12, and Article 13 shall survive any termination or expiration of this Agreement, as will the Parties' respective rights accrued hereunder to the date of termination or expiration.

11.8 **Bankruptcy Code**. If this Agreement is rejected by a Party as a debtor under Section 365 of the United States Bankruptcy Code or similar provision in the bankruptcy laws of another jurisdiction (the "**Code**"), then, notwithstanding anything else in this Agreement to the contrary, all licenses and rights to licenses granted under or pursuant to this Agreement by the Party in bankruptcy to the other Party are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (or similar provision in the bankruptcy laws of the jurisdiction), licenses of rights to "intellectual property" as defined under Section 101(35A) of the United States Bankruptcy Code (or similar provision in the bankruptcy laws of the jurisdiction) and subject to survival in accordance with the Code. The Parties agree that a Party that is a licensee of rights under this Agreement shall retain and may fully exercise all of its rights and elections under the Code. The foregoing provisions of this Section 11.8 are without prejudice to any rights a Party may have arising under the Code.

ARTICLE 12.
DISPUTE RESOLUTION

12.1 **General.** Except as otherwise provided in this Agreement or agreed by the Parties in writing, all disputes under this Agreement shall be resolved as set forth in this Article 12.

12.2 **Initial Attempts to Resolve Disputes.** Any disputes between the Parties first shall be addressed informally between the Parties. Either Party may request a special dispute resolution meeting. Upon such request, the Parties will use reasonable efforts to convene such a special meeting at a time and place that is mutually convenient to the Parties. If the Parties are unable to resolve a dispute among them informally, or a meeting could not be convened to consider the matter, then either Party may, by written notice to the other, have such dispute referred to their respective executive officers designated below or their successors, for attempted resolution by good faith negotiations:

FOR Selecta: Carsten Brunn, CEO

FOR AskBio: Sheila A. Mikhail, CEO

In the event the designated executive officers are not able to resolve any such dispute within thirty (30) days after written notice given by one Party to the other specifically invoking this stage in the dispute resolution procedure, either Party may by written notice to the other (a) commence the mediation process set forth in Section 12.3 if any such dispute is a Critical Matter, or (b) commence the arbitration process set forth in Section 12.4 below for all other disputes.

12.3 **Mediation.** All disputes regarding a Critical Matter which the Parties are unable to resolve amicably in accordance with Section 12.2 may be referred to a Third Party outside mediator

mutually acceptable to both Parties in good faith, for assistance in seeking resolution. The mediation shall proceed at such times and place mutually acceptable to both Parties in good faith; provided that any mediation pursuant to this Section 12.3 shall not last longer than sixty (60) days unless otherwise agreed by the Parties in writing. Each Party may be represented at the mediation by external legal counsel. The Parties shall each bear their own costs regarding mediation, except that the Parties shall share equally the cost of the mediator and the mediation facility.

12.4 **Arbitration.** All disputes, other than to the extent they related to Critical Matters, which the Parties are unable to resolve amicably in accordance with Section 12.2 hereof shall be finally settled by binding arbitration in accordance with the then applicable rules ("**Rules**") of the Judicial Arbitration and Mediation Services ("**JAMS**") by three (3) arbitrators selected from a list of arbitrators proposed by JAMS in accordance with the Rules, as long as such arbitrators have a reasonable level of legal expertise in the area of commercial transactions involving intellectual property and gene therapy pharmaceutical products. The arbitrators shall allow such discovery as is appropriate and consistent with the purposes of arbitration in accomplishing fair, speedy and cost-effective resolution of disputes. The arbitrators shall reference the rules of evidence and the Federal Rules of Civil Procedure then in effect in setting the scope of discovery. The seat of arbitration shall be [***]. The decision and/or award rendered by the arbitrator shall be written, final and non-appealable and such decision and/or award shall be both Parties' Confidential Information. Judgment upon the award may be entered in any court having jurisdiction thereof or having jurisdiction over the applicable Party or its assets. Notwithstanding the generality of Section 12.2 and Section 12.4, and without waiver of a Party's right to final adjudication on the merits by arbitration as provided herein, either Party may seek provisional remedies by filing a lawsuit in any court, domestic or foreign, having jurisdiction over the Parties or any assets of the Parties, to toll the running of a relevant statute of limitations or to seek equitable or other judicial relief to prevent or stop the breach or threatened breach of this Agreement, including the misuse or disclosure of Confidential Information or otherwise, and to enforce the Parties' obligations hereunder.

12.5 **Expenses.** All expenses and fees of the arbitrators and expenses for hearing facilities and other expenses of the arbitration shall be borne equally by Selecta and AskBio unless the Parties agree otherwise in writing or unless the arbitrators in the award assess such expenses against one of the Parties or allocate such expenses other than equally between Selecta and AskBio.

Each of the Parties shall bear its own counsel fees and the expenses of its witnesses except (a) to the extent otherwise provided in this Agreement or by Applicable Law or (b) to the extent the arbitrators in their discretion determine for any reason to allocate such fees and expenses among the Parties in a different manner.

ARTICLE 13.
MISCELLANEOUS

13.1 **Assignment.** This Agreement may not be assigned, directly or indirectly, by either Party without the prior written consent of the other Party, except that either Party may, subject to the terms of this Agreement, assign its rights and obligations under this Agreement without such consent to a Third Party in connection with a Change of Control or to an Affiliate of such Party. This Agreement will be binding upon the successors and permitted assigns of the Parties and the name of a Party appearing herein will be deemed to include the names of such Party's successors and permitted assigns to the extent necessary to carry out the intent of this Agreement. Any assignment not in accordance with this Section 13.1 will be null and void, *ab initio*.

13.2 **Acquirer's Right to Negotiation.** In the event of a Change of Control of a Party, within thirty (30) days following such Change of Control, the acquiring entity of such Party, or its Affiliates, may deliver an offer to the other Party to acquire any portion, or all, of the other Party's rights under this Agreement, which the other Party may consider in its sole discretion.

13.3 **Force Majeure.** A Party shall not be liable to the other Party for any loss or damages attributable to any occurrence beyond the reasonable control of the affected Party that prevents or substantially interferes with the performance of its obligations under this Agreement, including without limitation, delays in deliveries from Third Party subcontractors or suppliers, changes in legal requirements, and technical events beyond a Party's reasonable control, such as, for example, acts of God (including, but not limited to, earthquake, tornado, and hurricane), war, terrorism or civil commotion. Any Party so affected shall give prompt notice of any such cause to the other Party. The Party giving such notice shall thereupon be excused from such of its obligations hereunder as it is thereby disabled from performing for so long as it is so disabled; provided, however, that such affected Party commences and continues to take reasonable and diligent actions to cure such cause. If any such failure of delay in a Party's performance hereunder continues for more than one hundred eighty (180) days, the other Party may terminate this Agreement upon written notice to the delayed Party.

13.4 **Notices.** All notices and reports required under, and other communications with respect to, this Agreement shall be in writing, and given or sent to the Party to be notified at its respective address set forth below either (a) personally and thereby deemed to be given on that day, (b) by electronic transmission (e.g., email) and thereby deemed to be given on the day following such transmission; or (c) by internationally recognized overnight courier service (e.g., Federal Express) and thereby deemed to be given on the second (2^{nd}) business day following dispatch.

Either Party may change its address and related information by giving notice to the other Party in the manner set forth in this Section 13.4.

If to Selecta, addressed to:

Selecta Biosciences, Inc.
480 Arsenal Way
Watertown, MA 02472
Attention: General Counsel
Email: [***]

With a copy (which shall not constitute notice) to:

Gibson, Dunn & Crutcher LLP
555 Mission St.
San Francisco, CA 94105
Attention: Ryan Murr
Email: [***]

If to AskBio, addressed to:

Asklepios Biopharmaceutical, Inc.
20 TW Alexander Drive, Suite 110.
Research Triangle Park, NC 27709
Attention: Sheila A. Mikhail, CEO
Email: [***]

With a copy (which shall not constitute notice) to:

Wilson Sonsini Goodrich & Rosati
28 State Street
Boston, MA 02109
Attention: Farah B. Gerdes
Email: [***]

Notwithstanding the foregoing, any notice to be given pursuant to Article 10 and Article 12 shall not be delivered solely by electronic transmission.

13.5 **Independent Contractors.** Subject to the terms of this Agreement, the activities and resources of each Party shall be managed by such Party, acting independently and in its individual capacity, and the Parties will have a relationship of independent contractors with respect to each other. Other than to the extent the Parties execute the Definitive JV Agreements, no term or condition of this Agreement is intended to create, nor will any such term or condition create, any fiduciary duty on the part of either Party for the benefit of the other, nor require either

Party to expend funds or efforts or commit resources on behalf of the other, other than as specifically agreed in this Agreement.

13.6 **Interpretation.** Except where the context expressly requires otherwise, (a) the use of any gender herein will be deemed to encompass references to any gender, and the use of the singular will be deemed to include the plural (and vice versa), (b) the words "include," "includes," "including" or "e.g." will be deemed to be followed by the phrase "without limitation," whether or not expressly stated, (c) the word "will" will be construed to have the same meaning and effect as the word "shall," (d) any definition of or reference to any agreement, instrument or other document herein will be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (e) any reference herein to any person will be construed to include the person's successors and assigns, (f) the words "herein," "hereof" and "hereunder," and words of similar import, will be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (g) all references herein to Sections, Schedules or Exhibits will be construed to refer to Sections, Schedules or Exhibits of this Agreement, and references to this Agreement include all Schedules and Exhibits hereto, (h) the word "notice" will mean notice in writing (whether or not specifically stated) and will include notices, consents, approvals and other written communications contemplated under this Agreement, (i) provisions that require that a Party, the Parties or any committee hereunder "agree," "consent" or "approve" or the like will require that such agreement, consent or approval be specific and in writing, whether by written agreement, letter, e-mail (solely with return receipt), approved minutes or otherwise (but excluding (A) e-mail without return receipt and (B) text messaging or instant messaging), (j) references to any specific law, rule or regulation, or article, section or other division thereof, will be deemed to include the then-current amendments thereto or any replacement or successor law, rule or regulation thereof, (k) any action or occurrence deemed to be effective as of a particular date will be deemed to be effective as of 11:59 PM New York City local time on such date, unless an earlier time is specified, and (l) the term "or" will be interpreted in the inclusive sense commonly associated with the term "and/or."

13.7 **Amendment.** No amendment, modification or supplement of any provision of this Agreement, or any Exhibit hereto, shall be valid or effective unless made in writing and signed by a duly authorized officer of each Party.

13.8 **Waiver.** No provision of this Agreement shall be waived by any act, omission or knowledge of any Party or its agents or employees except by an instrument in writing expressly waiving such provision and signed by a duly authorized officer of the waiving Party. Without limiting the foregoing, the failure of any Party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other Party.

13.9 **Counterparts; Facsimile.** This Agreement may be executed in any number of counterparts, each of which need not contain the signature of more than one Party, all of which taken

together will constitute one and the same agreement. For purposes of this Agreement and any other document required to be delivered pursuant to this Agreement, facsimiles or other electronic transmissions of signatures shall be deemed to be original signatures. In addition, if any of the Parties sign facsimile or other electronic copies of this Agreement, such copies shall be deemed originals.

13.10 **Headings.** The headings contained in this Agreement are for convenience only and shall be of no force or effect in construing or interpreting any of the provisions of this Agreement.

13.11 **Governing Law.** This Agreement shall be governed by and interpreted in accordance with the substantive laws of the State of New York, without regard to the conflict of law or choice of law rules or principles of any jurisdiction; provided, however, that any and all issues concerning any patent including validity, infringement, enforceability, ownership, inventorship, and any other controversy concerning any patent shall be resolved in accordance with the laws of the jurisdiction which granted such patent(s).

13.12 **Severability.** In the event that any clause or portion thereof in this Agreement is for any reason held to be invalid, illegal or unenforceable, the same will not affect any other portion of this Agreement; this Agreement shall be construed in such fashion as to maintain its existence, validity and enforceability to the greatest extent possible. In any such event, this Agreement shall be construed as if such clause or portion thereof had never been contained in this Agreement, and there shall be deemed substituted therefor such provision as will most nearly carry out the intent of the Parties as expressed in this Agreement to the fullest extent permitted by Applicable Law unless doing so would have the effect of materially altering the rights and obligations of the Parties. Solely in the event an arbitrator or a court of competent jurisdiction presiding over a dispute arising under this Agreement determines that the duration of the obligations set forth herein with respect to non-disclosure of certain Confidential Information is unenforceable, the Parties agree that such arbitrator or court shall be permitted to modify the period of non-disclosure to the maximum period permitted; provided, however, that the non-disclosure period for Confidential Information qualifying as a trade secret under Applicable Law shall endure until such time as the trade secret is no longer qualified as a trade secret under Applicable Law.

13.13 **Entire Agreement.** This Agreement, including all Exhibits attached hereto, set forth all the covenants, promises, agreements, warranties, representations, conditions, and understandings between the Parties hereto concerning the subject matter hereof and supersede all prior agreements and understandings between the Parties with respect to such subject matter.

13.14 **Press Releases.** Promptly after the Effective Date, the Parties shall issue a joint press release in the form attached hereto as Schedule 13.14. Except (a) with respect to a Party's securities disclosure obligations, (b) as may be required by Applicable Law or any listing agreement of any Party hereto, or (c) as otherwise set forth in this Section 13.14, neither Party shall issue

any press release or make any public statement with respect to this Agreement without the express prior written consent of the other Party.

13.15 **Further Assurances.**

13.15.1 **General**. Each Party agrees to execute, acknowledge or deliver such further instruments, and to do all other reasonable acts, as may be reasonably necessary or appropriate in order to carry out the purposes and intent of this Agreement.

13.15.2 **In-Licensed IP**. In the event that the Development, Manufacture, or Commercialization of the Collaboration Products in accordance with this Agreement requires a Party to obtain the consent of a Third Party to grant a sublicense to the other Party under any Patent Rights or Know-How that would, but for the absence of such consent, be included in the AskBio Core Technology or Selecta Core Technology, as applicable, (a) AskBio will use Commercially Reasonable Efforts to obtain any such consent necessary to include such Patent Rights or Know-How within the AskBio Core Technology and (b) Selecta will use Commercially Reasonable Efforts to obtain any such consent necessary to include such Patent Rights or Know-How within the Selecta Core Technology, promptly upon request by the other Party.

13.16 **Injunctive Relief and Specific Performance.** Both Parties acknowledge that a Party may be irreparably injured by a breach of this Agreement by the other Party and that monetary remedies may be inadequate to protect a Party against any actual or threatened breach of this Agreement by the other Party. Accordingly, each Party may seek an injunction or injunctions (without the proof of actual damages or posting of a bond) to prevent breaches or threatened breaches of this Agreement or to compel specific performance of this Agreement. Such remedies shall not be deemed to be the exclusive remedy for actual or threatened breaches of this Agreement but shall be in addition to all other remedies available at law or in equity.

13.17 **Statutory and Common Law Duties.** The duties each Party owes to the other Party under this Agreement shall be deemed to include federal and state statutory and common law obligations and do not in any way supersede or limit any of the obligations or duties each Party owes to the other Party pursuant to any Applicable Law.

13.18 **Compliance.** Each Party commits to comply with Applicable Laws. Without limiting the generality of the foregoing, at all times and with respect to all matters pertaining to this Agreement and the transactions contemplated herein, each Party, on its own behalf and on behalf of any and all of its Third Party vendors, suppliers, contractors, and subcontractors shall comply with any and all Applicable Laws, including, without limitation, all applicable anti-trust, anti-bribery, anti-fraud and abuse, anti-kickback, anti-retaliation, unfair and deceptive trade practices, books-and-record, securities, tax, and import/export laws and regulations, and the listing requirements of any applicable securities exchanges. Each Party shall not, and shall not permit any of its directors, officers, managers, employees, independent contractors, representatives or agents to, promise, authorize or make any

payment to, or otherwise contribute any item of value to, directly or indirectly, any non-U.S. government official, in

each case, in violation of the Foreign Corrupt Practices Act of 1977, as amended, 15 U.S.C. §§ 78dd-1, et seq. ("**FCPA**") or any other applicable anti-bribery or anti-corruption law. Each Party further represents and warrants that it shall cease all of its activities, as well as remediate any actions taken by such Party, or any of its directors, officers, managers, employees, independent contractors, representatives or agents, in violation of the FCPA or any other applicable anti-bribery or anti-corruption law. Each Party further represents and warrants that it shall maintain systems of internal controls (including, but not limited to, accounting systems, purchasing systems and billing systems) to ensure compliance with the FCPA or any other applicable anti-bribery or anti-corruption law.

13.19 **No Third Party Beneficiaries.** This Agreement is not intended to and shall not be construed to give any Third Party any interest or rights (including any Third Party beneficiary rights) with respect to or in connection with any agreement or provision contained herein or contemplated hereby.

13.20 **Construction.** The Parties hereto acknowledge and agree that: (a) each Party and its counsel reviewed and negotiated the terms and provisions of this Agreement and have contributed to its revision; (b) 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 (c) the terms and provisions of this Agreement shall be construed fairly as to all Parties hereto and not in a favor of or against any Party, regardless of which Party was generally responsible for the preparation of this Agreement.

[**SIGNATURE PAGE FOLLOWS**]

The Parties have executed this Agreement by their duly authorized officers as of the Effective Date.

The Parties have executed this Agreement by their duly authorized officers as of the Effective Date.

ASKLEPIOS BIOPHARMACEUTICAL, INC.		**SELECTA BIOSCIENCES, INC.**	
By:	/s/ Sheila Mikhail	By:	/s/ Carsten Brunn
Name:	Sheila Mikhail	Name:	Carsten Brunn
Title:	CEO	Title:	President and CEO

SCHEDULE 1.9

ASKBIO CORE TECHNOLOGY

[***]

SCHEDULE 1.62

SELECTA CORE TECHNOLOGY

[***]

SCHEDULE 3.5.1.1

[***]

SCHEDULE 4.1

COLLABORATION INDICATIONS

[***]

SCHEDULE 4.3.1(w)

[***]

SCHEDULE 4.3.1(x)

[***]

FORM OF PRESS RELEASE

Selecta Biosciences Combines ImmTOR™ Platform with AskBio's Industry-Leading Gene Therapy Platform in Strategic Partnership

Development pipeline and human trials planned for repeat dosing of AAV-based gene therapies to address the unmet medical need for patients with rare and orphan genetic diseases.

Watertown, Mass., and Research Triangle Park, N.C., August 7, 2019 – Selecta Biosciences, Inc. (NASDAQ: SELB) and Asklepios BioPharmaceutical, Inc. (AskBio), today announced a strategic partnership to jointly develop, manufacture and commercialize a broad portfolio of life-changing, next-generation adeno-associated virus (AAV) gene therapies in areas of high medical need. This partnership will leverage the unique proprietary technology platforms of both companies with a human proof of concept trial to validate the potential for re-dosing in patients with genetic diseases.

Selecta is the first company with preclinical evidence to support the potential for re-dosing patients receiving gene therapy. When used in combination with AAV gene therapy vectors, Selecta's ImmTOR™ inhibits the immune response to the vector (*Nature Communications,* October 2018). Currently the ability to re-administer systemic AAV gene therapy is limited by the development of neutralizing antibodies. The ability to safely re-dose AAV should help achieve therapeutic benefit in patients who are under-dosed; it should also help restore transgene expression in patients, particularly growing pediatric patients, who may lose expression over time. In addition, integrating ImmTOR into a gene therapy protocol provides a first dose benefit by enhancing liver-directed transgene expression in preclinical models.

"We are very excited to partner with AskBio, as they are proven leaders in next-generation gene therapy development and scaled manufacturing," said Carsten Brunn, PhD, Chief Executive Officer of Selecta. "We expect that Selecta's ImmTOR technology, in combination with AskBio's AAV technology and clinical leadership, will allow us to rapidly advance a portfolio of new combination therapies through proof of concept and into the clinic. We look forward to working together as we aim to bring targeted therapeutics into clinical development that can offer patients a new treatment paradigm in areas of high unmet need."

AskBio was founded in 2001 as one of the first gene therapy companies and now owns over 500 patents and applications for AAV technology and processes. AskBio's gene therapy platform includes a robust pipeline of potentially curative gene therapies, an extensive capsid library, groundbreaking manufacturing process and several advanced AAV initiatives under development, including Doggybone DNA. The AskBio platform also was used to develop the only two FDA-approved gene therapies available today (Zolgensma® and Luxterna™). Several of AskBio's founders have been influential in the field. Dr. Jude Samulski was the first to clone AAV and discovered how AAV could be safely used to deliver corrected genes to cells with genetic defects. Dr. Xiao was the first to create a mini-dystrophin gene that opened the door for the development of

potential Duchenne Muscular Dystrophy therapies. Dr. Josh Grieger, Askbio's Chief Technology Officer, pioneered a production technology, the Pro10 cell line, that is paving the way to ensure these important gene therapeutics can reach all patients.

"We only seek to collaborate with companies that share our mission and core values, which are focused on one goal, finding the answers that will cure patients suffering from life-threatening genetic diseases," said Sheila Mikhail, CEO and cofounder of AskBio. "Selecta is a leading example of that kind of company, and we're enthusiastic to have this opportunity to work with them on behalf of patients and their families."

According to Dr. Jude Samulski, "We look forward to this opportunity to deploy our collective platforms to overcome one of the key obstacles to providing long-term treatment from AAV based therapeutics to all patients."

About AskBio
Asklepios BioPharmaceutical, Inc. (AskBio) is a privately held, clinical stage gene therapy platform company dedicated to improving the lives of children and adults with rare genetic disorders. AskBio's gene therapy platform includes an industry-leading proprietary cell line manufacturing process known as Pro10™ and an extensive AAV capsid library. The company has generated hundreds of proprietary third generation gene vectors, several of which that have entered clinical testing, and maintains a portfolio of clinical programs across a range of indications, including Pompe, Limb Girdle Muscular Dystrophy, Cystic Fibrosis, Myotonic Muscular Dystrophy, Huntington's, Hemophilia (Chatham Therapeutic/Takeda) and Duchenne Muscular Dystrophy (Bamboo Therapeutics/Pfizer). For more information, visit www.askbio.com.

About Selecta Biosciences, Inc.
Selecta Biosciences, Inc. is a clinical-stage biotechnology company focused on unlocking the full potential of biologic therapies based on its immune tolerance technology (ImmTOR) platform. Selecta plans to combine ImmTOR with a range of biologic therapies for rare and serious diseases that require new treatment options due to high immunogenicity. The company's current proprietary pipeline includes ImmTOR-powered therapeutic enzyme and gene therapy product candidates. SEL-212, the company's lead product candidate, is being developed to treat chronic refractory gout patients and resolve their debilitating symptoms, including flares and gouty arthritis. Selecta's proprietary gene therapy product candidates are in preclinical development for certain rare inborn errors of metabolism and incorporate ImmTOR with the goal of addressing barriers to repeat administration. Selecta is based in Watertown, Mass. For more information, please visit http://selectabio.com.

Forward-Looking Statements
Any statements in this press release about the future expectations, plans and prospects of Selecta Biosciences, Inc. ("the company"), including without limitation, statements regarding the unique proprietary technology platform of the Company, and the unique proprietary platform of its partners, the potential of ImmTOR to enable re-dosing of AAV gene therapy, the potential treatment applications of product candidates utilizing the ImmTOR platform in areas such as gene therapy, the ability of the Company and AskBio to develop gene therapy products using ImmTOR and AskBio's technology, the novelty of treatment paradigms that the Company is able to develop, the potential of any therapies developed by the Company and AskBio to fulfill unmet medical needs, the company's plan to apply its ImmTOR technology platform to a range of biologics for rare and orphan genetic diseases, the potential of the company's intellectual property

to enable repeat administration in gene therapy product candidates and products, the ability to re-dose patients and the potential of ImmTOR to allow for re-dosing, the potential to safely re-dose AAV, the ability to restore transgene expression, the potential of the ImmTOR technology platform generally and the company's ability to grow its strategic partnerships, and other statements containing the words "anticipate," "believe," "continue," "could," "estimate," "expect," "hypothesize," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "would," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including, but not limited to, the following: the uncertainties inherent in the initiation, completion and cost of clinical trials including proof of concept trials, including the uncertain outcomes, the availability and timing of data from ongoing and future clinical trials and the results of such trials, whether preliminary results from a particular clinical trial will be predictive of the final results of that trial or whether results of early clinical trials will be indicative of the results of later clinical trials, the unproven approach of the company's ImmTOR technology, potential delays in enrollment of patients, undesirable side effects of the company's product candidates, its reliance on third parties to manufacture its product candidates and to conduct its clinical trials, the company's inability to maintain its existing or future collaborations, licenses or contractual relationships, its inability to protect its proprietary technology and intellectual property, potential delays in regulatory approvals, , the availability of funding sufficient for its foreseeable and unforeseeable operating expenses and capital expenditure requirements, the company's recurring losses from operations and negative cash flows from operations raise substantial doubt regarding its ability to continue as a going concern, substantial fluctuation in the price of its common stock, and other important factors discussed in the "Risk Factors" section of the company's most recent Quarterly Report on Form 10-Q, and in other filings that the company makes with the Securities and Exchange Commission. In addition, any forward-looking statements included in this press release represent the company's views only as of the date of its publication and should not be relied upon as representing its views as of any subsequent date. The company specifically disclaims any intention to update any forward-looking statements included in this press release.

# # #

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Exhibit 10.3

LEASE

by and between

BRE-BMR GROVE LLC,
a Delaware limited liability company

and

SELECTA BIOSCIENCES, INC.,
a Delaware corporation

Table of Contents

LEASE

THIS LEASE (this "Lease") is entered into as of this 23rd day of July, 2019 (the "Execution Date"), by and between BRE-BMR Grove LLC, a Delaware limited liability company ("Landlord"), and Selecta Biosciences, Inc., a Delaware corporation ("Tenant").

RECITALS

A. WHEREAS, Landlord owns certain real property (the "Property") and the improvements on the Property located at 65 Grove Street, Watertown, Massachusetts, including the building located thereon (the "Building" and, together with the Property, the "Project"); and

B. WHEREAS, Landlord wishes to lease to Tenant, and Tenant desires to lease from Landlord, certain premises (the "Premises") located on the first (1st) floor of the Building, pursuant to the terms and conditions of this Lease, as detailed below.

AGREEMENT

NOW, THEREFORE, Landlord and Tenant, in consideration of the mutual promises contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, agree as follows:

1. Lease of Premises.

1.1. Effective on the Term Commencement Date (as defined below), Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the Premises, as shown on Exhibit A attached hereto, for use by Tenant in accordance with the Permitted Use (as defined below) and no other uses. The Property and all landscaping, parking facilities, private drives and other improvements and appurtenances related thereto, including the Building, are hereinafter collectively referred to as the "Project." All portions of the Project that are for the non-exclusive use of tenants of the Building, including driveways, sidewalks, parking facilities and areas, landscaped areas, service corridors, stairways, elevators, public restrooms and public lobbies, are hereinafter referred to as "Common Area." Subject to such Rules and Regulations (as defined below), Tenant shall have the non-exclusive right, as appurtenant to the Premises, to use the Common Areas.

2. Basic Lease Provisions. For convenience of the parties, certain basic provisions of this Lease are set forth herein. The provisions set forth herein are subject to the remaining terms and conditions of this Lease and are to be interpreted in light of such remaining terms and conditions.

2.1. This Lease shall take effect upon the Execution Date and, except as specifically otherwise provided within this Lease, each of the provisions hereof shall be binding upon and inure to the benefit of Landlord and Tenant from the date of execution and delivery hereof by all parties hereto.

2.2. In the definitions below, each current Rentable Area (as defined below) is expressed in square feet. Rentable Area and "Tenant's Pro Rata Share" are both subject to adjustment as provided in this Lease.

Definition or Provision	Means the Following
Approximate Rentable Area of Premises	25,078 square feet
Approximate Rentable Area of Building	124,349 square feet
Approximate Rentable Area of Project	124,349 square feet
Tenant's Pro Rata Share of Building	20.17%
Tenant's Pro Rata Share of Project	20.17%

2.3. Initial monthly and annual installments of Base Rent for the Premises ("Base Rent") as of the Rent Commencement Date (as defined below), subject to adjustment under this Lease:

Dates	Square Feet of Rentable Area	Base Rent per Square Foot of Rentable Area	Monthly Base Rent	Annual Base Rent
Rent Commencement Date – the day immediately prior to the first (1st) annual anniversary of the Rent Commencement Date	25,078 square feet	$66.00 annually	$137,929.00	$1,655,148.00

Note: Subject to adjustment to reflect disbursement of Additional TI Allowance, as provided in Section 4.5, below.

2.4. Estimated Term Commencement Date: March 10, 2020

2.5. Estimated Term Expiration Date: April 30, 2028

2.6. Security Deposit: $1,379,290.00, subject to adjustment in accordance with the terms hereof

2.7. Permitted Use: Office and laboratory use in conformity with all federal, state, municipal and local laws, codes, ordinances, rules and regulations of Governmental Authorities (as defined below), committees, associations, or other regulatory committees, agencies or governing bodies having jurisdiction over the Premises, the Building, the Property, the Project, Landlord or Tenant, including both statutory and common law and hazardous waste rules and regulations ("Applicable Laws")

2.8. Address for Rent Payment:

BRE-BMR Grove LLC
Attention Entity 111450
P.O. Box 511446
Los Angeles, California 90051-8001

2.9. Address for Notices to Landlord:

BRE-BMR Grove LLC
17190 Bernardo Center Drive
San Diego, California 92128
Attn: Legal Department

2.10. Address for Notices to Tenant:

Prior to the Term Commencement Date:

Selecta Biosciences, Inc.
480 Arsenal Way
Watertown, MA 02472
Attn: Lloyd Johnston, C.O.O.

Following the Term Commencement Date:

Selecta Biosciences, Inc.
65 Grove Street
Watertown, MA 02472
Attn: Lloyd Johnston, C.O.O.

With a copy to:

Foley Hoag LLP
155 Seaport Boulevard
Boston, Massachusetts 02210
Attn: Jeffrey L. Quillen, Esq.

2.11. Address for Invoices to Tenant:

Prior to the Term Commencement Date:

Selecta Biosciences, Inc.
480 Arsenal Way
Watertown, MA 02472
Attn: Lloyd Johnston, C.O.O.

Following the Term Commencement Date:

Selecta Biosciences, Inc.
65 Grove Street
Watertown, MA 02472
Attn: Lloyd Johnston, C.O.O.

2.12. The following Exhibits are attached hereto and incorporated herein by reference:

Exhibit A	Premises
Exhibit B	Work Letter
Exhibit B-1	Tenant Work Insurance Schedule
Exhibit B-2	Base Building Improvements
Exhibit C	Acknowledgement of Term Commencement Date and Term Expiration Date
Exhibit D	Form of Additional TI Allowance Acceptance Letter
Exhibit E	Form of Letter of Credit
Exhibit F	Rules and Regulations
Exhibit G	Tenant's Personal Property
Exhibit H	Form of Estoppel Certificate

3. Term. The actual term of this Lease (as the same may be extended pursuant to Article 42 hereof, and as the same may be earlier terminated in accordance with this Lease, the "Term") shall commence on the actual Term Commencement Date (as defined in Article 4) and end on the date (the "Term Expiration Date") that is ninety-six (96) months after the Rent Commencement Date, subject to extension or earlier termination of this Lease as provided herein.

4. Possession and Commencement Date.

4.1. Landlord shall use commercially reasonable efforts to tender possession of the Premises to Tenant on the Estimated Term Commencement Date, with the work (the "Tenant Improvements") required of Landlord described in the Work Letter attached hereto as Exhibit B (the "Work Letter"), and the base Building improvements described in Exhibit B-2 to the Work Letter (the "Base Building Improvements"), Substantially Complete (as defined below). Tenant agrees that in the event such work is not Substantially Complete on or before the Estimated Term Commencement Date for any reason, then (a) this Lease shall not be void or voidable, (b) Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, (c) the Term Commencement Date, the Rent Commencement Date and the Term Expiration Date shall be extended accordingly, (d) Tenant shall not be responsible for the payment of any Base Rent until the actual Rent Commencement Date as described in Section 4.2 occurs, and (e) Tenant shall not be responsible for the payment of the Property Management Fee or Tenant's Adjusted Share of Operating Expenses (as defined below) until the actual Term Commencement Date as described in Section 4.2 occurs. If Landlord fails to deliver the Premises to Tenant with the Tenant Improvements Substantially Complete on or before the day that is forty-five (45) days after the Estimated Term Commencement Date (as the same shall be extended to the extent of any delay caused by Force Majeure or Tenant Delay), then the Base Rent shall be abated one (1) day for each day after the Estimated Term Commencement Date that Landlord fails to deliver the Premises to Tenant with the Tenant Improvements Substantially Complete. For purposes of the construction of the Tenant Improvements, Landlord agrees that Landlord may not claim as a Force Majeure the failure of Landlord's contractor to Substantially Complete the Tenant Improvements by the Estimated Term Commencement Date solely on the basis that it is Landlord's contractor, and not Landlord, directly performing the Tenant Improvements. The term "Substantially Complete" or "Substantial Completion" means, (x) with respect to the Tenant Improvements, that the Tenant Improvements are substantially complete in accordance with the Approved Plans (as defined in the Work Letter), except for minor punch list items, (y) with respect to the Base Building Improvements, that the Base Building Improvements are substantially complete as reasonably determined by Landlord's architect, except for minor punch list items, and (z) Landlord has received a temporary or permanent certificate of occupancy (or its substantial equivalent) for the Premises; provided, that if Landlord receives a temporary certificate of occupancy (or its substantial equivalent), prior to the expiration of the same Landlord shall obtain a permanent certificate of occupancy (or its substantial equivalent). Notwithstanding anything in this Lease (including the Work Letter) to the contrary, Landlord's obligation to timely achieve Substantial Completion shall be subject to extension on a day-for-day basis as a result of Force Majeure (as defined below) or a Tenant Delay

(as defined below). Landlord shall use reasonable efforts to complete all punch list items in a timely manner and with minimal interference with Tenant's use of the Premises, provided, that Tenant shall not interfere with Landlord's completion of the punch list work and, notwithstanding anything in this Lease to the contrary, shall provide access to Landlord to the Premises as and when requested by Landlord in order to perform said punch list work.

4.2. The "Term Commencement Date" shall be the day Landlord tenders possession of the Premises to Tenant with the Tenant Improvements Substantially Complete. If possession is delayed by (i) the failure of Tenant to comply with its obligations under this Lease and the Work Letter, or (ii) any action or omission of Tenant or Tenant's agents, contractors, or representatives that results in a delay of the Term Commencement Date (each, a "Tenant Delay"), then Tenant shall commence paying Rent (as defined in Section 7.3) from and after the date that the Term Commencement Date would have occurred but for such Tenant Delay through the day immediately preceding the actual Term Commencement Date. Tenant shall execute and deliver to Landlord written acknowledgment of the actual Term Commencement Date and the Term Expiration Date within ten (10) days after Tenant takes occupancy of the Premises, in the form attached as Exhibit C hereto. Failure to execute and deliver such acknowledgment, however, shall not affect the Term Commencement Date or Landlord's or Tenant's liability hereunder. Failure by Tenant to obtain validation by any medical review board or other similar governmental licensing of the Premises required for the Permitted Use by Tenant shall not serve to extend the Term Commencement Date.

4.3. In the event that Landlord permits (in Landlord's sole and absolute discretion) Tenant to enter upon the Premises prior to the Term Commencement Date for the purpose of installing improvements, equipment, cabling, furniture and/or the placement of personal property, provided that no such early access shall interfere with Landlord's construction of the Tenant Improvements, Tenant shall furnish to Landlord evidence satisfactory to Landlord in advance that insurance coverages required of Tenant under the provisions of Article 23 are in effect, and such entry shall be subject to all the terms and conditions of this Lease other than the payment of Base Rent, the Property Management Fee or Tenant's Adjusted Share of Operating Expenses (as defined below); and provided, further, that if the Term Commencement Date is delayed due to such early access, then the Term Commencement Date shall be the date that the Term Commencement Date would have occurred but for such delay. For the avoidance of doubt, Landlord may deny or withdraw any such permission if such early access is anticipated to or does interfere with the execution or completion of the Tenant Improvements.

4.4. Landlord shall cause the Tenant Improvements to be constructed in the Premises pursuant to the Work Letter at a cost to Landlord not to exceed (a) Four Million Three Hundred Eighty-Eight Thousand Six Hundred Fifty and 00/100 Dollars ($4,388,650.00) (based upon One Hundred Seventy-Five and 00/100 Dollars ($175.00) per square foot of Rentable Area (as defined below)) (the "Base TI Allowance") plus (b) if properly requested by Tenant pursuant to this Section, Three Hundred Seventy-Six Thousand One Hundred Seventy and 00/100 Dollars ($376,170.00) (based upon Fifteen and 00/100 Dollars ($15.00) per square foot of Rentable Area) (the "Additional TI Allowance"). The Base TI Allowance, together with the Additional TI Allowance (if properly requested by Tenant pursuant to this Article), shall be referred to herein as the "TI Allowance." The TI Allowance may be applied to the costs of (m) construction, (n) project management by Landlord (which fee shall equal three percent (3%) of the hard costs of the Tenant Improvements, including the Base TI Allowance and, if used by Tenant, the Additional TI Allowance), (o) commissioning of mechanical, electrical and plumbing systems by a licensed, qualified commissioning agent hired by Landlord, and review of such party's commissioning report by a licensed, qualified commissioning agent hired by Tenant, (p) space planning, architect, engineering and other related services performed by third parties unaffiliated with Tenant, (q) building permits and other taxes, fees, charges and levies by Governmental Authorities (as defined below) for permits or for inspections of the Tenant Improvements, (r) costs and expenses for labor, material, equipment and fixtures, and (s) telephone and data cabling and installation. In no event shall more than fifteen percent (15%) of the TI Allowance be used for telephone and data cabling and installation and other so-called "soft" costs (excluding third party architectural, engineering or project oversight

fees). In no event shall the TI Allowance be used for (w) payments to Tenant or any affiliates of Tenant, (x) the purchase of any furniture, personal property or other non-building system equipment (excluding movable casework, which is Landlord's property pursuant to Section 17.7 and shall be surrendered with the Premises at the expiration or earlier termination of the Term in the condition required in Section 26), (y) costs arising from any default by Tenant of its obligations under this Lease or (z) costs that are recoverable by Tenant from a third party (e.g., insurers, warrantors, or tortfeasors).

4.5. Tenant shall have until the date that is nine (9) months after the Term Commencement Date (the "TI Deadline") to submit Fund Requests (as defined in the Work Letter) to Landlord for disbursement of the unused portion of the TI Allowance, after which date Landlord's obligation to fund any such costs for which Tenant has not submitted a Fund Request to Landlord shall expire. The Base Rent amount shall be increased to include the amount of the Additional TI Allowance disbursed by Landlord in accordance with this Lease for each year of the Initial Term starting on the Rent Commencement Date by adding Zero and 18.2/100 Dollars ($0.182) per square foot of Rentable Area for each Dollar of the Additional TI Allowance disbursed by Landlord to the Base Rent amount, which such amount shall be prorated if the Additional TI Allowance that is disbursed by Landlord is not a whole dollar amount (*i.e.*, such Additional TI Allowance disbursed by Landlord includes both dollars and cents). By way of example and not in limitation of any provisions hereof, in the event Tenant properly requests the Additional TI Allowance in the amount of $15.00 per square foot of Rentable Area, then Tenant's Base Rent as of the Rent Commencement Date shall be increased to $68.73 per square feet of Rentable Area. The amount by which Base Rent shall be increased shall be determined (and Base Rent shall be increased accordingly) as of the date immediately following the scheduled expiration of the Free Rent Period and, if such determination does not reflect use by Tenant of all of the Additional TI Allowance, shall be determined again as of the TI Deadline, with Tenant paying (on the next succeeding day that Base Rent is due under this Lease (the "TI True-Up Date")) any underpayment of the further adjusted Base Rent for the period beginning on the date immediately following the scheduled expiration of the Free Rent Period and ending on the TI True-Up Date.

4.6. Landlord shall not be obligated to expend any portion of the Additional TI Allowance until Landlord shall have received from Tenant a letter in the form attached as Exhibit D hereto executed by an authorized officer of Tenant. In no event shall any unused TI Allowance entitle Tenant to a credit against Rent payable under this Lease.

4.7. Notwithstanding anything to the contrary in this Lease, Landlord and Tenant agree that all Tenant Improvements and Alterations (as hereinafter defined) shall be programmed in accordance with the lab and office zones identified on Exhibit A-1 attached hereto.

5. Condition of Premises. Tenant acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of the Premises, the Building or the Project, or with respect to the suitability of the Premises, the Building or the Project for the conduct of Tenant's business. Tenant acknowledges that (a) it is fully familiar with the condition of the Premises and agrees to take the same in its condition "as is" as of the Term Commencement Date (subject to Landlord's obligations to complete the punch list work), and (b) Landlord shall have no obligation to alter, repair or otherwise prepare the Premises for Tenant's occupancy or to pay for or construct any improvements to the Premises, except with respect to the completion of the Base Building Improvements and the Tenant Improvements and with respect to payment of the TI Allowance and Landlord's maintenance obligations under Section 18.1. Tenant's taking of possession of the Premises shall, except as otherwise agreed to in writing by Landlord and Tenant, conclusively establish that the Premises, the Building and the Project were at such time in good, sanitary and satisfactory condition and repair. Notwithstanding the foregoing, Landlord represents to Tenant that, on the Term Commencement Date, (i) the base building systems serving the Premises (including the HVAC, electrical, life safety and plumbing systems) shall be in good working order, and (ii) the Tenant Improvements shall be free from defects in materials and workmanship not inherent in

the quality required or permitted (collectively, "Landlord's Delivery Condition"). In the event that Landlord fails to satisfy Landlord's Delivery Condition, Tenant's sole and exclusive remedy for such failure shall be to deliver written notice to Landlord (a "Repair Notice") on or before the date that is (i) six (6) months after the Term Commencement Date with respect to the heating, ventilating and air conditioning systems servicing the Premises, and (ii) sixty (60) days after the Term Commencement Date otherwise (the "Repair Notice Date"), detailing the nature of such failure. In the event that Landlord receives a Repair Notice on or before the Repair Notice Date, Landlord shall promptly make any repairs reasonably necessary to correct the failure described in the Repair Notice (but only to the extent that Landlord reasonably determines that the failure described in the Repair Notice constitutes and actual failure of Landlord's Delivery Condition), at Landlord's sole cost and expense. Any such failure of Landlord's Delivery Condition shall not entitle Tenant to any monetary damages or delay the Term Commencement Date.

6. Rentable Area.

6.1. The term "Rentable Area" shall reflect such areas as reasonably calculated by Landlord's architect, as the same may be reasonably adjusted from time to time by Landlord in consultation with Landlord's architect to reflect changes to the Premises, the Building or the Project, as applicable. Notwithstanding the foregoing to the contrary, in no event shall the Rentable Area of the Premises, the Building or the Project be deemed to have increased unless due to a change in the outer dimensions of the exterior walls of the same.

6.2. The Rentable Area of the Building is generally determined by making separate calculations of Rentable Area applicable to each floor within the Building and totaling the Rentable Area of all floors within the Building. The Rentable Area of a floor is computed by measuring to the outside finished surface of the permanent outer Building walls. The full area calculated as previously set forth is included as Rentable Area, without deduction for columns and projections or vertical penetrations, including stairs, elevator shafts, flues, pipe shafts, vertical ducts and the like, as well as such items' enclosing walls.

6.3. The term "Rentable Area," when applied to the Premises, is that area equal to the usable area of the Premises, plus an equitable allocation of Rentable Area within the Building that is not then utilized or expected to be utilized as usable area, including that portion of the Building devoted to corridors, equipment rooms, restrooms, elevator lobby, atrium and mailroom.

7. Rent.

7.1. Tenant shall pay to Landlord as Base Rent for the Premises, commencing on the later of (a) May 1, 2020, and (b) one (1) calendar month after the Term Commencement Date if the Term Commencement Date occurs after March 31, 2020 (such later date, the "Rent Commencement Date"), the sums set forth in Section 2.3, subject to the rental adjustments provided in Article 8 hereof. Base Rent shall be paid in equal monthly installments as set forth in Section 2.3, subject to the rental adjustments provided in Article 8 hereof, each in advance on the first day of each and every calendar month during the Term.

7.2. In addition to Base Rent, Tenant shall pay to Landlord as additional rent ("Additional Rent") at times hereinafter specified in this Lease (a) Tenant's Adjusted Share (as defined below) of Operating Expenses (as defined below), (b) the Property Management Fee (as defined below), and (c) any other amounts that Tenant assumes or agrees to pay under the provisions of this Lease that are owed to Landlord, including any and all other sums that may become due by reason of any default of Tenant or failure on Tenant's part to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after notice and the lapse of any applicable cure periods.

7.3. Base Rent and Additional Rent shall together be denominated "Rent." Rent shall be paid to Landlord, without abatement, deduction or offset, in lawful money of the United States of America to the address set forth in Section 2.8 or to such other person or at such other place as Landlord may from time designate in writing. In the event the Term commences or ends on a day other than the first day of a calendar month, then the Rent for such fraction of a month shall be prorated for such period on the basis of the number of days in the month and shall be paid at the then-current rate for such fractional month.

7.4. Tenant's obligation to pay Rent shall not be discharged or otherwise affected by (a) any Applicable Laws now or hereafter applicable to the Premises, (b) any other restriction on Tenant's use, (c) except as expressly provided herein, any casualty or taking or (d) any other occurrence; and Tenant waives all rights now or hereafter existing to terminate or cancel this Lease or quit or surrender the Premises or any part thereof, or to assert any defense in the nature of constructive eviction to any action seeking to recover rent. Tenant's obligation to pay Rent with respect to any period or obligations arising, existing or pertaining to the period prior to the date of the expiration or earlier termination of the Term or this Lease shall survive any such expiration or earlier termination; provided, however, that nothing in this sentence shall in any way affect Tenant's obligations with respect to any other period.

8. Rent Adjustments; Free Rent Period.

8.1. Base Rent (including any increase to Base Rent arising from any disbursement of the Additional TI Allowance by Landlord in accordance with this Lease) shall be subject to an annual upward adjustment of three percent (3%) of the then-current Base Rent. The first such adjustment shall become effective commencing on the first (1st) annual anniversary of the Rent Commencement Date, and subsequent adjustments shall become effective on every successive annual anniversary for so long as this Lease continues in effect.

8.2. Notwithstanding anything to the contrary contained in this Lease, and so long as no Default (as defined below) by Tenant has occurred, Tenant shall not be required to pay Base Rent for the period commencing on the Term Commencement Date and expiring on the day immediately prior to the Rent Commencement Date (such period, the "Free Rent Period"). During the Free Rent Period, Tenant shall continue to be responsible for the payment of all of Tenant's other Rent obligations under this Lease, including all Additional Rent such as Operating Expenses, the Property Management Fee, and costs of utilities for the Premises. Upon the occurrence of any Default, the Free Rent Period shall immediately expire, and Tenant shall no longer be entitled to any further abatement of Base Rent pursuant to this Section. In the event of any Default that results in termination of this Lease, then, as part of the recovery to which Landlord is entitled pursuant to this Lease, and in addition to any other rights or remedies to which Landlord may be entitled pursuant to this Lease (including Article 31), at law or in equity, Landlord shall be entitled to the immediate recovery, as of the day immediately prior to such termination of the Lease, of the unamortized amount of Base Rent that Tenant would have paid had the Free Rent Period not been in effect.

9. Operating Expenses.

9.1. As used herein, the term "Operating Expenses" shall include:

(a) Government impositions, including property tax costs consisting of real and personal property taxes (including amounts due under any improvement bond upon the Building or the Project (including the parcel or parcels of real property upon which the Building and areas serving the Building are located)) or assessments in lieu thereof imposed by any federal, state, regional, local or municipal governmental authority, agency or subdivision (each, a "Governmental Authority"); taxes on or measured by gross rentals received from the rental of space in the Project; taxes based on the square footage of the Premises, the Building or the Project, as well as any parking charges, utilities surcharges or any other costs levied, assessed or imposed by, or at the direction of, or arising from Applicable Laws or interpretations thereof, promulgated by any Governmental Authority in

connection with the use or occupancy of the Project or the parking facilities serving the Project; taxes on this transaction or any document to which Tenant is a party creating or transferring an interest in the Premises; any fee for a business license to operate an office building; and any expenses, including the reasonable cost of attorneys or experts, reasonably incurred by Landlord in seeking reduction by the taxing authority of the applicable taxes, less tax refunds obtained as a result of an application for review thereof; and

(b) All other costs of any kind paid or incurred by Landlord in connection with the operation or maintenance of the Building and the Project, which shall include Project office rent at fair market rental for a commercially reasonable amount of space for Project management personnel, to the extent an office used for Project operations is maintained at the Project, plus customary expenses for such office, and costs of repairs and replacements to improvements within the Project as appropriate to maintain the Project as required hereunder; costs of any shuttle or other transportation services provided for the Project; costs of utilities furnished to the Common Area; sewer fees; cable television; trash collection; cleaning, including windows; heating, ventilation and air-conditioning ("HVAC"); maintenance of landscaping and grounds; snow removal; maintenance of drives and parking facilities and areas; maintenance of the roof; security services and devices; building supplies; maintenance or replacement of equipment utilized for operation and maintenance of the Project; license, permit and inspection fees; sales, use and excise taxes on goods and services purchased by Landlord in connection with the operation, maintenance or repair of the Building or Project systems and equipment; telephone, postage, stationery supplies and other expenses incurred in connection with the operation, maintenance or repair of the Project; accounting, legal and other professional fees and expenses incurred in connection with the Project; costs of furniture, draperies, carpeting, landscaping supplies, snow removal and other customary and ordinary items of personal property provided by Landlord for use in Common Area; capital expenditures (i) for replacing obsolete equipment, (ii) for the primary purpose of reducing Operating Expenses or (iii) required by any Governmental Authority to comply with changes in Applicable Laws that take effect after the Execution Date (collectively, "Permitted Capital Expenditures"), in each case amortized over the useful life thereof, as reasonably determined by Landlord, in accordance with generally accepted accounting principles, but in no event longer than ten (10) years; costs of complying with Applicable Laws (except to the extent such costs are incurred to remedy non-compliance as of the Execution Date with Applicable Laws); costs to keep the Project in compliance with, or costs or fees otherwise required under or incurred pursuant to any CC&Rs (as defined below), including condominium fees; insurance premiums, including premiums for commercial general liability, property casualty, earthquake, terrorism and environmental coverages; portions of insured losses paid by Landlord as part of the deductible portion of a loss pursuant to the terms of insurance policies; service contracts; costs of services of independent contractors retained to do work of a nature referenced above; and costs of compensation (including employment taxes and fringe benefits) of all persons who perform regular and recurring duties connected with the day-to-day operation and maintenance of the Project, its equipment, the adjacent walks, landscaped areas, drives and parking areas, including janitors, floor waxers, window washers, watchmen, gardeners, sweepers, plow truck drivers, handymen, and engineering/maintenance/facilities personnel.

(c) Notwithstanding the foregoing, Operating Expenses shall not include any net income, franchise, capital stock, estate or inheritance taxes, or taxes that are the personal obligation of Tenant or of another tenant of the Project, penalties or interest incurred by reason of Landlord's failure to timely pay any taxes or other impositions of a Governmental Authority; any leasing commissions; expenses that relate to preparation of rental space for a tenant; expenses of initial development and construction, including grading, paving, landscaping and decorating (as distinguished from maintenance, repair and replacement of the foregoing); legal expenses relating to other tenants; costs of repairs to the extent reimbursed by payment of insurance proceeds received by Landlord; principal, interest and other expenses for loans to Landlord or secured by a loan agreement, mortgage, deed of trust, security instrument or other loan document covering the Project or a portion thereof (collectively, "Loan Documents") (provided that interest upon a government assessment or improvement bond payable in installments shall constitute an Operating Expense under Subsection 9.1(a)); depreciation claimed by Landlord for tax purposes (provided that

this exclusion of depreciation is not intended to delete from Operating Expenses actual costs of repairs and replacements and reasonable reserves in regard thereto that are provided for in Subsection 9.1(b)); taxes that are excluded from Operating Expenses by the last sentence of Subsection 9.1(a); costs or expenses incurred in connection with the financing or sale of the Project or any portion thereof (other than property taxes); costs expressly excluded from Operating Expenses elsewhere in this Lease or that are charged to or paid by Tenant under other provisions of this Lease; professional fees and disbursements and other costs and expenses related to the ownership (as opposed to the use, occupancy, operation, maintenance or repair) of the Project; cost and expenses of investigating, monitoring and remediating hazardous materials that existed on the Property prior to the Execution Date; rent under any ground lease; capital expenditures other than Permitted Capital Expenditures; reserves; expenses for any item or service not provided to Tenant but provided to certain other tenant(s) in the Project; expenses for any item or service which Tenant pays directly to a third party or separately pays to Landlord; management fees (other than the Property Management Fee); costs incurred due to the negligence or willful misconduct of Landlord or its agents and employees; penalties, fines and other costs incurred due to violation of Applicable Laws by Landlord and any interest or penalties attributable to late payment by Landlord of any Operating Expenses (but only provided Tenant is timely in the payment of Tenant's Pro Rata Share of Operating Expenses); and any item that, if included in Operating Expenses, would involve a double collection for such item by Landlord. To the extent that Tenant uses more than Tenant's Pro Rata Share of any item of Operating Expenses, Tenant shall pay Landlord for such excess in addition to Tenant's obligation to pay Tenant's Pro Rata Share of Operating Expenses (such excess, together with Tenant's Pro Rata Share, "Tenant's Adjusted Share").

9.2. Tenant shall pay to Landlord on the first day of each calendar month of the Term, as Additional Rent, (a) the Property Management Fee (as defined below), and (c) Landlord's estimate of Tenant's Adjusted Share of Operating Expenses with respect to the Building and the Project, as applicable, for such month.

(w) The "Property Management Fee" shall equal three percent (3%) of Base Rent due from Tenant. Tenant shall pay the Property Management Fee in accordance with Section 9.2 with respect to the entire Term, including any Free Rent Period, any extensions of the Term, or any holdover periods, regardless of whether Tenant is obligated to pay Base Rent, Operating Expenses or any other Rent with respect to any such period or portion thereof. During any Free Rent Period (and any period of occupancy prior to the Term as further described in Section 9.5), the Property Management Fee shall be calculated as if Tenant were paying Base Rent in the full amount required pursuant to this Lease had the Free Rent Period not been in effect.

(x) Within ninety (90) days after the conclusion of each calendar year (or such longer period as may be reasonably required by Landlord), Landlord shall furnish to Tenant a statement showing in reasonable detail the actual Operating Expenses, Tenant's Adjusted Share of Operating Expenses, and the cost of providing utilities to the Premises for the previous calendar year ("Landlord's Statement"). Any additional sum due from Tenant to Landlord shall be due and payable within thirty (30) days after receipt of an invoice therefor. If the amounts paid by Tenant pursuant to this Section exceed Tenant's Adjusted Share of Operating Expenses for the previous calendar year, then Landlord shall credit the difference against the Rent next due and owing from Tenant; provided that, if the Lease term has expired, Landlord shall accompany Landlord's Statement with payment for the amount of such difference. Landlord's annual statement shall be final and binding upon Tenant unless Tenant, within ninety (90) days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reasons therefor; provided that Tenant shall in all events pay the amount specified in Landlord's annual statement, pending the results of the Independent Review and determination of the Accountant(s), as applicable and as each such term is defined below. If, during such 90-day period, Tenant reasonably and in good faith questions or contests the correctness of Landlord's statement of Tenant's Share of Operating Expenses, Landlord shall provide Tenant with reasonable access to Landlord's books and records to the extent relevant to determination of Operating Expenses, and such information as Landlord reasonably determines to be responsive to Tenant's written inquiries. In the event that, after Tenant's review of such information, Landlord and Tenant

cannot agree upon the amount of Tenant's Share of Operating Expenses, then Tenant shall have the right to have an independent public accounting firm hired by Tenant on an hourly basis and not on a contingent-fee basis (at Tenant's sole cost and expense) and approved by Landlord (which approval Landlord shall not unreasonably withhold or delay) audit and review such of Landlord's books and records for the year in question as directly relate to the determination of Operating Expenses for such year (the "Independent Review"). Landlord shall make such books and records available at the location where Landlord maintains them in the ordinary course of its business. Landlord need not provide copies of any books or records. Tenant shall commence the Independent Review within fifteen (15) days after the date Landlord has given Tenant access to Landlord's books and records for the Independent Review. Tenant shall complete the Independent Review and notify Landlord in writing of Tenant's specific objections to Landlord's calculation of Operating Expenses (including Tenant's accounting firm's written statement of the basis, nature and amount of each proposed adjustment) no later than sixty (60) days after Landlord has first given Tenant access to Landlord's books and records for the Independent Review. Landlord shall review the results of any such Independent Review. The parties shall endeavor to agree promptly and reasonably upon Operating Expenses taking into account the results of such Independent Review. If, as of sixty (60) days after Tenant has submitted the Independent Review to Landlord, the parties have not agreed on the appropriate adjustments to Operating Expenses, then the parties shall engage a mutually agreeable independent third party accountant with at least ten (10) years' experience in commercial real estate accounting in the Watertown area (the "Accountant"). If the parties cannot agree on the Accountant, each shall within ten (10) days after such impasse appoint an Accountant (different from the accountant and accounting firm that conducted the Independent Review) and, within ten (10) days after the appointment of both such Accountants, those two Accountants shall select a third (which cannot be the accountant and accounting firm that conducted the Independent Review). If either party fails to timely appoint an Accountant, then the Accountant the other party appoints shall be the sole Accountant. Within ten (10) days after appointment of the Accountant(s), Landlord and Tenant shall each simultaneously give the Accountants (with a copy to the other party) its determination of Operating Expenses, with such supporting data or information as each submitting party determines appropriate. Within ten (10) days after such submissions, the Accountants shall by majority vote select either Landlord's or Tenant's determination of Operating Expenses. The Accountants may not select or designate any other determination of Operating Expenses. The determination of the Accountant(s) shall bind the parties. If the parties agree or the Accountant(s) determine that the Operating Expenses actually paid by Tenant for the calendar year in question exceeded Tenant's obligations for such calendar year, then Landlord shall, at Tenant's option, either (a) credit the excess to the next succeeding installments of estimated Additional Rent or (b) pay the excess to Tenant within thirty (30) days after delivery of such results, and if such excess is more than ten percent (10%) of Tenant's obligations, then Landlord shall also reimburse Tenant for the costs of its Independent Review and its Accountants. If the parties agree or the Accountant(s) determine that Tenant's payments of Operating Expenses for such calendar year were less than Tenant's obligation for the calendar year, then Tenant shall pay the deficiency to Landlord within thirty (30) days after delivery of such results.

(y) Any amount due under this Section for any period that is less than a full month shall be prorated for such fractional month on the basis of the number of days in the month.

9.3. Landlord or an affiliate(s) of Landlord currently own and may acquire in the future other property(ies) in the vicinity of the Project (collectively, "Neighboring Properties"). In connection with Landlord performing services for the Project pursuant to this Lease, similar services may be performed by the same vendor(s) for Neighboring Properties, including without limitation, shuttle services. In such a case, Landlord shall reasonably allocate to each Building and the Project the costs for such services based upon the ratio that the square footage of the Building or the Project (as applicable) bears to the total square footage of all of the Neighboring Properties or buildings within the Neighboring Properties for which the services are performed, unless the scope of the services performed for any building or property (including the Building and the Project) is disproportionately more or less than for others, in which case Landlord shall equitably allocate the costs based on the scope of the services being performed for each building or property (including the Building and the Project).

9.4. Tenant shall not be responsible for Operating Expenses with respect to any time period prior to the Term Commencement Date; provided, however, that if Landlord shall permit Tenant possession of the Premises prior to the Term Commencement Date for the conduct of Tenant's business (as opposed to installation of improvements, equipment, cabling, furniture and personal property pursuant to Section 4.3), Tenant shall be responsible for Operating Expenses from such earlier date of possession (the Term Commencement Date or such earlier date, as applicable, the "Expense Trigger Date"); and provided, further, that Landlord may annualize certain Operating Expenses incurred prior to the Expense Trigger Date over the course of the budgeted year during which the Expense Trigger Date occurs, and Tenant shall be responsible for the annualized portion of such Operating Expenses corresponding to the number of days during such year, commencing with the Expense Trigger Date, for which Tenant is otherwise liable for Operating Expenses pursuant to this Lease. Tenant's responsibility for Tenant's Adjusted Share of Operating Expenses shall continue to the latest of (a) the date of termination of the Lease, (b) the date Tenant has fully vacated the Premises and (c) if termination of the Lease is due to a default by Tenant, the date through which Tenant's obligations to pay Rent hereunder shall cease.

9.5. Operating Expenses for the calendar year in which Tenant's obligation to share therein commences and for the calendar year in which such obligation ceases shall be prorated on a basis reasonably determined by Landlord. Expenses such as taxes, assessments and insurance premiums that are incurred for an extended time period shall be prorated based upon the time periods to which they apply so that the amounts attributed to the Premises relate in a reasonable manner to the time period wherein Tenant has an obligation to share in Operating Expenses.

9.6. Within thirty (30) days after the end of each calendar month, Tenant shall submit to Landlord an invoice, or, in the event an invoice is not available, an itemized list, of all costs and expenses that (a) Tenant has incurred (either internally or by employing third parties) during the prior month and (b) for which Tenant reasonably believes it is entitled to reimbursements from Landlord pursuant to the terms of this Lease or that Tenant reasonably believes is the responsibility of Landlord pursuant to this Lease or the Work Letter.

9.7. In the event that the Building or Project is less than fully occupied during a calendar year, Tenant acknowledges that Landlord may extrapolate Operating Expenses that vary depending on the occupancy of the Building or Project, as applicable, to equal Landlord's reasonable estimate of what such Operating Expenses would have been had the Building or Project, as applicable, been ninety-five percent (95%) occupied during such calendar year; provided, however, that Landlord shall not recover more than one hundred percent (100%) of Operating Expenses.

10. Taxes on Tenant's Property.

10.1. Tenant shall be solely responsible for the payment of any and all taxes levied upon (a) personal property and trade fixtures located at the Premises and (b) any gross or net receipts of or sales by Tenant, and shall pay the same at least twenty (20) days prior to delinquency.

10.2. If any such taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property or, if the assessed valuation of the Building, the Property or the Project is increased by inclusion therein of a value attributable to Tenant's personal property or trade fixtures, and if Landlord, after written notice to Tenant, pays the taxes based upon any such increase in the assessed value of the Building, the Property or the Project, then Tenant shall, within twenty (20) days after demand, repay to Landlord the taxes so paid by Landlord.

10.3 If any improvements in or alterations to the Premises, whether owned by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, are assessed for real property tax purposes at a valuation higher than the valuation at which improvements conforming to Landlord's building standards (the "Building Standard") in other spaces in the Building are assessed, then the real property taxes and assessments

levied against Landlord or the Building, the Property or the Project by reason of such excess assessed valuation shall be deemed to be taxes levied against personal property of Tenant and shall be governed by the provisions of Section 10.2. Any such excess assessed valuation due to improvements in or alterations to space in the Project leased by other tenants at the Project shall not be included in Operating Expenses. If the records of the applicable governmental assessor's office are available and sufficiently detailed to serve as a basis for determining whether such Tenant improvements or alterations are assessed at a higher valuation than the Building Standard, then such records shall be binding on both Landlord and Tenant.

11. Security Deposit.

11.1. Tenant shall deposit with Landlord on or before the Execution Date the sum set forth in Section 2.6 (the "Security Deposit"), which sum shall be held by Landlord as security for the faithful performance by Tenant of all of the terms, covenants and conditions of this Lease to be kept and performed by Tenant during the period commencing on the Execution Date and ending upon the expiration or termination of Tenant's obligations under this Lease. If Tenant Defaults (as defined below) with respect to any provision of this Lease, including any provision relating to the payment of Rent, then Landlord may (but shall not be required to) use, apply or retain all or any part of the Security Deposit for the payment of any Rent or any other sum in default, or to compensate Landlord for any other loss or damage that Landlord may suffer by reason of Tenant's default. If any portion of the Security Deposit is so used or applied, then Tenant shall, within ten (10) days following demand therefor, deposit cash with Landlord in an amount sufficient to restore the Security Deposit to its original amount, and Tenant's failure to do so shall be a material breach of this Lease. The provisions of this Article shall survive the expiration or earlier termination of this Lease.

11.2. In the event of bankruptcy or other debtor-creditor proceedings against Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for all periods prior to the filing of such proceedings.

11.3. Landlord may deliver to any purchaser of Landlord's interest in the Premises the funds deposited hereunder by Tenant, and thereupon Landlord shall be discharged from any further liability with respect to such deposit. This provision shall also apply to any subsequent transfers.

11.4. If Tenant shall fully and faithfully perform every provision of this Lease to be performed by it, then the Security Deposit, or any balance thereof, shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within thirty (30) days after the expiration or earlier termination of this Lease.

11.5. If the Security Deposit shall be in cash, Landlord shall hold the Security Deposit in an account at a banking organization selected by Landlord; provided, however, that Landlord shall not be required to maintain a separate account for the Security Deposit, but may intermingle it with other funds of Landlord. Landlord shall be entitled to all interest and/or dividends, if any, accruing on the Security Deposit. Landlord shall not be required to credit Tenant with any interest for any period during which Landlord does not receive interest on the Security Deposit.

11.6. The Security Deposit may be in the form of cash, a letter of credit or any other security instrument acceptable to Landlord in its sole discretion. Tenant may at any time, except when Tenant is in Default (as defined below), deliver a letter of credit (the "L/C Security") as the entire Security Deposit, as follows:

(a) If Tenant elects to deliver L/C Security, then Tenant shall provide Landlord, and maintain in full force and effect throughout the Term and until the date that is ninety (90) days after the then-current Term Expiration Date, a letter of credit substantially in the form of Exhibit E issued by an issuer reasonably satisfactory to Landlord (it being agreed that Silicon Valley Bank, N.A. is satisfactory), in the amount of the Security Deposit, with an

initial term of at least one year. Landlord may require the L/C Security to be re-issued by a different issuer at any time during the Term if Landlord reasonably believes that the issuing bank of the L/C Security is or may soon become insolvent; provided, however, Landlord shall return the existing L/C Security to the existing issuer immediately upon receipt of the substitute L/C Security. If any issuer of the L/C Security shall become insolvent or placed into FDIC receivership, then Tenant shall immediately deliver to Landlord (without the requirement of notice from Landlord) substitute L/C Security issued by an issuer reasonably satisfactory to Landlord, and otherwise conforming to the requirements set forth in this Article. As used herein with respect to the issuer of the L/C Security, "insolvent" shall mean the determination of insolvency as made by such issuer's primary bank regulator (*i.e.*, the state bank supervisor for state chartered banks; the OCC or OTS, respectively, for federally chartered banks or thrifts; or the Federal Reserve for its member banks). If, at the Term Expiration Date, any Rent remains uncalculated or unpaid, then (i) Landlord shall with reasonable diligence complete any necessary calculations, (ii) Tenant shall extend the expiry date of such L/C Security from time to time as Landlord reasonably requires and (iii) in such extended period, Landlord shall not unreasonably refuse to consent to an appropriate reduction of the L/C Security. Tenant shall reimburse Landlord's legal costs (as estimated by Landlord's counsel) in handling Landlord's acceptance of L/C Security or its replacement or extension.

(b) If Tenant delivers to Landlord satisfactory L/C Security in place of the entire Security Deposit, Landlord shall remit to Tenant any cash Security Deposit Landlord previously held.

(c) Landlord may draw upon the L/C Security, and hold and apply the proceeds in the same manner and for the same purposes as the Security Deposit, if (i) an uncured Default (as defined below) exists, (ii) as of the date that is forty-five (45) days before any L/C Security expires (even if such scheduled expiry date is after the Term Expiration Date) Tenant has not delivered to Landlord an amendment or replacement for such L/C Security, reasonably satisfactory to Landlord, extending the expiry date to the earlier of (1) sixty (60) days after the then-current Term Expiration Date or (2) the date that is one year after the then-current expiry date of the L/C Security, (iii) the L/C Security provides for automatic renewals, Landlord asks the issuer to confirm the current L/C Security expiry date, and the issuer fails to do so within ten (10) business days, (iv) Tenant fails to pay (when and as Landlord reasonably requires) any bank charges for Landlord's transfer of the L/C Security or (v) the issuer of the L/C Security ceases, or announces that it will cease, to maintain an office in the city where Landlord may present drafts under the L/C Security (and fails to permit drawing upon the L/C Security by overnight courier or facsimile). This Section does not limit any other provisions of this Lease allowing Landlord to draw the L/C Security under specified circumstances.

(d) Tenant shall not seek to enjoin, prevent, or otherwise interfere with Landlord's draw under L/C Security, even if it violates this Lease. Tenant acknowledges that the only effect of a wrongful draw would be to substitute a cash Security Deposit for L/C Security, causing Tenant no legally recognizable damage. Landlord shall hold the proceeds of any draw in the same manner and for the same purposes as a cash Security Deposit. In the event of a wrongful draw, the parties shall cooperate to allow Tenant to post replacement L/C Security simultaneously with the return to Tenant of the wrongfully drawn sums, and Landlord shall upon request confirm in writing to the issuer of the L/C Security that Landlord's draw was erroneous.

(e) If Landlord transfers its interest in the Premises, then Tenant shall at Tenant's expense, within five (5) business days after receiving a request from Landlord, deliver (and, if the issuer requires, Landlord shall consent to) an amendment to the L/C Security naming Landlord's grantee as substitute beneficiary. If the required Security Deposit changes while L/C Security is in force, then Tenant shall deliver (and, if the issuer requires, Landlord shall consent to) a corresponding amendment to the L/C Security.

11.7. If as of the third (3rd) anniversary of the Rent Commencement Date, Tenant has not been in Default under this Lease (the "SD Reduction Obligation"), then Tenant, at any time after the third (3rd) anniversary of the

Rent Commencement Date, but no later than forty-five (45) days after the third (3rd) anniversary of the Rent Commencement Date, may notify Landlord in writing that it wishes to decrease the Security Deposit to an amount equal to One Million Ninety Thousand Six Hundred Seventy-Two and 00/100 Dollars ($1,090,672.00) (the "Reduced Security Deposit"). Within ten (10) Business Days following Landlord's receipt of such notice, Landlord shall (y) confirm in writing that the SD Reduction Obligation has been satisfied and that the Security Deposit shall be deemed to equal the Reduced Security Deposit, or (z) notify Tenant that the SD Reduction Obligation has not been satisfied and that the Security Deposit shall not be decreased. Upon Landlord's confirmation that the SD Reduction Obligation has been satisfied, (i) if the Security Deposit is in the form of cash, Landlord shall return to Tenant the excess amount within ten (10) Business Days following such confirmation, or (ii) if the Security Deposit is in the form of the L/C Security, the Tenant may provide to Landlord, and Landlord shall accept, a replacement L/C Security in the amount of the Reduced Security Deposit in the form required by Section 11.6 of this Lease.

12. Use.

12.1. Tenant shall use the Premises for the Permitted Use, and shall not use the Premises, or permit or suffer the Premises to be used, for any other purpose without Landlord's prior written consent, which consent Landlord may withhold in its sole and absolute discretion. Tenant shall be prohibited from using the Premises or any portion of the Property for the sale or production of marijuana.

12.2. Tenant shall not use or occupy the Premises in violation of Applicable Laws; zoning ordinances; or the certificate of occupancy (or its substantial equivalent) issued for the Building or the Project, and shall, upon five (5) days' written notice from Landlord, discontinue any use of the Premises that is declared or claimed by any Governmental Authority having jurisdiction to be a violation of any of the above, or that in Landlord's reasonable opinion violates any of the above. Tenant shall comply with any direction of any Governmental Authority having jurisdiction that shall, by reason of the nature of Tenant's use or occupancy of the Premises, impose any duty upon Tenant or Landlord with respect to the Premises or with respect to the use or occupation thereof, and shall indemnify, defend (at the option of and with counsel reasonably acceptable to the indemnified party(ies)), save, reimburse and hold harmless (collectively, "Indemnify," "Indemnity" or "Indemnification," as the case may require) Landlord and its affiliates, employees, agents and contractors; and any lender, mortgagee, ground lessor or beneficiary (each, a "Lender" and, collectively with Landlord and its affiliates, employees, agents and contractors, the "Landlord Indemnitees") harmless from and against any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages, suits or judgments, and all reasonable expenses (including reasonable attorneys' fees, charges and disbursements, regardless of whether the applicable demand, claim, action, cause of action or suit is voluntarily withdrawn or dismissed) incurred in investigating or resisting the same (collectively, "Claims") of any kind or nature that arise before, during or after the Term as a result of Tenant's breach of this Section.

12.3. Tenant shall not do or permit to be done anything that will invalidate or increase the cost of any fire, environmental, extended coverage or any other insurance policy covering the Building or the Project, and shall comply with all rules, orders, regulations and requirements of the insurers of the Building and the Project, and Tenant shall promptly, upon demand, reimburse Landlord for any additional premium charged for such policy by reason of Tenant's failure to comply with the provisions of this Article.

12.4. Tenant shall keep all doors opening onto public corridors closed, except when in use for ingress and egress.

12.5. No additional locks or bolts of any kind shall be placed upon any of the doors or windows by Tenant, nor shall any changes be made to existing locks or the mechanisms thereof without Landlord's prior written consent. Tenant shall, upon termination of this Lease, return to Landlord all keys to offices and restrooms either furnished to or otherwise procured by Tenant. In the event any key so furnished to Tenant is lost, Tenant shall pay to Landlord

the cost of replacing the same or of changing the lock or locks opened by such lost key if Landlord shall deem it necessary to make such change.

12.6. No awnings or other projections shall be attached to any outside wall of the Building. No curtains, blinds, shades or screens shall be attached to or hung in, or used in connection with, any window or door of the Premises other than Landlord's standard window coverings. Neither the interior nor exterior of any windows shall be coated or otherwise sunscreened without Landlord's prior written consent, nor shall any bottles, parcels or other articles be placed on the windowsills or items attached to windows that are visible from outside the Premises. No equipment, furniture or other items of personal property shall be placed on any exterior balcony without Landlord's prior written consent.

12.7. No sign, advertisement or notice ("Signage") shall be exhibited, painted or affixed by Tenant on any part of the Premises visible from outside the Premises or on any part of the Building without Landlord's prior written consent. Signage shall conform to Landlord's design criteria. For any Signage, Tenant shall, at Tenant's own cost and expense, (a) acquire all permits for such Signage in compliance with Applicable Laws and (b) design, fabricate, install and maintain such Signage in a first-class condition. Tenant shall be responsible for reimbursing Landlord for costs incurred by Landlord in removing any of Tenant's Signage and restoring any damage to the Premises or the Building upon the expiration or earlier termination of the Lease. Interior signs on entry doors to the Premises and the directory tablet shall be inscribed, painted or affixed for Tenant by Landlord at Landlord's sole cost and expense, and shall be of a size, color and type and be located in a place acceptable to Landlord. The directory tablet shall be provided exclusively for the display of the name and location of tenants only. Tenant shall not place anything on the exterior of the corridor walls or corridor doors other than Landlord's standard lettering. At Landlord's option, Landlord may install any Tenant Signage, and Tenant shall pay all costs associated with such installation within thirty (30) days after demand therefor. Notwithstanding anything herein to the contrary, all Tenant Signage, other than directory or monument signage, whether installed by Landlord or Tenant, shall incorporate, at Tenant's election, Tenant's corporate logo, graphics and colors.

12.8. Tenant may only place equipment within the Premises with floor loading consistent with the Building's structural design unless Tenant obtains Landlord's prior written approval. Tenant may place such equipment only in a location designed to carry the weight of such equipment.

12.9. Tenant shall cause any equipment or machinery to be installed in the Premises so as to reasonably prevent sounds or vibrations therefrom from extending into the Common Area or other offices in the Project.

12.10. Tenant shall not (a) do or permit anything to be done in or about the Premises that shall in any way obstruct or interfere with the rights of other tenants or occupants of the Project, or injure or annoy them, (b) use or allow the Premises to be used for immoral, unlawful or objectionable purposes, (c) cause, maintain or permit any nuisance or waste in, on or about the Project or (d) take any other action that would in Landlord's reasonable determination in any manner adversely affect other tenants' quiet use and enjoyment of their space or adversely impact their ability to conduct business in a professional and suitable work environment. Notwithstanding any other provision herein to the contrary, Tenant shall be responsible for all liabilities, costs and expenses arising from or in connection with the compliance of the Premises with the Americans with Disabilities Act, 42 U.S.C. § 12101, et seq., and any state and local accessibility laws, codes, ordinances and rules (collectively, and together with regulations promulgated pursuant thereto, the "ADA"), and Tenant shall Indemnify the Landlord Indemnitees from and against any Claims arising from any such failure of the Premises to comply with the ADA. Notwithstanding the foregoing, and without limiting Tenant's responsibilities under this Section, at the time of Landlord's delivery of the Premises, the Common Area shall be ADA compliant. This Section (as well as any other provisions of this Lease dealing with Indemnification of the Landlord Indemnitees by Tenant) shall be deemed to be modified in each case by the insertion in the appropriate place of the following: "except as otherwise provided in Mass. G.L.

Ter. Ed., C. 186, Section 15." For the avoidance of doubt, "Lenders" shall also include historic tax credit investors and new market tax credit investors. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

12.11. Tenant shall establish and maintain a chemical safety program administered by a licensed, qualified individual in accordance with the requirements of the Massachusetts Water Resources Authority ("MWRA") and any other applicable Governmental Authority. Tenant shall be solely responsible for all costs incurred in connection with such chemical safety program, and Tenant shall provide Landlord with such documentation as Landlord may reasonably require evidencing Tenant's compliance with the requirements of (a) the MWRA and any other applicable Governmental Authority with respect to such chemical safety program and (b) this Section. Notwithstanding the foregoing, Landlord shall obtain and maintain during the Term (m) any permit required by the MWRA ("MWRA Permit") and (n) a wastewater treatment operator license from the Commonwealth of Massachusetts with respect to Tenant's use of the Acid Neutralization Tank (as defined below) in the Building. Tenant shall not introduce anything into the Acid Neutralization Tank (x) in violation of the terms of the MWRA Permit, (y) in violation of Applicable Laws or (z) that would interfere with the proper functioning of the Acid Neutralization Tank. Tenant agrees to reasonably cooperate with Landlord in order to obtain the MWRA Permit and the wastewater treatment operator license. Tenant shall reimburse Landlord within ten (10) business days after demand for any costs incurred by Landlord pursuant to this Section.

13. Rules and Regulations, CC&Rs, Parking Facilities and Common Area.

13.1. Tenant shall have the non-exclusive right, in common with others, to use the Common Area in conjunction with Tenant's use of the Premises for the Permitted Use, and such use of the Common Area and Tenant's use of the Premises shall be subject to the rules and regulations adopted by Landlord and attached hereto as Exhibit F, together with such other reasonable and nondiscriminatory rules and regulations as are hereafter promulgated by Landlord in its sole and absolute discretion (the "Rules and Regulations"). Tenant shall and shall ensure that its contractors, subcontractors, employees, subtenants and invitees faithfully observe and comply with the Rules and Regulations. Landlord shall not be responsible to Tenant for the violation or non-performance by any other tenant or any agent, employee or invitee thereof of any of the Rules and Regulations.

13.2. This Lease is subject to any recorded covenants, conditions or restrictions on the Project or Property, including, without limitation, a Declaration of Use Restrictions and Affirmative Covenants dated as June 24, 2014 recorded with the Middlesex South District Registry of Deeds Registry in Book 63800, Page 255, as the same may be amended, amended and restated, supplemented or otherwise modified from time to time (collectively, the "CC&Rs") provided that any such amendments, restatements, supplements or modifications do not materially modify Tenant's rights or obligations hereunder. Tenant shall, at its sole cost and expense, comply with the CC&Rs.

13.3. Notwithstanding anything in this Lease to the contrary, Tenant may not install any security systems (including cameras) outside the Premises or that record sounds or images outside the Premises without Landlord's prior written consent, which Landlord may withhold in its sole and absolute discretion.

13.4. Tenant shall have a non-exclusive, irrevocable license to use sixty-seven (67) parking spaces at the parking facilities, which consist of a structured parking garage and surface lot adjacent to the Building, serving the Building in common on an unreserved basis with other tenants of the Building during the Term (i) at no additional cost during the initial Term; and (ii) upon the commencement of an Option term, at a cost equal to fair market rent, as determined by Landlord from time to time, per parking space per month, which Tenant shall pay simultaneously with payments of Base Rent as Additional Rent. Landlord reserves the right to adopt protocols concerning the use of the parking facilities, such as the use of passes or stickers issued by Landlord, with which Tenant and its contractors, subcontractors, employees, subtenants and invitees shall faithfully observe and comply.

13.5. Tenant agrees not to unreasonably overburden the parking facilities and agrees to cooperate with Landlord and other tenants in the use of the parking facilities. Landlord reserves the right to determine that parking facilities are becoming overcrowded and to limit Tenant's use thereof. Upon such determination, Landlord may reasonably allocate parking spaces among Tenant and other tenants of the Building or the Project. Nothing in this Section, however, is intended to create an affirmative duty on Landlord's part to monitor parking.

13.6. Subject to the terms of this Lease including the Rules and Regulations and the rights of other tenants of the Building, Tenant shall have the non-exclusive right to access the freight loading dock, at no additional cost.

13.7. This Lease is subject to that certain Activity and Use Limitation a notice of which is recorded with the Middlesex South District Registry of Deeds in Book 60629, Page 36.

14. Project Control by Landlord.

14.1. Landlord reserves full control over the Building and the Project to the extent not inconsistent with Tenant's enjoyment of the Premises as provided by this Lease. This reservation includes Landlord's right to subdivide the Project; convert the Building to condominium units; change the size of the Project by selling all or a portion of the Project or adding real property and any improvements thereon to the Project; grant easements and licenses to third parties; maintain or establish ownership of the Building separate from fee title to the Property; make additions to or reconstruct portions of the Building and the Project; install, use, maintain, repair, replace and relocate for service to the Premises and other parts of the Building or the Project pipes, ducts, conduits, wires and appurtenant fixtures, wherever located in the Premises, the Building or elsewhere at the Project; and alter or relocate any other Common Area or facility, including private drives, lobbies, entrances and landscaping; provided, however, that such rights shall be exercised in a way that does not materially adversely affect Tenant's beneficial use and occupancy of the Premises, including the Permitted Use and Tenant's access to the Premises. Tenant acknowledges that Landlord specifically reserves the right to allow the exclusive use of corridors and restroom facilities located on specific floors to one or more tenants occupying such floors; provided, however, that Tenant shall not be deprived of the use of the corridors reasonably required to serve the Premises or of restroom facilities serving the floor upon which the Premises are located.

14.2. Possession of areas of the Premises necessary for utilities, services, safety and operation of the Building is reserved to Landlord, provided, however, that Landlord's exercise of its rights under this Section shall not reduce the usable area of the Premises or materially adversely interfere with the Permitted Use of the Premises.

14.3. Tenant shall, at Landlord's request, promptly execute such further documents as may be reasonably appropriate to assist Landlord in the performance of its obligations hereunder; provided that Tenant need not execute any document that creates additional liability for Tenant or that deprives Tenant of the quiet enjoyment and use of the Premises as provided for in this Lease.

14.4. Landlord may, at any and all reasonable times during non-business hours (or during business hours, if Landlord so requests), and upon twenty-four (24) hours' prior notice (which may be oral or by email to the office manager or other Tenant-designated individual at the Premises; but provided that no time restrictions shall apply or advance notice be required if an emergency necessitates immediate entry), enter the Premises to (u) inspect the same and to determine whether Tenant is in compliance with its obligations hereunder, (v) supply any service Landlord is required to provide hereunder, (w) alter, improve or repair any portion of the Building other than the Premises for which access to the Premises is reasonably necessary, (x) post notices of nonresponsibility, (y) access the telephone equipment, electrical substation and fire risers and (z) show the Premises to prospective tenants during the final year of the Term and current and prospective purchasers and lenders at any time. In connection with any such alteration, improvement or repair as described in Subsection 14.4(w), Landlord may erect in the Premises or elsewhere in the Project scaffolding and other structures reasonably required for the alteration,

improvement or repair work to be performed. In no event shall Tenant's Rent abate as a result of Landlord's activities pursuant to this Section; provided, however, that all such activities shall be conducted in such a manner so as to cause as little interference to Tenant as is reasonably possible. Landlord shall at all times retain a key with which to unlock all of the doors in the Premises. If an emergency necessitates immediate access to the Premises, Landlord may use whatever force is necessary to enter the Premises, and any such entry to the Premises shall not constitute a forcible or unlawful entry to the Premises, a detainer of the Premises, or an eviction of Tenant from the Premises or any portion thereof.

15. Quiet Enjoyment. Landlord covenants that Tenant, upon paying the Rent and performing its obligations contained in this Lease, may peacefully and quietly have, hold and enjoy the Premises, free from any claim by Landlord or persons claiming under Landlord, but subject to all of the terms and provisions hereof, provisions of Applicable Laws and rights of record to which this Lease is or may become subordinate. This covenant is in lieu of any other quiet enjoyment covenant, either express or implied.

16. Utilities and Services.

16.1. Tenant shall pay for all water (including the cost to service, repair and replace reverse osmosis, de-ionized and other treated water), gas, heat, light, power, telephone, internet service, cable television, other telecommunications and other utilities supplied to the Premises, together with any fees, surcharges and taxes thereon. If any such utility is not separately metered to Tenant, Tenant shall pay Tenant's Adjusted Share of all charges of such utility jointly metered with other premises as Additional Rent or, in the alternative, Landlord may, at its option, monitor the usage of such utilities by Tenant and charge Tenant with the cost of purchasing, installing and monitoring such metering equipment, which cost shall be paid by Tenant as Additional Rent. Tenant shall maintain temperature and humidity in the Premises in accordance with ASHRAE standards at all times.

16.2. Landlord may base its bills for utilities on reasonable estimates; provided that Landlord adjusts such billings as part of the next Landlord's Statement (or more frequently, as determined by Landlord) to reflect the actual cost of providing utilities to the Premises. To the extent that Tenant uses more than Tenant's Pro Rata Share of any utilities, then Tenant shall pay Landlord for Tenant's Adjusted Share of such utilities to reflect such excess. In the event that the Building or Project is less than fully occupied during a calendar year, Tenant acknowledges that Landlord may extrapolate utility usage that varies depending on the occupancy of the Building or Project (as applicable) to equal Landlord's reasonable estimate of what such utility usage would have been had the Building or Project, as applicable, been ninety-five percent (95%) occupied during such calendar year; provided, however, that Landlord shall not recover more than one hundred percent (100%) of the cost of such utilities. Tenant shall not be liable for the cost of utilities supplied to the Premises attributable to the time period prior to the Term Commencement Date; provided, however, that, if Landlord shall permit Tenant possession of the Premises prior to the Term Commencement Date and Tenant uses the Premises for any purpose other than installation of improvements, equipment, cabling, and furniture and placement of personal property as set forth in Section 4.3 (including to construct the Tenant Improvements), then Tenant shall be responsible for the cost of utilities supplied to the Premises from such earlier date of possession.

16.3. Landlord shall not be liable for, nor shall any eviction of Tenant result from, the failure to furnish any utility or service, whether or not such failure is caused by accidents; breakage; casualties (to the extent not caused by the party claiming Force Majeure); Severe Weather Conditions (as defined below); physical natural disasters (but excluding weather conditions that are not Severe Weather Conditions); strikes, lockouts or other labor disturbances or labor disputes (other than labor disturbances and labor disputes resulting solely from the acts or omissions of the party claiming Force Majeure); acts of terrorism; riots or civil disturbances; wars or insurrections; shortages of materials (which shortages are not unique to the party claiming Force Majeure); government regulations, moratoria or other governmental actions, inactions or delays; failures to grant consent or delays in

granting consent by any Lender whose consent is required under any applicable Loan Document; failures by third parties to deliver gas, oil or another suitable fuel supply, or inability of the party claiming Force Majeure, by exercise of reasonable diligence, to obtain gas, oil or another suitable fuel; or other causes beyond the reasonable control of the party claiming that Force Majeure has occurred (collectively, "Force Majeure"); or, to the extent permitted by Applicable Laws, Landlord's negligence. In the event of such failure, Tenant shall not be entitled to termination of this Lease or any abatement or reduction of Rent, nor shall Tenant be relieved from the operation of any covenant or agreement of this Lease. "Severe Weather Conditions" means weather conditions that are materially worse than those that reasonably would be anticipated for the Property at the applicable time based on historic meteorological records. Notwithstanding anything to the contrary in this Lease, if, for more than seven (7) consecutive days following written notice to Landlord and as a direct result of Landlord's gross negligence or willful misconduct (and except to the extent that such failure arises from any other factor, including any action or inaction of a Tenant Party (as defined below)), the provision of HVAC or other utilities to all or a material portion of the Premises that Landlord must provide pursuant to this Lease is interrupted (a "Material Services Failure"), then Base Rent and Tenant's Adjusted Share of Operating Expenses (or, to the extent that less than all of the Premises are affected, a proportionate amount (based on the Rentable Area of the Premises that is rendered unusable) of Base Rent and Tenant's Adjusted Share of Operating Expenses) shall thereafter be abated until the Premises are again usable by Tenant for the Permitted Use; provided, however, that, if Landlord is diligently pursuing the restoration of such HVAC and other utilities and Landlord provides substitute HVAC and other utilities reasonably suitable for Tenant's continued use and occupancy of the Premises for the Permitted Use (e.g., supplying potable water or portable air conditioning equipment), then neither Base Rent nor Tenant's Adjusted Share of Operating Expenses shall be abated. During any Material Services Failure, Tenant will cooperate with Landlord to arrange for the provision of any interrupted utility services on an interim basis via temporary measures until final corrective measures can be accomplished, and Tenant will permit Landlord the necessary access to the Premises to remedy such Material Service Failure. In the event of any interruption of HVAC or other utilities that Landlord must provide pursuant to this Lease, regardless of the cause, Landlord shall diligently pursue the restoration of such HVAC and other utilities. Notwithstanding anything in this Lease to the contrary, but subject to Article 24 (which shall govern in the event of a casualty), the provisions of this Section shall be Tenant's sole recourse and remedy in the event of an interruption of HVAC or other utilities to the Premises, including related to Section 16.8.

16.4. Tenant shall pay for, prior to delinquency of payment therefor, any utilities and services that may be furnished to the Premises during or, if Tenant occupies the Premises after the expiration or earlier termination of the Term, after the Term, beyond those utilities provided by Landlord, including telephone, internet service, cable television and other telecommunications, together with any fees, surcharges and taxes thereon. Upon Landlord's demand, utilities and services provided to the Premises that are separately metered shall be paid by Tenant directly to the supplier of such utilities or services.

16.5. Tenant shall not, without Landlord's prior written consent, use any device in the Premises (including data processing machines) that will in any way (a) increase the amount of ventilation, air exchange, gas, steam, electricity or water required or consumed in the Premises based upon Tenant's Pro Rata Share of the Building or Project (as applicable) beyond the existing capacity of the Building or the Project usually furnished or supplied for the Permitted Use or (b) exceed Tenant's Pro Rata Share of the Building's or Project's (as applicable) capacity to provide such utilities or services.

16.6. If Tenant shall require utilities or services in excess of those usually furnished or supplied for tenants in similar spaces in the Building or the Project by reason of Tenant's equipment or extended hours of business operations, then Tenant shall first procure Landlord's consent for the use thereof, which consent Landlord may condition upon the availability of such excess utilities or services, and Tenant shall pay as Additional Rent an amount equal to the cost of providing such excess utilities and services.

16.7. Landlord shall provide water in Common Area for lavatory and landscaping purposes only, which water shall be from the local municipal or similar source; provided, however, that if Landlord determines that Tenant requires, uses or consumes water provided to the Common Area for any purpose other than ordinary lavatory purposes, Landlord may install a water meter ("Tenant Water Meter") and thereby measure Tenant's water consumption for all purposes. Tenant shall pay Landlord for the costs of any Tenant Water Meter and the installation and maintenance thereof during the Term. If Landlord installs a Tenant Water Meter, Tenant shall pay for water consumed, as shown on such meter, as and when bills are rendered. If Tenant fails to timely make such payments, Landlord may pay such charges and collect the same from Tenant. Any such costs or expenses incurred or payments made by Landlord for any of the reasons or purposes stated in this Section shall be deemed to be Additional Rent payable by Tenant and collectible by Landlord as such.

16.8. Landlord reserves the right to stop service of the elevator, plumbing, ventilation, air conditioning and utility systems, when Landlord deems necessary or desirable, due to accident, emergency or the need to make repairs, alterations or improvements, until such repairs, alterations or improvements shall have been completed, and subject to the abatement of Rent provided in Section 16.3, Landlord shall further have no responsibility or liability for failure to supply elevator facilities, plumbing, ventilation, air conditioning or utility service when prevented from doing so by Force Majeure or, to the extent permitted by Applicable Laws, Landlord's negligence. Without limiting the foregoing, it is expressly understood and agreed that any covenants on Landlord's part to furnish any service pursuant to any of the terms, covenants, conditions, provisions or agreements of this Lease, or to perform any act or thing for the benefit of Tenant, shall not be deemed breached if Landlord is unable to furnish or perform the same by virtue of Force Majeure or, to the extent permitted by Applicable Laws, Landlord's negligence.

16.9. Landlord will install a generator providing standby power to the base Building systems, the Premises, and other tenant premises in the Building (the "Generator") as part of the Base Building Improvements. Landlord will connect the Generator to the Premises as part of the Tenant Improvements. Tenant shall be entitled to use up to its proportionate share (after deducting any power from the Generator required for the Common Area) of power from the Generator on a non-exclusive basis with other tenants in the Building. The cost of maintaining, repairing and replacing the Generator shall constitute Operating Expenses. Landlord expressly disclaims any warranties with regard to the Generator or the installation thereof, including any warranty of merchantability or fitness for a particular purpose. Landlord shall maintain the Generator and any equipment connecting the Generator to Tenant's automatic transfer switch in good working condition, provided, however, that Tenant shall be solely responsible, at Tenant's sole cost and expense, (and Landlord shall not be liable) for maintaining and operating Tenant's automatic transfer switch and the distribution of power from Tenant's automatic transfer switch throughout the Premises, and provided further that Landlord shall not be liable for any failure to make any repairs or to perform any maintenance of the Generator that is an obligation of Landlord unless and except to the extent that Landlord willfully fails to make such repairs or perform such maintenance and such failure persists for an unreasonable time after Tenant provides Landlord with written notice of the need for such repairs or maintenance. Upon receipt of such written notice, Landlord shall promptly commence to cure such failure and shall diligently prosecute the same to completion in accordance with Section 31.13. The provisions of Section 16.3 shall apply to the Generator.

16.10. For the Premises, Landlord shall (a) maintain and operate the base Building HVAC systems used for the Permitted Use only and (b) furnish HVAC as reasonably required (except as this Lease otherwise provides or as to any special requirements that arise from Tenant's particular use of the Premises) for reasonably comfortable occupancy of the Premises twenty-four (24) hours a day, every day during the Term, subject to casualty, eminent domain or as otherwise specified in this Article. To the extent that Tenant requires HVAC services in excess of those provided by connection to the base Building HVAC systems, Tenant shall install and maintain, at its sole cost, supplemental HVAC systems in accordance with the provisions of this Lease. Tenant shall pay Landlord, as Additional Rent, Tenant's Adjusted Share of airflow to the Premises. Notwithstanding anything to the contrary in

this Section, but subject to the abatement of Rent provided in Section 16.3, Landlord shall have no liability, and Tenant shall have no right or remedy, on account of any interruption or impairment in HVAC services; provided that Landlord diligently endeavors to cure any such interruption or impairment.

16.11. For any utilities serving the Premises for which Tenant is billed directly by such utility provider, Tenant agrees to furnish to Landlord (a) any invoices or statements for such utilities within thirty (30) days after Tenant's receipt thereof, (b) within thirty (30) days after Landlord's request, any other utility usage information reasonably requested by Landlord, and (c) within thirty (30) days after each calendar year during the Term, authorization to allow Landlord to access Tenant's usage information necessary for Landlord to complete an ENERGY STAR® Statement of Performance (or similar comprehensive utility usage report (e.g., related to Labs 21), if requested by Landlord) and any other information reasonably requested by Landlord for the immediately preceding year; and Tenant shall comply with any other energy usage or consumption requirements required by Applicable Laws. Tenant shall retain records of utility usage at the Premises, including invoices and statements from the utility provider, for at least sixty (60) months, or such other period of time as may be requested by Landlord. Tenant acknowledges that any utility information for the Premises, the Building and the Project may be shared with third parties, including Landlord's consultants and Governmental Authorities. In the event that Tenant fails to comply with this Section, Tenant hereby authorizes Landlord to collect utility usage information directly from the applicable utility providers, and Tenant shall pay Landlord a fee of Five Hundred Dollars ($500) per month to collect such utility usage information. In addition to the foregoing, Tenant shall comply with all Applicable Laws related to the disclosure and tracking of energy consumption at the Premises. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

16.12. As part of the Base Building Improvements, Landlord will install a common laboratory waste sanitary sewer connection from the pH neutralization room on the first (1st) floor of the Building to the municipal sewer line in the street adjacent to the Building, as well as a separate acid neutralization tank (the "Acid Neutralization Tank") serving the Premises and other premises at the Building. Landlord will install a lab waste line connecting the Acid Neutralization Tank to the Premises as part of the Tenant Improvements. Tenant shall have a non-exclusive right to use its proportionate share of the Acid Neutralization Tank in accordance with Applicable Laws in common with other tenants at the Building. Tenant, as a portion of its Operating Expenses, shall reimburse Landlord for all costs, charges and expenses incurred by Landlord from time to time in connection with or arising from the operation, use, maintenance, repair or refurbishment of the Acid Neutralization Tank, including all clean-up costs relating to the Acid Neutralization Tank (collectively, "Tank Costs"); provided, however, that if the Acid Neutralization Tank is being used by other tenant(s) or occupant(s) of the Building at any time during the Term, then, during such time period, Tenant shall only be obligated to pay its proportionate share of the Tank Costs. Notwithstanding the foregoing, in the event the Acid Neutralization Tank is damaged or repairs to the Acid Neutralization Tank are required as a result of the improper use of the Acid Neutralization Tank by Tenant, Tenant shall be responsible for one hundred percent (100%) of the cost of any repairs or replacement required as a result of such improper use by Tenant, regardless of whether the Acid Neutralization Tank is then being used by other tenant(s) or occupant(s) of the Building. Similarly, if the Acid Neutralization Tank is damaged, or if repairs to the Acid Neutralization Tank are required as a result of the improper use of the Acid Neutralization Tank by other tenant(s) or occupant(s) of the Building, then Tenant shall have no responsibility for the cost of any repairs or replacements required as a result of such improper use by such other tenant(s) or occupant(s). Tenant shall Indemnify the Landlord Indemnitees from and against any and all Claims, including (a) diminution in value of the Project or any portion thereof, (b) damages for the loss or restriction on use of rentable or usable space or of any amenity of the Project, (c) damages arising from any adverse impact on marketing of space in the Project or any portion thereof and (d) sums paid in settlement of Claims that arise during or after the Term as a result of Tenant's improper use of the Acid Neutralization Tank. This Indemnification by Tenant includes costs incurred in connection with any investigation of site conditions or any clean-up, remediation, removal or restoration required by any Governmental Authority arising from Tenant's improper use of the Acid Neutralization Tank.

16.13. Landlord shall provide a dumpster or trash compactor at the Project for the disposal of Tenant's non-hazardous/non-controlled substances.

17. Alterations.

17.1. Tenant shall make no alterations, additions or improvements in or to the Premises or engage in any construction, demolition, reconstruction, renovation or other work (whether major or minor) of any kind in, at or serving the Premises ("Alterations") without Landlord's prior written approval, which approval may be subject to the consent of one or more Lenders, if required under any applicable Loan Document, but which approval Landlord shall not otherwise unreasonably withhold; provided, however, that, in the event any proposed Alteration affects (a) any structural portions of the Building, including exterior walls, the roof, the foundation or slab, foundation or slab systems (including barriers and subslab systems) or the core of the Building, (b) the exterior of the Building or (c) any Building systems, including elevator, plumbing, HVAC, electrical, security, life safety and power, then Landlord may withhold its approval in its sole and absolute discretion. Tenant shall, in making any Alterations, use only those architects, contractors, suppliers and mechanics of which Landlord has given prior written approval, which approval shall not be unreasonably withheld. In seeking Landlord's approval, Tenant shall provide Landlord, at least thirty (30) days in advance of the desired commencement date of any proposed construction, with plans, specifications, bid proposals, certified stamped engineering drawings and calculations by Tenant's engineer of record or architect of record (including connections to the Building's structural system, modifications to the Building's envelope, non-structural penetrations in slabs or walls, and modifications or tie-ins to life safety systems), work contracts, requests for laydown areas and such other information concerning the nature and cost of the Alterations as Landlord may reasonably request, provided that Tenant shall not commence any such Alterations that require Landlord's consent unless and until Tenant has received the written approval of Landlord and any and all Lenders whose consent is required under any applicable Loan Document. In no event shall Tenant use or Landlord be required to approve any architects, consultants, contractors, subcontractors or material suppliers that Landlord reasonably believes could cause labor disharmony or may not have sufficient experience, in Landlord's reasonable opinion, to perform work in an occupied Class "A" laboratory research building and in tenant-occupied lab areas. Notwithstanding the foregoing, Tenant may make strictly cosmetic changes to the Premises that do not require any permits or more than three (3) total contractors and subcontractors ("Cosmetic Alterations") without Landlord's consent; provided that (y) the cost of any Cosmetic Alterations does not exceed Ten Thousand Dollars ($10,000) in any one instance or Fifty Thousand Dollars ($50,000) annually, (z) such Cosmetic Alterations are not reasonably expected to have any material adverse effect on the Project and do not (i) require any structural or other substantial modifications to the Premises, (ii) require any changes to or adversely affect the Building systems, (iii) affect any portion of the Building or Project that is exterior to the Premises or (iv) trigger any requirement under Applicable Laws that would require Landlord to make any alteration or improvement to the Premises, the Building or the Project. Tenant shall give Landlord at least ten (10) days' prior written notice of any Cosmetic Alterations.

17.2. Tenant shall not construct or permit to be constructed partitions or other obstructions that might interfere with free access to mechanical installation or service facilities of the Building or with other tenants' components located within the Building, or interfere with the moving of Landlord's equipment to or from the enclosures containing such installations or facilities.

17.3. Tenant shall accomplish any work performed on the Premises or the Building in such a manner as to permit any life safety systems to remain fully operable at all times.

17.4. Any work performed on the Premises, the Building or the Project by Tenant or Tenant's contractors shall be done at such times and in such manner as Landlord may from time to time designate. Tenant covenants and agrees that all work done by Tenant or Tenant's contractors shall be performed in full compliance with Applicable Laws. Within thirty (30) days after completion of any Alterations (other than Cosmetic Alterations), Tenant shall

provide Landlord with complete "as built" drawing print sets and electronic CADD files on disc (or files in such other current format in common use as Landlord reasonably approves or requires) showing any changes in the Premises, as well as a commissioning report prepared by a licensed, qualified commissioning agent hired by Tenant and approved by Landlord for all new or affected mechanical, electrical and plumbing systems. Any such "as built" plans shall show the applicable Alterations as an overlay on the Building as-built plans; provided that Landlord provides the Building "as built" plans to Tenant.

17.5. Before commencing any Alterations, Tenant shall (a) give Landlord at least thirty (30) days' prior written notice of the proposed commencement of such work and the names and addresses of the persons supply labor or materials therefor so that Landlord may enter the Premises to post and keep posted thereon and therein notices or to take any further action that Landlord may reasonably deem proper for the protection of Landlord's interest in the Project and (b) shall, if required by Landlord, secure, at Tenant's own cost and expense, a completion and lien indemnity bond satisfactory to Landlord for such work.

17.6. Tenant shall repair any damage to the Premises arising from Tenant's removal of any property from the Premises. During any such restoration period, Tenant shall pay Rent to Landlord as provided herein as if such space were otherwise occupied by Tenant. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

17.7. The Premises plus any Alterations; Signage; Tenant Improvements; attached equipment, decorations, fixtures and trade fixtures; movable laboratory casework and related appliances; and other additions and improvements attached to or built into the Premises made by either of the parties (including all floor and wall coverings; paneling; sinks and related plumbing fixtures; laboratory benches; exterior venting fume hoods; walk-in freezers and refrigerators; ductwork; conduits; electrical panels and circuits; attached machinery and equipment; and built-in furniture and cabinets, in each case, together with all additions and accessories thereto), shall (unless, prior to such construction or installation, Landlord elects otherwise in writing) at all times remain the property of Landlord, shall remain in the Premises and shall (unless, prior to construction or installation thereof, Landlord elects otherwise in writing) be surrendered to Landlord upon the expiration or earlier termination of this Lease. For the avoidance of doubt, the items listed on Exhibit G attached hereto (which Exhibit G may be updated by Tenant from and after the Term Commencement Date, subject to Landlord's written consent) constitute Tenant's property and shall be removed by Tenant upon the expiration or earlier termination of the Lease.

17.8. Notwithstanding any other provision of this Article to the contrary, in no event shall Tenant remove any improvement from the Premises in which any Lender has a security interest or as to which Landlord contributed payment, including the Tenant Improvements, without Landlord's prior written consent, which consent Landlord may withhold in its sole and absolute discretion.

17.9. If Tenant shall fail to remove any of its property from the Premises prior to the expiration or earlier termination of this Lease, then Landlord may, at its option, remove the same in any manner that Landlord shall choose and store such effects without liability to Tenant for loss thereof or damage thereto, and Tenant shall pay Landlord, upon demand, any costs and expenses incurred due to such removal and storage or Landlord may, at its sole option and without notice to Tenant, sell such property or any portion thereof at private sale and without legal process for such price as Landlord may obtain and apply the proceeds of such sale against any (a) amounts due by Tenant to Landlord under this Lease and (b) any expenses incident to the removal, storage and sale of such personal property.

17.10. Tenant shall pay to Landlord an amount equal to three percent (3%) of the cost to Tenant of all Alterations to cover Landlord's overhead and expenses for plan review, engineering review, coordination, scheduling and supervision thereof or obtaining any required Lender consent. For purposes of payment of such sum, Tenant shall submit to Landlord copies of all bills, invoices and statements covering the costs of such charges,

accompanied by payment to Landlord of the fee set forth in this Section. Tenant shall reimburse Landlord for any extra expenses incurred by Landlord by reason of faulty work done by Tenant or its contractors, or by reason of delays arising from such faulty work, or by reason of inadequate clean-up.

17.11. Within sixty (60) days after final completion of any Alterations performed by Tenant with respect to the Premises, Tenant shall submit to Landlord documentation showing the amounts expended by Tenant with respect to such Alterations, together with supporting documentation reasonably acceptable to Landlord.

17.12. Tenant shall take, and shall cause its contractors to take, commercially reasonable steps to protect the Premises during the performance of any Alterations, including covering or temporarily removing any window coverings so as to guard against dust, debris or damage.

17.13. Tenant shall require its contractors and subcontractors performing work on the Premises to name Landlord and its affiliates and Lenders as additional insureds on their respective insurance policies.

18. Repairs and Maintenance.

18.1. Subject to the limitations set forth in Section 16.10, Landlord shall repair and maintain the structural and exterior portions and Common Area of the Building and the Project, including roofing and covering materials; foundations (excluding any architectural slabs, but including any structural slabs); exterior walls (excluding any glass windows or doors of the Premises, whether interior or exterior); plumbing; fire sprinkler systems (if any); base Building HVAC systems up to the first damper or isolation valve that serves the Premises (for purposes of clarity, the portion of the HVAC system that includes such first damper or isolation valve and extends into and through the Premises, including but not limited to any supplemental HVAC serving Tenant's vivarium, shall not be part of the base Building HVAC and shall be Tenant's obligation to maintain and repair pursuant to Section 18.2 below); elevators; and base Building electrical systems installed or furnished by Landlord. In addition, Landlord shall provide: (i) janitorial service for the Common Area in the Building of a level that is consistent with other first-class office/laboratory buildings in the Watertown submarket; and (ii) snow and ice removal from the parking areas and Building entrances and walkways and maintenance of all landscaped areas.

18.2. Except for services of Landlord, if any, required by Section 18.1, Tenant shall at Tenant's sole cost and expense maintain and keep the Premises (including but not limited to the portion of the HVAC system that includes the first damper or isolation valve and extends into and through the Premises, any supplemental HVAC serving the Premises, including but not limited to any supplemental HVAC serving Tenant's vivarium, and any other systems or equipment exclusively serving the Premises and including, but not limited to, any systems or facilities installed as part of the Tenant Improvements) and every part thereof in good condition and repair, damage thereto from ordinary wear and tear excepted, and shall, within ten (10) days after receipt of written notice from Landlord, provide to Landlord any maintenance records that Landlord reasonably requests. Tenant shall, upon the expiration or sooner termination of the Term, surrender the Premises to Landlord in as good a condition as when received, ordinary wear and tear excepted; and shall, unless otherwise notified by Landlord in writing at least sixty (60) days prior to the expiration of the Term and at Tenant's sole cost and expense, remove all telephone and data systems, wiring and equipment from the Premises, and repair any damage to the Premises caused thereby. Landlord shall have no obligation to alter, remodel, improve, repair, decorate or paint the Premises or any part thereof, other than pursuant to the terms and provisions of the Work Letter.

18.3. Landlord shall not be liable for any failure to make any repairs or to perform any maintenance that is Landlord's obligation pursuant to this Lease unless such failure shall persist for an unreasonable time after Tenant provides Landlord with written notice of the need of such repairs or maintenance. Tenant waives its rights under Applicable Laws now or hereafter in effect to make repairs at Landlord's expense.

18.4. If any excavation shall be made upon land adjacent to or under the Building, or shall be authorized to be made, Tenant shall afford to the person causing or authorized to cause such excavation, license to enter the Premises for the purpose of performing such work as such person shall deem necessary or desirable to preserve and protect the Building from injury or damage and to support the same by proper foundations, without any claim for damages or liability against Landlord and without reducing or otherwise affecting Tenant's obligations under this Lease.

18.5. This Article relates to repairs and maintenance arising in the ordinary course of operation of the Building and the Project. In the event of a casualty described in Article 24, Article 24 shall apply in lieu of this Article. In the event of eminent domain, Article 25 shall apply in lieu of this Article.

18.6. Costs incurred by Landlord pursuant to this Article shall constitute Operating Expenses.

19. Liens.

19.1. Subject to the immediately succeeding sentence, Tenant shall keep the Premises, the Building and the Project free from any liens arising from work or services performed, materials furnished to or obligations incurred by Tenant. Tenant further covenants and agrees that any mechanic's or materialman's lien filed against the Premises, the Building or the Project for work or services claimed to have been done for, or materials claimed to have been furnished to, or obligations incurred by Tenant shall be discharged or bonded by Tenant within ten (10) days after the filing thereof, at Tenant's sole cost and expense. The foregoing obligations exclude any work or services provided by Landlord.

19.2. Should Tenant fail to discharge or bond against any lien of the nature described in Section 19.1, Landlord may, at Landlord's election, pay such claim or post a statutory lien bond or otherwise provide security to eliminate the lien as a claim against title, and Tenant shall immediately reimburse Landlord for the costs thereof as Additional Rent. Tenant shall Indemnify the Landlord Indemnitees from and against any Claims arising from any such liens, including any administrative, court or other legal proceedings related to such liens.

19.3. In the event that Tenant leases or finances the acquisition of office equipment, furnishings or other personal property of a removable nature utilized by Tenant in the operation of Tenant's business, Tenant warrants that any Uniform Commercial Code financing statement shall, upon its face or by exhibit thereto, indicate that such financing statement is applicable only to removable personal property of Tenant located within the Premises. In no event shall the address of the Premises, the Building or the Project be furnished on a financing statement without qualifying language as to applicability of the lien only to removable personal property located in an identified suite leased by Tenant. Should any holder of a financing statement record or place of record a financing statement that appears to constitute a lien against any interest of Landlord or against equipment that may be located other than within an identified suite leased by Tenant, Tenant shall, within ten (10) days after filing such financing statement, cause (a) a copy of the lender security agreement or other documents to which the financing statement pertains to be furnished to Landlord to facilitate Landlord's ability to demonstrate that the lien of such financing statement is not applicable to Landlord's interest and (b) Tenant's lender to amend such financing statement and any other documents of record to clarify that any liens imposed thereby are not applicable to any interest of Landlord in the Premises, the Building or the Project.

20. Estoppel Certificate. Tenant shall, within ten (10) business days after receipt of written notice from Landlord, execute, acknowledge and deliver a statement in writing substantially in the form attached to this Lease as Exhibit H, or on any other form reasonably requested by a current or proposed Lender or encumbrancer or proposed purchaser, (a) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified is in full force and effect) and the dates to which rental and other charges are paid in advance, if any, (b) acknowledging that there are not, to Tenant's knowledge,

any uncured defaults on the part of Landlord hereunder, or specifying such defaults if any are claimed, and (c) setting forth such further information with respect to this Lease or the Premises as may be requested thereon. Any such statements may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the Property. Tenant's failure to deliver any such statement within such the prescribed time shall, at Landlord's option, constitute a Default (as defined below) under this Lease, and, in any event, shall be binding upon Tenant that the Lease is in full force and effect and without modification except as may be represented by Landlord in any certificate prepared by Landlord and delivered to Tenant for execution. Upon request, Landlord shall execute such instruments as may be reasonably requested by vendor or lender of Tenant relating to the leasing or financing of Tenant's equipment, furnishings, trade fixtures and other personal property.

21. Hazardous Materials.

21.1. Tenant shall not cause or permit any Hazardous Materials (as defined below) to be brought upon, kept or used in or about the Premises, the Building or the Project in violation of Applicable Laws by Tenant or any of its employees, agents, contractors or invitees (collectively with Tenant, each a "Tenant Party"). If (a) Tenant breaches such obligation, (b) the presence of Hazardous Materials as a result of such a breach results in contamination of the Project, any portion thereof, or any adjacent property, (c) contamination of the Premises otherwise occurs during the Term or any extension or renewal hereof or holding over hereunder (other than if such contamination results from (i) migration of Hazardous Materials from outside the Premises not arising from the acts or omissions of a Tenant Party or coming from property owned or leased by a Tenant Party or (ii) to the extent such contamination arises directly from Landlord's gross negligence or willful misconduct) or (d) contamination of the Project occurs as a result of Hazardous Materials that are placed on or under or are released into the Project by a Tenant Party, then Tenant shall Indemnify the Landlord Indemnitees from and against any and all Claims of any kind or nature, including (w) diminution in value of the Project or any portion thereof, (x) damages for the loss or restriction on use of rentable or usable space or of any amenity of the Project, (y) damages arising from any adverse impact on marketing of space in the Project or any portion thereof and (z) sums paid in settlement of Claims that arise before, during or after the Term as a result of such breach or contamination. This Indemnification by Tenant includes costs incurred in connection with any investigation of site conditions or any clean-up, remedial, removal or restoration work required by any Governmental Authority because of Hazardous Materials present in the air, soil or groundwater above, on, under or about the Project. Without limiting the foregoing, if the presence of any Hazardous Materials in, on, under or about the Project, any portion thereof or any adjacent property caused or permitted by any Tenant Party results in any contamination of the Project, any portion thereof or any adjacent property, then Tenant shall promptly take all actions at its sole cost and expense as are necessary to return the Project, any portion thereof or any adjacent property to its respective condition existing prior to the time of such contamination; provided that Landlord's written approval of such action shall first be obtained, which approval Landlord shall not unreasonably withhold; and provided, further, that it shall be reasonable for Landlord to withhold its consent if such actions could have a material adverse long-term or short-term effect on the Project, any portion thereof or any adjacent property. Tenant's obligations under this Section shall not be affected, reduced or limited by any limitation on the amount or type of damages, compensation or benefits payable by or for Tenant under workers' compensation acts, disability benefit acts, employee benefit acts or similar legislation.

21.2. Landlord acknowledges that it is not the intent of this Article to prohibit Tenant from operating its business for the Permitted Use. Tenant may operate its business according to the custom of Tenant's industry so long as the use or presence of Hazardous Materials is strictly and properly monitored in accordance with Applicable Laws. As a material inducement to Landlord to allow Tenant to use Hazardous Materials in connection with its business, Tenant agrees to deliver to Landlord (a) a list identifying each type of Hazardous Material to be present at the Premises that is subject to regulation under any environmental Applicable Laws in the form of a Tier II form pursuant to Section 312 of the Emergency Planning and Community Right-to-Know Act of 1986 (or any successor statute) or any other form reasonably requested by Landlord, (b) a list of any and all approvals or permits from

Governmental Authorities required in connection with the presence of such Hazardous Material at the Premises and (c) correct and complete copies of (i) notices of violations of Applicable Laws related to Hazardous Materials and (ii) plans relating to the installation of any storage tanks to be installed in, on, under or about the Project (provided that installation of storage tanks shall only be permitted after Landlord has given Tenant its written consent to do so, which consent Landlord may withhold in its sole and absolute discretion) and closure plans or any other documents required by any and all Governmental Authorities for any storage tanks installed in, on, under or about the Project for the closure of any such storage tanks (collectively, "Hazardous Materials Documents"). Tenant shall deliver to Landlord updated Hazardous Materials Documents, within fourteen (14) days after receipt of a written request therefor from Landlord, not more often than once per year, unless (m) there are any changes to the Hazardous Materials Documents or (n) Tenant initiates any Alterations or changes its business, in either case in a way that involves any material increase in the types or amounts of Hazardous Materials, in which case Tenant shall deliver updated Hazardous Materials documents (without Landlord having to request them) before or, if not practicable to do so before, as soon as reasonably practicable after the occurrence of the events in Subsection 21.2(m) or (n). For each type of Hazardous Material listed, the Hazardous Materials Documents shall include (t) the chemical name, (u) the material state (e.g., solid, liquid, gas or cryogen), (v) the concentration, (w) the storage amount and storage condition (e.g., in cabinets or not in cabinets), (x) the use amount and use condition (e.g., open use or closed use), (y) the location (e.g., room number or other identification) and (z) if known, the chemical abstract service number. Notwithstanding anything in this Section to the contrary, Tenant shall not be required to provide Landlord with any documents containing information of a proprietary nature, unless such documents contain a reference to Hazardous Materials or activities related to Hazardous Materials. Landlord may, at Landlord's expense, cause the Hazardous Materials Documents to be reviewed by a person or firm qualified to analyze Hazardous Materials to confirm compliance with the provisions of this Lease and with Applicable Laws. In the event that a review of the Hazardous Materials Documents indicates non-compliance with this Lease or Applicable Laws, Tenant shall, at its expense, diligently take steps to bring its storage and use of Hazardous Materials into compliance. Notwithstanding anything in this Lease to the contrary or Landlord's review into Tenant's Hazardous Materials Documents or use or disposal of hazardous materials, however, Landlord shall not have and expressly disclaims any liability related to Tenant's or other tenants' use or disposal of Hazardous Materials, it being acknowledged by Tenant that Tenant is best suited to evaluate the safety and efficacy of its Hazardous Materials usage and procedures. If Tenant is required to provide Landlord with Hazardous Materials Documents containing information of a proprietary nature and notifies Landlord in writing upon disclosure that such information is proprietary, Landlord shall keep the same confidential and shall not disclose such information to any third-party, except that Landlord may disclose such information (a) as may be required by Applicable Laws or in any judicial proceeding (provided that prior to disclosure Landlord gives Tenant reasonable notice of such requirement, if feasible) and (b) to Landlord's attorneys, accountants and other bona fide consultants or advisers who are advised of the confidential nature of such information. Landlord agrees that a breach of such confidentiality may cause Tenant harm for which recovery of damages would be an inadequate remedy, and in such event, Tenant shall be entitled to obtain injunctive relief, as well as such further relief as may be granted by a court of competent jurisdiction, but excluding special, punitive, exemplary or consequential damages.

21.3. Tenant represents and warrants to Landlord that it is not nor has it been, in connection with the use, disposal or storage of Hazardous Materials, (a) subject to a material enforcement order issued by any Governmental Authority or (b) required to take any remedial action.

21.4. At any time, and from time to time, prior to the expiration of the Term, Landlord shall have the right to conduct appropriate tests of the Project or any portion thereof to demonstrate that Hazardous Materials are present or that contamination has occurred due to the acts or omissions of a Tenant Party. Tenant shall pay all reasonable costs of such tests if such tests reveal that Hazardous Materials exist at the Project in violation of this Lease.

21.5. If underground or other storage tanks storing Hazardous Materials installed or utilized by Tenant are located on the Premises, or are hereafter placed on the Premises by Tenant (or by any other party, if such storage tanks are utilized by Tenant), then Tenant shall monitor the storage tanks, maintain appropriate records, implement reporting procedures, properly close any underground storage tanks, and take or cause to be taken all other steps necessary or required under the Applicable Laws. Tenant shall have no responsibility or liability for underground or other storage tanks installed by anyone other than Tenant unless Tenant utilizes such tanks, in which case Tenant's responsibility for such tanks shall be as set forth in this Section.

21.6. Tenant shall promptly report to Landlord any actual or suspected presence of mold or water intrusion at the Premises.

21.7. Tenant's obligations under this Article shall survive the expiration or earlier termination of the Lease. During any period of time needed by Tenant or Landlord after the termination of this Lease to complete the removal from the Premises of any such Hazardous Materials, Tenant shall be deemed a holdover tenant and subject to the provisions of Article 27.

12.8. As used herein, the term "Hazardous Material" means any toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic or otherwise hazardous substance, material or waste that is or becomes regulated by Applicable Laws or any Governmental Authority.

12.9. Notwithstanding anything to the contrary in this Lease, Tenant shall have (a) sole control over one (1) of fire control area (as defined in the Uniform Building Code as adopted by the city or municipality(ies) in which the Project is located (the "UBC")), and (b) up to fifty percent (50%) of one (1) fire control area shared with the Common Area of Project for the storage of Hazardous Materials. Notwithstanding anything to the contrary in this Lease, the quantity of Hazardous Materials allowed by this Section is specific to Tenant and shall not run with the Lease in the event of a Transfer (as defined in Article 29). In the event of a Transfer, if the use of Hazardous Materials by such new tenant ("New Tenant") is such that New Tenant utilizes fire control areas in the Project in excess of New Tenant's Pro Rata Share of the Building, then New Tenant shall, at its sole cost and expense and upon Landlord's written request, establish and maintain a separate area of the Premises classified by the UBC as an "H" occupancy area for the use and storage of Hazardous Materials, or take such other action as is necessary to ensure that its share of the fire control areas of the Building is not greater than New Tenant's Pro Rata Share of the Building. Notwithstanding anything in this Lease to the contrary, Landlord shall not have and expressly disclaims any liability related to Tenant's or other tenants' use or disposal of fire control areas, it being acknowledged by Tenant that Tenant and other tenants are best suited to evaluate the safety and efficacy of its Hazardous Materials usage and procedures.

22. Odors and Exhaust. Tenant acknowledges that Landlord would not enter into this Lease with Tenant unless Tenant assured Landlord that under no circumstances will any other occupants of the Building or the Project (including persons legally present in any outdoor areas of the Project) be subjected to odors or fumes (whether or not noxious), and that the Building and the Project will not be damaged by any exhaust, in each case from Tenant's operations, including in Tenant's vivarium. Landlord and Tenant therefore agree as follows:

22.1 Tenant shall not cause or permit (or conduct any activities that would cause) any release of any odors or fumes of any kind from the Premises.

22.2 If the Building has a ventilation system that, in Landlord's judgment, is adequate, suitable, and appropriate to vent the Premises in a manner that does not release odors affecting any indoor or outdoor part of the Project, Tenant shall vent the Premises through such system. If Landlord at any time determines that any existing ventilation system is inadequate, or if no ventilation system exists, Tenant shall in compliance with Applicable Laws vent all fumes and odors from the Premises (and remove odors from Tenant's exhaust stream)

as Landlord requires. The placement and configuration of all ventilation exhaust pipes, louvers and other equipment shall be subject to Landlord's approval. Tenant acknowledges Landlord's legitimate desire to maintain the Project (indoor and outdoor areas) in an odor-free manner, and Landlord may require Tenant to abate and remove all odors in a manner that goes beyond the requirements of Applicable Laws.

22.3 Tenant shall, at Tenant's sole cost and expense, provide odor eliminators and other devices (such as filters, air cleaners, scrubbers and whatever other equipment may in Landlord's judgment be necessary or appropriate from time to time) to completely remove, eliminate and abate any odors, fumes or other substances in Tenant's exhaust stream that, in Landlord's judgment, emanate from Tenant's Premises. Any work Tenant performs under this Section shall constitute Alterations.

22.4 Tenant's responsibility to remove, eliminate and abate odors, fumes and exhaust shall continue throughout the Term. Landlord's construction of the Tenant Improvements shall not preclude Landlord from requiring additional measures to eliminate odors, fumes and other adverse impacts of Tenant's exhaust stream (as Landlord may designate in Landlord's discretion). Tenant shall install additional equipment as Landlord requires from time to time under the preceding sentence. Such installations shall constitute Alterations.

22.5 If Tenant fails to install satisfactory odor control equipment within ten (10) business days after Landlord's demand made at any time, then Landlord may, without limiting Landlord's other rights and remedies, require Tenant to cease and suspend any operations in the Premises that, in Landlord's determination, cause odors, fumes or exhaust. For example, if Landlord determines that Tenant's production of a certain type of product causes odors, fumes or exhaust, and Tenant does not install satisfactory odor control equipment within ten (10) business days after Landlord's request, then Landlord may require Tenant to stop producing such type of product in the Premises unless and until Tenant has installed odor control equipment satisfactory to Landlord.

23. Insurance

23.1. Landlord shall maintain insurance for the Building and the Project in amounts equal to full replacement cost (exclusive of the costs of excavation, foundations and footings, engineering costs or such other costs to the extent the same are not incurred in the event of a rebuild and without reference to depreciation taken by Landlord upon its books or tax returns) or such lesser coverage as Landlord may elect consistent with coverages carried by owners of similar properties in the Greater Boston area, provided that such coverage shall not be less than the amount of such insurance Landlord's Lender, if any, requires Landlord to maintain, providing protection against any peril generally included within the classification "Fire and Extended Coverage," together with insurance against sprinkler damage (if applicable), vandalism and malicious mischief. Landlord, subject to availability thereof, shall further insure, if Landlord deems it appropriate, coverage against flood, environmental hazard, earthquake, loss or failure of building equipment, rental loss during the period of repairs or rebuilding, Workers' Compensation insurance and fidelity bonds for employees employed to perform services. Notwithstanding the foregoing, Landlord may, but shall not be deemed required to, provide insurance for any improvements installed by Tenant or that are in addition to the standard improvements customarily furnished by Landlord, without regard to whether or not such are made a part of or are affixed to the Building.

23.2. In addition, Landlord shall carry Commercial General Liability insurance with limits of One Million Dollars ($1,000,000) per occurrence/general aggregate for bodily injury (including death), or property damage with respect to the Project.

23.3. Tenant shall, at its own cost and expense, procure and maintain during the Term the following insurance for the benefit of Tenant and Landlord (as their interests may appear) with insurers financially acceptable and lawfully authorized to do business in the state where the Premises are located:

(a) Commercial General Liability insurance on a broad-based occurrence coverage form, with coverages including but not limited to bodily injury (including death), property damage (including loss of use resulting therefrom), premises/operations, personal & advertising injury, and contractual liability with limits of liability of not less than $2,000,000 for bodily injury and property damage per occurrence, $4,000,000 general aggregate, which limits may be met by use of excess and/or umbrella liability insurance; provided that such coverage is at least as broad as the primary coverages required herein.

(b) Commercial Automobile Liability insurance covering liability arising from the use or operation of any auto on behalf of Tenant or invited by Tenant (including those owned, hired, rented, leased, borrowed, scheduled or non-owned). Coverage shall be on a broad-based occurrence form in an amount not less than $2,000,000 combined single limit per accident for bodily injury and property damage. Such coverage shall apply to all vehicles and persons, whether accessing the property with active or passive consent.

(c) Commercial Property insurance covering property damage to the full replacement cost value and business interruption. Covered property shall include all tenant improvements in the Premises (to the extent not insured by Landlord pursuant to Section 23.1) and Tenant's Property including personal property, furniture, fixtures, machinery, equipment, stock, inventory and improvements and betterments, which may be owned by Tenant or Landlord and required to be insured hereunder, or which may be leased, rented, borrowed or in the care custody or control of Tenant, or Tenant's agents, employees or subcontractors. Such insurance, with respect only to all Tenant Improvements, Alterations or other work performed on the Premises by Tenant (collectively, "Tenant Work"), shall name Landlord and Landlord's current and future mortgagees as loss payees as their interests may appear. Such insurance shall be written on an "all risk" of physical loss or damage basis including the perils of fire, extended coverage, electrical injury, mechanical breakdown, windstorm, vandalism, malicious mischief, sprinkler leakage, back-up of sewers or drains, flood, earthquake, terrorism and such other risks Landlord may from time to time designate, for the full replacement cost value of the covered items with an agreed amount endorsement with no co-insurance. Business interruption coverage shall have limits sufficient to cover Tenant's lost profits and necessary continuing expenses, including rents due Landlord under the Lease. The minimum period of indemnity for business interruption coverage shall be eighteen (18) months.

(d) Workers' Compensation in compliance with all Applicable Laws or as may be available on a voluntary basis. Employer's Liability must be at least in the amount of $1,000,000 for bodily injury by accident for each employee, $1,000,000 for bodily injury by disease for each employee, and $1,000,000 bodily injury by disease for policy limit.

(e) Medical malpractice insurance at limits of not less than $1,000,000 each claim during such periods, if any, that Tenant engages in the practice of medicine or clinical trials involving human beings at the Premises.

(f) Pollution Legal Liability insurance is required if Tenant stores, handles, generates or treats Hazardous Materials, as determined solely by Landlord, on or about the Premises. Such coverage shall include bodily injury, sickness, disease, death or mental anguish or shock sustained by any person; property damage including physical injury to or destruction of tangible property including the resulting loss of use thereof, clean-up costs, and the loss of use of tangible property that has not been physically injured or destroyed; and defense costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages. Coverage shall apply to both sudden and non-sudden pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water. Claims-made coverage is permitted, provided the policy retroactive date is continuously maintained prior to the commencement date of this agreement, and coverage is continuously maintained during all periods in

which Tenant occupies the Premises. Coverage shall be maintained with limits of not less than $2,000,000 per incident with a $4,000,000 policy aggregate and for a period of two (2) years thereafter.

(g) During all construction by Tenant at the Premises, with respect to tenant improvements being constructed (including any Alterations, insurance required in Exhibit B-1 must be in place.

23.4. The insurance required of Tenant by this Article shall be with companies at all times having a current rating of not less than A- and financial category rating of at least Class VII in "A.M. Best's Insurance Guide" current edition. Tenant shall obtain for Landlord from the insurance companies/broker or cause the insurance companies/broker to furnish certificates of insurance evidencing all coverages required herein to Landlord. Landlord reserves the right to require complete, certified copies of all required insurance policies including any endorsements. No such policy shall be cancelable or subject to reduction of coverage or other modification or cancellation except after thirty (30) days' prior written notice to Landlord from Tenant or its insurers (except in the event of non-payment of premium, in which case ten (10) days' written notice shall be given). All such policies shall be written as primary policies, not contributing with and not in excess of the coverage that Landlord may carry. Tenant's required policies shall contain severability of interests clauses stating that, except with respect to limits of insurance, coverage shall apply separately to each insured or additional insured. Tenant shall, on the date of expiration of such policies, furnish Landlord with renewal certificates of insurance or binders. Tenant agrees that if Tenant does not take out and maintain such insurance, Landlord may (but shall not be required to) procure such insurance on Tenant's behalf and at its cost to be paid by Tenant as Additional Rent. Commercial General Liability, Commercial Automobile Liability, Umbrella Liability and Pollution Legal Liability insurance as required above shall name Landlord, BioMed Realty LLC, BioMed Realty II LP and their respective officers, employees, agents, general partners, members, subsidiaries, affiliates and Lenders ("Landlord Parties") as additional insureds as respects liability arising from work or operations performed by or on behalf of Tenant, Tenant's use or occupancy of Premises, and ownership, maintenance or use of vehicles by or on behalf of Tenant.

23.5. In each instance where insurance is to name Landlord Parties as additional insureds, Tenant shall, upon Landlord's written request, also designate and furnish certificates evidencing such Landlord Parties as additional insureds to (a) any Lender of Landlord holding a security interest in the Building or the Project, (b) the landlord under any lease whereunder Landlord is a tenant of the real property upon which the Building is located if the interest of Landlord is or shall become that of a tenant under a ground lease rather than that of a fee owner and (c) any management company retained by Landlord to manage the Project.

23.6. Tenant assumes the risk of damage to any fixtures, goods, inventory, merchandise, equipment and leasehold improvements, and Landlord shall not be liable for injury to Tenant's business or any loss of income therefrom, relative to such damage, all as more particularly set forth within this Lease. Tenant shall, at Tenant's sole cost and expense, carry such insurance as Tenant desires for Tenant's protection with respect to personal property of Tenant or business interruption.

23.7. Tenant, on behalf of itself and its insurers, hereby waives any and all rights of recovery against the Landlord Parties with respect to any loss, damage, claims, suits or demands, howsoever caused, that are covered, or should have been covered as required by this Lease, by valid and collectible workers' compensation, employer's liability insurance and other liability insurance required to be obtained and carried by Tenant pursuant to this Article, including any deductibles or self-insurance maintained thereunder. Tenant agrees to endorse the required workers' compensation, employer's liability and other liability insurance policies to permit waivers of subrogation as required hereunder and hold harmless and indemnify the Landlord Parties for any loss or expense incurred as a result of a failure to obtain such waivers of subrogation from insurers. Such waivers shall continue so long as Tenant's insurers so permit. Any termination of such a waiver shall be by written notice to Landlord, containing a description of the circumstances hereinafter set forth in this Section. Tenant, upon obtaining the policies of

workers' compensation, employer's liability and other liability insurance required or permitted under this Lease, shall give notice to its insurance carriers that the foregoing waiver of subrogation is contained in this Lease. If such policies shall not be obtainable with such waiver or shall be so obtainable only at a premium over that chargeable without such waiver, then Tenant shall notify Landlord of such condition.

23.8. Landlord, on behalf of itself and its insurers, hereby waives any and all rights of recovery against the Tenant Parties with respect to any loss, damage, claims, suits or demands, howsoever caused (unless caused by Tenant's willful misconduct (it being agreed that the actions of employees and other persons acting outside the scope of their relationship with Tenant shall not be deemed to be the willful misconduct of Tenant), that are covered, or should have been covered as required by this Lease, by valid and collectible commercial general liability insurance and property insurance, but excluding any deductibles or self-insurance maintained thereunder. Landlord agrees to endorse the required commercial general liability insurance and property insurance policies to permit waivers of subrogation as required hereunder and hold harmless and indemnify the Tenant Parties for any loss or expense incurred as a result of a failure to obtain such waivers of subrogation from insurers. Such waivers shall continue so long as Landlord's insurers so permit. Any termination of such a waiver shall be by written notice to Tenant, containing a description of the circumstances hereinafter set forth in this Section. Landlord, upon obtaining the policies of commercial general liability insurance and property insurance, shall give notice to its insurance carriers that the foregoing waiver of subrogation is contained in this Lease. If such policies shall not be obtainable with such waiver or shall be so obtainable only at a premium over that chargeable without such waiver, then Landlord shall notify Tenant of such condition.

23.9. Landlord may require insurance policy limits required under this Lease to be raised to conform with requirements of Landlord's Lender or to bring coverage limits to levels then being reasonably required of new tenants within the Project.

23.10. In addition to other insurance required by this Lease to be carried by Tenant, if Tenant sells, merchandises, transfers, gives away or exchanges so-called "alcoholic liquors" in, upon or from any part of the Premises, then Tenant shall, at Tenant's sole cost and expense, purchase and maintain in full force and effect during the Term dram shop insurance in form and substance satisfactory to Landlord, with total limits of liability for bodily injury, loss of means of support and property damage for each occurrence in an amount and with a carrier reasonably acceptable to Landlord, and otherwise in compliance with the general provisions of this Article governing the provision of insurance by Tenant. Such policy shall name Landlord and the Landlord Parties as additional insureds against any liability by virtue of Applicable Laws concerning the use, sale or giving away of alcoholic liquors. If at any time such insurance is for any reason not in force, then during all and any such times no selling, merchandising, transferring, giving away or exchanging of so-called "alcoholic liquors" shall be conducted by Tenant in, upon or from any part of the Premises.

23.11. Any costs incurred by Landlord pursuant to this Article shall constitute a portion of Operating Expenses.

23.12. The provisions of this Article shall survive the expiration or earlier termination of this Lease.

24. Damage or Destruction.

24.1. In the event of a partial destruction of (a) the Premises, (b) the Building, (c) the Common Area or (d) the Project ((a)-(d) collectively, the "Affected Areas") by fire or other perils covered by extended coverage insurance not exceeding twenty-five percent (25%) of the full insurable value thereof, and provided that (w) the damage thereto is such that the Affected Areas may be repaired, reconstructed or restored within a period of six (6) months from the date of the happening of such casualty, (x) Landlord shall receive insurance proceeds from its insurer or Lender sufficient to cover the cost of such repairs, reconstruction and restoration (except for any deductible amount

provided by Landlord's policy, which deductible amount, if paid by Landlord, shall constitute an Operating Expense), (y) the repair, reconstruction or restoration of the Affected Areas is permitted by all applicable Loan Documents or otherwise consented to by any and all Lenders whose consent is required thereunder and (z) such casualty was not intentionally caused by a Tenant Party, then Landlord shall commence and proceed diligently with the work of repair, reconstruction and restoration of the Affected Areas and this Lease shall continue in full force and effect.

24.2. In the event of any damage to or destruction of the Building or the Project other than as described in Section 24.1, Landlord may elect to repair, reconstruct and restore the Building or the Project, as applicable, in which case this Lease shall continue in full force and effect. If Landlord elects not to repair, reconstruct and restore the Building or the Project, as applicable, then this Lease shall terminate as of the date of such damage or destruction. In the event of any damage or destruction (regardless of whether such damage is governed by Section 24.1 or this Section), if (a) in Landlord's determination as set forth in the Damage Repair Estimate (as defined below), the Affected Areas cannot be repaired, reconstructed or restored within twelve (12) months after the date of the Damage Repair Estimate, (b) subject to Section 24.6, the Affected Areas are not actually repaired, reconstructed and restored within fifteen (15) months after the date of the Damage Repair Estimate, or (c) the damage and destruction occurs within the last twelve (12) months of the then-current Term, then Tenant shall have the right to terminate this Lease, effective as of the date of such damage or destruction, by delivering to Landlord its written notice of termination (a "Termination Notice") (y) with respect to Subsections 24.2(a) and (c), no later than fifteen (15) days after Landlord delivers to Tenant Landlord's Damage Repair Estimate and (z) with respect to Subsection 24.2(b), no later than fifteen (15) days after such twelve (12) month period (as the same may be extended pursuant to Section 24.6) expires. If Tenant provides Landlord with a Termination Notice pursuant to Subsection 24.2(z), Landlord shall have an additional thirty (30) days after receipt of such Termination Notice to complete the repair, reconstruction and restoration. If Landlord does not complete such repair, reconstruction and restoration within such thirty (30) day period, then Tenant may terminate this Lease by giving Landlord written notice within two (2) business days after the expiration of such thirty (30) day period. If Landlord does complete such repair, reconstruction and restoration within such thirty (30) day period, then this Lease shall continue in full force and effect.

24.3. As soon as reasonably practicable, but in any event within sixty (60) days following the date of damage or destruction, Landlord shall notify Tenant of Landlord's good faith estimate of the period of time in which the repairs, reconstruction and restoration will be completed (the "Damage Repair Estimate"), which estimate shall be based upon the opinion of a contractor reasonably selected by Landlord and experienced in comparable repair, reconstruction and restoration of similar buildings. Additionally, Landlord shall give written notice to Tenant within sixty (60) days following the date of damage or destruction of its election not to repair, reconstruct or restore the Building or the Project, as applicable.

24.4. Upon any termination of this Lease under any of the provisions of this Article, the parties shall be released thereby without further obligation to the other from the date possession of the Premises is surrendered to Landlord, except with regard to (a) items occurring prior to the damage or destruction and (b) provisions of this Lease that, by their express terms, survive the expiration or earlier termination hereof.

24.5. In the event of repair, reconstruction and restoration as provided in this Article, all Rent to be paid by Tenant under this Lease shall be abated proportionately from the date of casualty based on the extent to which Tenant's use of the Premises is impaired during the period of such repair, reconstruction or restoration, unless Landlord provides Tenant with other space during the period of repair, reconstruction and restoration that, in Tenant's reasonable opinion, is suitable for the temporary conduct of Tenant's business; provided, however, that the amount of such abatement shall be reduced by the amount of Rent that is received by Tenant as part of the

business interruption or loss of rental income with respect to the Premises from the proceeds of business interruption or loss of rental income insurance actually received by Tenant with respect to the Premises.

24.6. Notwithstanding anything to the contrary contained in this Article, (a) Landlord shall not be required to repair, reconstruct or restore any damage or destruction to the extent that Landlord is prohibited from doing so by any applicable Loan Document or any Lender whose consent is required thereunder withholds its consent, and (b) should Landlord be delayed or prevented from completing the repair, reconstruction or restoration of the damage or destruction to the Premises after the occurrence of such damage or destruction by Force Majeure or delays caused by a Lender or Tenant Party, then the time for Landlord to commence or complete repairs, reconstruction and restoration shall be extended on a day-for-day basis; provided, however, that, (i) such day-for-day extension on account of a Force Majeure shall not exceed six (6) months after the date that Landlord has estimated for the completion of the repairs in the Damage Repair Estimate and (ii) at Landlord's election, Landlord shall be relieved of its obligation to make such repairs, reconstruction and restoration, in which event this Lease shall automatically terminate upon written notice from Landlord.

24.7. If Landlord is obligated to or elects to repair, reconstruct or restore as herein provided, then Landlord shall be obligated to make such repairs, reconstruction or restoration only with regard to (a) those portions of the Premises that were originally provided at Landlord's expense and (b) the Common Area portion of the Affected Areas. The repairs, reconstruction or restoration of improvements not originally provided by Landlord or at Landlord's expense shall be the obligation of Tenant. In the event Tenant has elected to upgrade certain improvements from the Building Standard, Landlord shall, upon the need for replacement due to an insured loss, provide only the Building Standard, unless Tenant again elects to upgrade such improvements and pay any incremental costs related thereto, except to the extent that excess insurance proceeds, if received, are adequate to provide such upgrades, in addition to providing for basic repairs, reconstruction and restoration of the Premises, the Building and the Project.

24.8. Notwithstanding anything to the contrary contained in this Article, Landlord shall not have any obligation whatsoever to repair, reconstruct or restore the Premises if the damage resulting from any casualty covered under this Article occurs during the last twelve (12) months of the Term or any extension thereof, or to the extent that insurance proceeds are not available therefor.

24.9. Landlord's obligation, should it elect or be obligated to repair, reconstruct or restore, shall be limited to the Affected Areas, and shall be conditioned upon Landlord receiving any permits or authorizations required by Applicable Laws. Tenant shall, at its expense, replace or fully repair all of Tenant's personal property and any Alterations installed by Tenant existing at the time of such damage or destruction. If Affected Areas are to be repaired, reconstructed or restored in accordance with the foregoing, Landlord shall make available to Tenant any portion of insurance proceeds it receives that are allocable to the Alterations constructed by Tenant pursuant to this Lease; provided Tenant is not then in default under this Lease, and subject to the requirements of any Lender of Landlord.

24.10. This Article sets forth the terms and conditions upon which this Lease may terminate in the event of any damage or destruction. Accordingly, the parties hereby waive the provisions of any Applicable Laws (and any successor statutes) permitting the parties to terminate this Lease as a result of any damage or destruction.

25. Eminent Domain.

25.1. In the event (a) the whole of all Affected Areas or (b) such part thereof as shall substantially interfere with Tenant's use and occupancy of the Premises for the Permitted Use shall be taken for any public or quasi-public purpose by any lawful power or authority by exercise of the right of appropriation, condemnation or eminent domain, or sold to prevent such taking, Tenant or Landlord may terminate this Lease effective as of the date

possession is required to be surrendered to such authority, except with regard to (y) items occurring prior to the taking and (z) provisions of this Lease that, by their express terms, survive the expiration or earlier termination hereof.

25.2. In the event of a partial taking of (a) the Building or the Project or (b) drives, walkways or parking areas serving the Building or the Project for any public or quasi-public purpose by any lawful power or authority by exercise of right of appropriation, condemnation, or eminent domain, or sold to prevent such taking, then, without regard to whether any portion of the Premises occupied by Tenant was so taken, Landlord may elect to terminate this Lease (except with regard to (a) items occurring prior to the taking and (b) provisions of this Lease that, by their express terms, survive the expiration or earlier termination hereof) as of such taking if such taking is, in Landlord's sole opinion, of a material nature such as to make it uneconomical to continue use of the unappropriated portion for purposes of renting office or laboratory space.

25.3. To the extent permitted under all applicable Loan Documents or otherwise consented to by any and all Lenders whose consent is required thereunder, Tenant shall be entitled to any award that is specifically awarded as compensation for (a) the taking of Tenant's personal property that was installed at Tenant's expense and (b) the costs of Tenant moving to a new location and (c) the unamortized costs of any Alterations (and expressly excluding the Tenant Improvements) paid solely for by Tenant. Except as set forth in the previous sentence, any award for such taking shall be the property of Landlord.

25.4. If, upon any taking of the nature described in this Article, this Lease continues in effect, then Landlord shall promptly proceed to restore the Affected Areas to substantially their same condition prior to such partial taking. To the extent such restoration is infeasible, as determined by Landlord in its sole and absolute discretion, the Rent shall be decreased proportionately to reflect the loss of any portion of the Premises no longer available to Tenant. Notwithstanding anything to the contrary contained in this Article, Landlord shall not be required to restore the Affected Areas to the extent that Landlord is prohibited from doing so by any applicable Loan Document or any Lender whose consent is required thereunder withholds its consent.

25.5. This Article sets forth the terms and conditions upon which this Lease may terminate in the event of any taking. Accordingly, the parties hereby waive the provisions of any Applicable Laws (and any successor statutes) permitting the parties to terminate this Lease as a result of any damage or destruction.

26. Surrender.

26.1. At least thirty (30) days prior to Tenant's surrender of possession of any part of the Premises, Tenant shall provide Landlord with a facility decommissioning and Hazardous Materials closure plan for the Premises ("Exit Survey") prepared by an independent third party state-certified professional with appropriate expertise, which Exit Survey must be reasonably acceptable to Landlord. The Exit Survey shall comply with the American National Standards Institute's Laboratory Decommissioning guidelines (ANSI/AIHA Z9.11-2008) or any successor standards published by ANSI or any successor organization (or, if ANSI and its successors no longer exist, a similar entity publishing similar standards). In addition, at least ten (10) days prior to Tenant's surrender of possession of any part of the Premises, Tenant shall (a) provide Landlord with written evidence of all appropriate governmental releases obtained by Tenant in accordance with Applicable Laws, including laws pertaining to the surrender of the Premises, (b) place Laboratory Equipment Decontamination Forms on all decommissioned equipment to assure safe occupancy by future users and (c) conduct a site inspection with Landlord. In addition, Tenant agrees to remain responsible after the surrender of the Premises for the remediation of any recognized environmental conditions set forth in the Exit Survey and comply with any recommendations set forth in the Exit Survey. Tenant's obligations under this Section shall survive the expiration or earlier termination of the Lease.

26.2. No surrender of possession of any part of the Premises shall release Tenant from any of its obligations hereunder, unless such surrender is accepted in writing by Landlord.

26.3. The voluntary or other surrender of this Lease by Tenant shall not effect a merger with Landlord's fee title or leasehold interest in the Premises, the Building, the Property or the Project, unless Landlord consents in writing, and shall, at Landlord's option, operate as an assignment to Landlord of any or all subleases.

26.4. The voluntary or other surrender of any ground or other underlying lease that now exists or may hereafter be executed affecting the Building or the Project, or a mutual cancellation thereof or of Landlord's interest therein by Landlord and its lessor shall not effect a merger with Landlord's fee title or leasehold interest in the Premises, the Building or the Property and shall, at the option of the successor to Landlord's interest in the Building or the Project, as applicable, operate as an assignment of this Lease.

27. Holding Over.

27.1. If, with Landlord's prior written consent, Tenant holds possession of all or any part of the Premises after the Term, Tenant shall become a tenant from month to month after the expiration or earlier termination of the Term, and in such case Tenant shall continue to pay (a) Base Rent in accordance with Article 7, as adjusted in accordance with Article 8, and (b) any amounts for which Tenant would otherwise be liable under this Lease if the Lease were still in effect, including payments for Tenant's Adjusted Share of Operating. Any such month-to-month tenancy shall be subject to every other term, covenant and agreement contained herein.

27.2. Notwithstanding the foregoing, if Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without Landlord's prior written consent, (a) Tenant shall become a tenant at sufferance subject to the terms and conditions of this Lease, except that the monthly rent shall be equal to one hundred fifty percent (150%) of the Rent in effect during the last thirty (30) days of the Term, and (b) Tenant shall be liable to Landlord for any and all damages suffered by Landlord as a result of such holdover, including any lost rent or consequential, special and indirect damages (in each case, regardless of whether such damages are foreseeable).

27.3. Acceptance by Landlord of Rent after the expiration or earlier termination of the Term shall not result in an extension, renewal or reinstatement of this Lease.

27.4. The foregoing provisions of this Article are in addition to and do not affect Landlord's right of reentry or any other rights of Landlord hereunder or as otherwise provided by Applicable Laws.

27.5. The provisions of this Article shall survive the expiration or earlier termination of this Lease.

28. Indemnification and Exculpation.

28.1. Subject to Section 23.8, Tenant agrees to Indemnify the Landlord Indemnitees from and against any and all Claims of any kind or nature, real or alleged, arising from (a) injury to or death of any person or damage to any property occurring within or about the Premises, the Building, the Property or the Project, arising directly or indirectly out of (i) the presence at or use or occupancy of the Premises or Project by a Tenant Party or (ii) an act or omission on the part of any Tenant Party, (b) a breach or default by Tenant in the performance of any of its obligations hereunder (including any Claim asserted by a Lender against any Landlord Indemnitees under any Loan Document as a direct result of such breach or default by Tenant) or (c) injury to or death of persons or damage to or loss of any property, real or alleged, arising from the serving of alcoholic beverages at the Premises or Project, including liability under any dram shop law, host liquor law or similar Applicable Law, except in each case to the extent arising directly from Landlord's negligence or willful misconduct. Tenant's obligations under this Section

shall not be affected, reduced or limited by any limitation on the amount or type of damages, compensation or benefits payable by or for Tenant under workers' compensation acts, disability benefit acts, employee benefit acts or similar legislation. Tenant's obligations under this Section shall survive the expiration or earlier termination of this Lease. Subject to Sections 23.7, 28.2 and 31.13 and any subrogation provisions contained in the Work Letter, Landlord agrees to Indemnify the Tenant Parties from and against any and all Claims arising from injury to or death of any person or damage to or loss of any physical property occurring within or about the Premises, the Building, the Property or the Project to the extent arising directly from Landlord's gross negligence or willful misconduct.

28.2. Notwithstanding anything in this Lease to the contrary, Landlord shall not be liable to Tenant for and Tenant assumes all risk of (a) damage or losses arising from fire, electrical malfunction, gas explosion or water damage of any type (including broken water lines, malfunctioning fire sprinkler systems, roof leaks or stoppages of lines), unless any such loss is due to Landlord's willful disregard of written notice by Tenant of need for a repair that Landlord is responsible to make for an unreasonable period of time, and (b) damage to personal property or scientific research, including loss of records kept by Tenant within the Premises (in each case, regardless of whether such damages are foreseeable). Tenant further waives any claim for injury to Tenant's business or loss of income relating to any such damage or destruction of personal property as described in this Section. Notwithstanding anything in the foregoing or this Lease to the contrary, except (x) as otherwise provided herein (including Section 27.2), (y) as may be provided by Applicable Laws or (z) in the event of Tenant's breach of Article 21 or Section 26.1, in no event shall Landlord or Tenant be liable to the other for any consequential, special or indirect damages arising from this Lease, including lost profits (provided that this Subsection 28.2(z) shall not limit Tenant's liability for Base Rent or Additional Rent pursuant to this Lease).

28.3. Landlord shall not be liable for any damages arising from any act, omission or neglect of any other tenant in the Building or the Project, or of any other third party.

28.4. Tenant acknowledges that security devices and services, if any, while intended to deter crime, may not in given instances prevent theft or other criminal acts. Landlord shall not be liable for injuries or losses arising from criminal acts of third parties, and Tenant assumes the risk that any security device or service may malfunction or otherwise be circumvented by a criminal. If Tenant desires protection against such criminal acts, then Tenant shall, at Tenant's sole cost and expense, obtain appropriate insurance coverage. Tenant's security programs and equipment for the Premises shall be coordinated with Landlord and subject to Landlord's reasonable approval.

28.5. The provisions of this Article shall survive the expiration or earlier termination of this Lease.

29. Assignment or Subletting.

29.1. Except as hereinafter expressly permitted, none of the following (each, a "Transfer"), either voluntarily or by operation of Applicable Laws, shall be directly or indirectly performed without Landlord's prior written consent, which shall not be unreasonably withheld, conditioned or delayed: (a) Tenant selling, hypothecating, assigning, pledging, encumbering or otherwise transferring this Lease or subletting the Premises or (b) a controlling interest in Tenant being sold, assigned or otherwise transferred (other than as a result of shares in Tenant being sold on a public stock exchange). For purposes of the preceding sentence, "control" means (f) owning (directly or indirectly) more than fifty percent (50%) of the stock or other equity interests of another person or (g) possessing, directly or indirectly, the power to direct or cause the direction of the management and policies of such person. Notwithstanding the foregoing, Tenant shall have the right to Transfer, without Landlord's prior written consent, Tenant's interest in this Lease or the Premises or any part thereof to (i) any person that as of the date of determination and at all times thereafter directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with Tenant ("Tenant's Affiliate") or (ii) any person or any entity with which Tenant is merged or to which all or substantially all of Tenant's assets or all or substantially all of the ownership interests in

Tenant are sold; provided that (in each instance under the foregoing clauses (i) and (ii)) Tenant shall notify Landlord in writing at least thirty (30) days prior to the effectiveness of such Transfer to Tenant's Affiliate (an "Exempt Transfer") and otherwise comply with the requirements of this Lease regarding such Transfer; and provided, further, that the person that will be the tenant under this Lease after the Exempt Transfer either is Tenant's Affiliate or has a net worth (as of both the day immediately prior to and the day immediately after the Exempt Transfer) that is equal to or greater than the net worth (as of both the Execution Date and the date of the Exempt Transfer) of the transferring Tenant. For purposes of the immediately preceding sentence, "control" requires both (m) owning (directly or indirectly) more than fifty percent (50%) of the stock or other equity interests of another person and (n) possessing, directly or indirectly, the power to direct or cause the direction of the management and policies of such person. In no event shall Tenant perform a Transfer to or with an entity that is a tenant at the Project or that is in discussions or negotiations with Landlord or an affiliate of Landlord to lease premises at the Project or a property owned by Landlord or an affiliate in Watertown, Massachusetts, except to the extent there is no comparable space available in any properties owned by Landlord or its affiliates in Watertown, Massachusetts.

29.2. In the event Tenant desires to effect a Transfer, then, at least thirty (30) but not more than ninety (90) days prior to the date when Tenant desires the Transfer to be effective (the "Transfer Date"), Tenant shall provide written notice to Landlord (the "Transfer Notice") containing information (including references) concerning the character of the proposed transferee, assignee or sublessee; the Transfer Date; the most recent unconsolidated financial statements of Tenant and of the proposed transferee, assignee or sublessee satisfying the requirements of Section 40.2 ("Required Financials"); any ownership or commercial relationship between Tenant and the proposed transferee, assignee or sublessee; copies of Hazardous Materials Documents for the proposed transferee, assignee or sublessee; and the consideration and all other material terms and conditions of the proposed Transfer, all in such detail as Landlord shall reasonably require.

29.3. Landlord, in determining whether consent should be given to a proposed Transfer, may give consideration to (a) the financial strength of Tenant and of such transferee, assignee or sublessee (notwithstanding Tenant remaining liable for Tenant's performance), (b) any change in use that such transferee, assignee or sublessee proposes to make in the use of the Premises and (c) Landlord's desire to exercise its rights under Section 29.7 to cancel this Lease. In no event shall Landlord be deemed to be unreasonable for declining to consent to a Transfer if any applicable Loan Document prohibits such assignment or any Lender whose consent is required thereunder withholds its consent, or if the Transfer is to a transferee, assignee or sublessee of poor reputation, lacking financial qualifications or seeking a change in the Permitted Use, or jeopardizing directly or indirectly the status of Landlord or any of Landlord's affiliates as a Real Estate Investment Trust under the Internal Revenue Code of 1986 (as the same may be amended from time to time, the "Revenue Code"). Notwithstanding anything contained in this Lease to the contrary, (w) no Transfer shall be consummated on any basis such that the rental or other amounts to be paid by the occupant, assignee, manager or other transferee thereunder would be based, in whole or in part, on the income or profits derived by the business activities of such occupant, assignee, manager or other transferee; (x) Tenant shall not furnish or render any services to an occupant, assignee, manager or other transferee with respect to whom transfer consideration is required to be paid, or manage or operate the Premises or any capital additions so transferred, with respect to which transfer consideration is being paid; (y) Tenant shall not consummate a Transfer with any person in which Landlord owns an interest, directly or indirectly (by applying constructive ownership rules set forth in Section 856(d)(5) of the Revenue Code); and (z) Tenant shall not consummate a Transfer with any person or in any manner that could cause any portion of the amounts received by Landlord pursuant to this Lease or any sublease, license or other arrangement for the right to use, occupy or possess any portion of the Premises to fail to qualify as "rents from real property" within the meaning of Section 856(d) of the Revenue Code, or any similar or successor provision thereto or which could cause any other income of Landlord to fail to qualify as income described in Section 856(c)(2) of the Revenue Code. Notwithstanding anything in this Lease to the contrary, if (a) any proposed transferee, assignee or sublessee of Tenant has been required by any prior landlord, Lender or Governmental Authority to take material remedial action in connection with Hazardous Materials

contaminating a property if the contamination resulted from such party's action or omission or use of the property in question or (b) any proposed transferee, assignee or sublessee is subject to a material enforcement order issued by any Governmental Authority in connection with the use, disposal or storage of Hazardous Materials, it shall not be unreasonable for Landlord to withhold its consent to any proposed transfer, assignment or subletting (with respect to any such matter involving a proposed transferee, assignee or sublessee).

29.4. The following are conditions precedent to a Transfer or to Landlord considering a request by Tenant to a Transfer:

(a) Tenant shall remain fully liable under this Lease. Tenant agrees that it shall not be (and shall not be deemed to be) a guarantor or surety of this Lease, however, and waives its right to claim that is it is a guarantor or surety or to raise in any legal proceeding any guarantor or surety defenses permitted by this Lease or by Applicable Laws;

(b) If Tenant or the proposed transferee, assignee or sublessee does not or cannot deliver the Required Financials, then Landlord may elect to have either Tenant's ultimate parent company or the proposed transferee's, assignee's or sublessee's ultimate parent company provide a guaranty of the applicable entity's obligations under this Lease, in a form acceptable to Landlord, which guaranty shall be executed and delivered to Landlord by the applicable guarantor prior to the Transfer Date;

(c) In the case of an Exempt Transfer, Tenant shall provide Landlord with evidence reasonably satisfactory to Landlord that the Transfer qualifies as an Exempt Transfer;

(d) Tenant shall provide Landlord with evidence reasonably satisfactory to Landlord that the value of Landlord's interest under this Lease shall not be diminished or reduced by the proposed Transfer. Such evidence shall include evidence respecting the relevant business experience and financial responsibility and status of the proposed transferee, assignee or sublessee;

(e) Tenant shall reimburse Landlord for Landlord's actual costs and expenses, including reasonable attorneys' fees, charges and disbursements incurred in connection with the review, processing and documentation of such request;

(f) If Tenant's transfer of rights or sharing of the Premises provides for the receipt by, on behalf of or on account of Tenant of any consideration of any kind whatsoever (including a premium rental for a sublease or lump sum payment for an assignment, but excluding Tenant's reasonable costs in marketing and subleasing the Premises) in excess of the rental and other charges due to Landlord under this Lease, Tenant shall pay fifty percent (50%) of all of such excess to Landlord, after making deductions for any reasonable marketing expenses, tenant improvement funds expended by Tenant, alterations, cash concessions, brokerage commissions, attorneys' fees and free rent actually paid by Tenant. If such consideration consists of cash paid to Tenant, payment to Landlord shall be made upon receipt by Tenant of such cash payment;

(g) The proposed transferee, assignee or sublessee shall agree that, in the event Landlord gives such proposed transferee, assignee or sublessee notice that Tenant is in default under this Lease, such proposed transferee, assignee or sublessee shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments shall be received by Landlord without any liability being incurred by Landlord, except to credit such payment against those due by Tenant under this Lease, and any such proposed transferee, assignee or sublessee shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason; provided, however, that in no event shall Landlord or its Lenders, successors or assigns be obligated to accept such attornment;

(h) Landlord's consent to any such Transfer shall be effected on Landlord's forms;

(i) Tenant shall not then be in default hereunder in any respect;

(j) Such proposed transferee, assignee or sublessee's use of the Premises shall be the same as the Permitted Use;

(k) Landlord shall not be bound by any provision of any agreement pertaining to the Transfer, except for Landlord's written consent to the same;

(l) Tenant shall pay all transfer and other taxes (including interest and penalties) assessed or payable for any Transfer;

(m) Landlord's consent (or waiver of its rights) for any Transfer shall not waive Landlord's right to consent or refuse consent to any later Transfer;

(n) Tenant shall deliver to Landlord one executed copy of any and all written instruments evidencing or relating to the Transfer; and

(o) Tenant shall deliver to Landlord a list of Hazardous Materials (as defined below), certified by the proposed transferee, assignee or sublessee to be true and correct, that the proposed transferee, assignee or sublessee intends to use or store in the Premises. Additionally, Tenant shall deliver to Landlord, on or before the date any proposed transferee, assignee or sublessee takes occupancy of the Premises, all of the items relating to Hazardous Materials of such proposed transferee, assignee or sublessee as described in Section 21.2.

29.5. Any Transfer that is not in compliance with the provisions of this Article or with respect to which Tenant does not fulfill its obligations pursuant to this Article shall be void.

29.6. Notwithstanding any Transfer, Tenant shall remain fully and primarily liable for the payment of all Rent and other sums due or to become due hereunder, and for the full performance of all other terms, conditions and covenants to be kept and performed by Tenant. The acceptance of Rent or any other sum due hereunder, or the acceptance of performance of any other term, covenant or condition thereof, from any person or entity other than Tenant shall not be deemed a waiver of any of the provisions of this Lease or a consent to any Transfer.

29.7. If Tenant delivers to Landlord a Transfer Notice indicating a desire to transfer this Lease or greater than seventy-five percent (75%) of the Rentable Area of the Premises to a proposed transferee, assignee or Sublessee (other than an Exempt Transfer) with a proposed term of all or substantially all of the then-remaining balance of the Term (which excludes any extensions of the Term that have not been timely exercised by Tenant in accordance with Section 42 prior to the date of the Transfer Notice), then Landlord shall have the option, exercisable by giving notice to Tenant at any time within thirty (30) days after Landlord's receipt of such Transfer Notice, to terminate this Lease as of the later of (i) the date specified in the Transfer Notice as the Transfer Date, and (ii) nine (9) months after the date Landlord notifies Tenant that it has elected to terminate this Lease pursuant to this Section 29.7, except for those provisions that, by their express terms, survive the expiration or earlier termination hereof. If Landlord exercises such option, then Tenant shall have the right to withdraw such Transfer Notice by delivering to Landlord written notice of such election within five (5) days after Landlord's delivery of notice electing to exercise Landlord's option to terminate this Lease. In the event Tenant withdraws the Transfer Notice as provided in this Section, this Lease shall continue in full force and effect. No failure of Landlord to exercise its option to terminate this Lease shall be deemed to be Landlord's consent to a proposed Transfer.

29.8. If Tenant sublets the Premises or any portion thereof, Tenant hereby immediately and irrevocably assigns to Landlord, as security for Tenant's obligations under this Lease, all rent from any such subletting, and appoints Landlord as assignee and attorney-in-fact for Tenant, and Landlord (or a receiver for Tenant appointed

on Landlord's application) may collect such rent and apply it toward Tenant's obligations under this Lease; provided that, until the occurrence of a Default (as defined below) by Tenant, Tenant shall have the right to collect such rent.

29.9. In the event that Tenant enters into a sublease for the entire Premises in accordance with this Article that expires within two (2) days of the Term Expiration Date, the term expiration date of such sublease shall, notwithstanding anything in this Lease, the sublease or any consent to the sublease to the contrary, be deemed to be the date that is two (2) days prior to the Term Expiration Date.

30. Subordination and Attornment.

30.1. This Lease shall be subject and subordinate to the lien of any mortgage, deed of trust, or lease in which Landlord is tenant now or hereafter in force against the Building or the Project and to all advances made or hereafter to be made upon the security thereof without the necessity of the execution and delivery of any further instruments on the part of Tenant to effectuate such subordination. Landlord shall use commercially reasonable efforts to deliver to Tenant a subordination, non-disturbance and attornment agreement ("SNDA") from Landlord's existing Lender on its then-customary form within sixty (60) days following the Term Commencement Date, and from any future Lender within sixty (60) days of the date that Landlord obtains from such Lender additional financing secured by the Building during the Term.

30.2. Notwithstanding the foregoing, Tenant shall execute and deliver upon demand such further instrument or instruments evidencing such subordination of this Lease to the lien of any such mortgage or mortgages or deeds of trust or lease in which Landlord is tenant as may be required by Landlord. If any Lender so elects, however, this Lease shall be deemed prior in lien to any such lease, mortgage, or deed of trust upon or including the Premises regardless of date and Tenant shall execute a statement in writing to such effect at Landlord's request. If Tenant fails to execute any document required from Tenant under this Section within ten (10) days after written request therefor, Tenant hereby constitutes and appoints Landlord or its special attorney-in-fact to execute and deliver any such document or documents in the name of Tenant. Such power is coupled with an interest and is irrevocable. For the avoidance of doubt, "Lenders" shall also include historic tax credit investors and new market tax credit investors.

30.3. Upon written request of Landlord and opportunity for Tenant to review, Tenant agrees to execute any Lease amendments not materially altering the terms of this Lease, if required by a Lender incident to the financing of the real property of which the Premises constitute a part.

30.4. In the event any proceedings are brought for foreclosure, or in the event of the exercise of the power of sale under any mortgage or deed of trust made by Landlord covering the Premises, Tenant shall at the election of the purchaser at such foreclosure or sale attorn to the purchaser upon any such foreclosure or sale and recognize such purchaser as Landlord under this Lease.

31. Defaults and Remedies.

31.1. Late payment by Tenant to Landlord of Rent and other sums due shall cause Landlord to incur costs not contemplated by this Lease, the exact amount of which shall be extremely difficult and impracticable to ascertain. Such costs include processing and accounting charges and late charges that may be imposed on Landlord by the terms of any mortgage or trust deed covering the Premises. Therefore, if any installment of Rent due from Tenant is not received by Landlord within three (3) days after the date such payment is due, Tenant shall pay to Landlord (a) an additional sum of six percent (6%) of the overdue Rent as a late charge plus (b) interest at an annual rate (the "Default Rate") equal to the lesser of (a) twelve percent (12%) and (b) the highest rate permitted by Applicable Laws. The parties agree that this late charge represents a fair and reasonable estimate of the costs that Landlord shall incur by reason of late payment by Tenant and shall be payable as Additional Rent to Landlord due with the

next installment of Rent or within five (5) business days after Landlord's demand, whichever is earlier. Landlord's acceptance of any Additional Rent (including a late charge or any other amount hereunder) shall not be deemed an extension of the date that Rent is due or prevent Landlord from pursuing any other rights or remedies under this Lease, at law or in equity.

31.2. No payment by Tenant or receipt by Landlord of a lesser amount than the Rent payment herein stipulated shall be deemed to be other than on account of the Rent, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as Rent be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or pursue any other remedy provided in this Lease or in equity or at law. If a dispute shall arise as to any amount or sum of money to be paid by Tenant to Landlord hereunder, Tenant shall have the right to make payment "under protest," such payment shall not be regarded as a voluntary payment, and there shall survive the right on the part of Tenant to institute suit for recovery of the payment paid under protest.

31.3. If Tenant fails to pay any sum of money required to be paid by it hereunder or perform any other act on its part to be performed hereunder, in each case within the applicable cure period (if any) described in Section 31.4, then Landlord may (but shall not be obligated to), without waiving or releasing Tenant from any obligations of Tenant, make such payment or perform such act; provided that such failure by Tenant unreasonably interfered with the use of the Building or the Project by any other tenant or with the efficient operation of the Building or the Project, or resulted or could have resulted in a violation of Applicable Laws or the cancellation of an insurance policy maintained by Landlord. Notwithstanding the foregoing, in the event of an emergency, Landlord shall have the right to enter the Premises and act in accordance with its rights as provided elsewhere in this Lease. In addition to the late charge described in Section 31.1, Tenant shall pay to Landlord as Additional Rent all sums so paid or incurred by Landlord, together with interest at the Default Rate, computed from the date such sums were paid or incurred.

31.4. The occurrence of any one or more of the following events shall constitute a "Default" hereunder by Tenant:

(a) Tenant abandons the Premises;

(b) Tenant fails to make any payment of Rent, as and when due, or to satisfy its obligations under Article 19, where such failure shall continue for a period of three (3) days after written notice thereof from Landlord to Tenant;

(c) Tenant fails to observe or perform any obligation or covenant contained herein (other than described in Sections 31.4(a) and 31.4(b)) to be performed by Tenant, where such failure continues for a period of ten (10) days after written notice thereof from Landlord to Tenant; provided that, if the nature of Tenant's default is such that it reasonably requires more than ten (10) days to cure, Tenant shall not be deemed to be in Default if Tenant commences such cure within such ten (10) day period and thereafter diligently prosecutes the same to completion; and provided, further, that such cure is completed no later than ninety (90) days after Tenant's receipt of written notice from Landlord;

(d) Tenant makes an assignment for the benefit of creditors;

(e) A receiver, trustee or custodian is appointed to or does take title, possession or control of all or substantially all of Tenant's assets;

(f) Tenant files a voluntary petition under the United States Bankruptcy Code or any successor statute (as the same may be amended from time to time, the "Bankruptcy Code") or an order for relief is entered against Tenant pursuant to a voluntary or involuntary proceeding commenced under any chapter of the Bankruptcy Code;

(g) Any involuntary petition is filed against Tenant under any chapter of the Bankruptcy Code and is not dismissed within one hundred twenty (120) days;

(h) Tenant fails to deliver an estoppel certificate in accordance with Article 20; or

(i) Tenant's interest in this Lease is attached, executed upon or otherwise judicially seized and such action is not released within one hundred twenty (120) days of the action.

Notices given under this Section shall specify the alleged default and shall demand that Tenant perform the provisions of this Lease or pay the Rent that is in arrears, as the case may be, within the applicable period of time, or quit the Premises. No such notice shall be deemed a forfeiture or a termination of this Lease unless Landlord elects otherwise in such notice.

31.5. In the event of a Chronic Delinquency (as defined below), Landlord may, in addition to all other remedies under this Lease, at law or in equity, require that Tenant thereafter pay Rent quarterly in advance. This provision shall not limit in any way nor be construed as a waiver of Landlord's rights and remedies contained in this Lease, at law or in equity in the event of a default. "Chronic Delinquency" means that Tenant commits a Default pursuant to Section 31.4(b) three (3) times in any twelve (12) month period.

31.6. In the event of a Default by Tenant, and at any time thereafter, with or without notice or demand and without limiting Landlord in the exercise of any right or remedy that Landlord may have, Landlord has the right to do any or all of the following:

(a) Halt any Tenant Improvements and Alterations and order Tenant's contractors, subcontractors, consultants, designers and material suppliers to stop work;

(b) Terminate Tenant's right to possession of the Premises by written notice to Tenant or by any lawful means, in which case Tenant shall immediately surrender possession of the Premises to Landlord. In such event, Landlord shall have the immediate right to re-enter and remove all persons and property, and such property may be removed and stored in a public warehouse or elsewhere at the cost and for the account of Tenant, all without service of notice or resort to legal process and without being deemed guilty of trespass or becoming liable for any loss or damage that may be occasioned thereby; and

(c) Terminate this Lease, in which event Tenant shall immediately surrender possession of the Premises to Landlord. In such event, Landlord shall have the immediate right to re-enter and remove all persons and property, and such property may be removed and stored in a public warehouse or elsewhere at the cost and for the account of Tenant, all without service of notice or resort to legal process and without being deemed guilty of trespass or becoming liable for any loss or damage that may be occasioned thereby. In the event that Landlord shall elect to so terminate this Lease, then Landlord shall be entitled to recover from Tenant all damages incurred by Landlord by reason of Tenant's default, including the sum of:

(i) The worth at the time of award of any unpaid Rent that had accrued at the time of such termination; plus

(ii) The costs of restoring the Premises to the condition required under the terms of this Lease; plus

(iii) An amount (the "Election Amount") equal to either (A) the positive difference (if any, and measured at the time of such termination) between (1) the then-present value of the total Rent and other benefits that would have accrued to Landlord under this Lease for the remainder of the Term if Tenant had fully complied with the Lease minus (2) the then-present cash rental value of the Premises as determined by Landlord for what would be the then-unexpired Term if the Lease remained in effect, computed using the discount rate of the Federal Reserve Bank of San Francisco at the time of the award plus one (1) percentage point (the "Discount Rate") or (B) twelve (12) months (or such lesser number of months as may then be remaining in the Term) of Base Rent and Additional Rent at the rate last payable by Tenant pursuant to this Lease, in either case as Landlord specifies in such election. Landlord and Tenant agree that the Election Amount represents a reasonable forecast of the minimum damages expected to occur in the event of a breach, taking into account the uncertainty, time and cost of determining elements relevant to actual damages, such as fair market rent, time and costs that may be required to re-lease the Premises, and other factors; and that the Election Amount is not a penalty.

As used in Section 31.6(c)(i), "worth at the time of award" shall be computed by allowing interest at the Default Rate.

31.7. In addition to any other remedies available to Landlord at law or in equity and under this Lease, Landlord may continue this Lease in effect after Tenant's Default or abandonment and recover Rent as it becomes due. In addition, Landlord shall not be liable in any way whatsoever for its failure or refusal to relet the Premises. For purposes of this Section, the following acts by Landlord will not constitute the termination of Tenant's right to possession of the Premises:

(a) Acts of maintenance or preservation or efforts to relet the Premises, including alterations, remodeling, redecorating, repairs, replacements or painting as Landlord shall consider advisable for the purpose of reletting the Premises or any part thereof; or

(b) The appointment of a receiver upon the initiative of Landlord to protect Landlord's interest under this Lease or in the Premises.

Notwithstanding the foregoing, in the event of a Default by Tenant, Landlord may elect at any time to terminate this Lease and to recover damages to which Landlord is entitled.

31.8. If Landlord does not elect to terminate this Lease as provided in Section 31.6, then Landlord may, from time to time, recover all Rent as it becomes due under this Lease. At any time thereafter, Landlord may elect to terminate this Lease and to recover damages to which Landlord is entitled.

31.9. In the event Landlord elects to terminate this Lease and relet the Premises, Landlord may execute any new lease in its own name. Tenant hereunder shall have no right or authority whatsoever to collect any Rent from such tenant. The proceeds of any such reletting shall be applied as follows:

(a) First, to the payment of any indebtedness other than Rent due hereunder from Tenant to Landlord, including storage charges or brokerage commissions owing from Tenant to Landlord as the result of such reletting;

(b) Second, to the payment of the costs and expenses of reletting the Premises, including (i) alterations and repairs that Landlord deems reasonably necessary and advisable and (ii) reasonable attorneys' fees, charges and disbursements incurred by Landlord in connection with the retaking of the Premises and such reletting;

(c) Third, to the payment of Rent and other charges due and unpaid hereunder; and

(d) Fourth, to the payment of future Rent and other damages payable by Tenant under this Lease.

31.10. All of Landlord's rights, options and remedies hereunder shall be construed and held to be nonexclusive and cumulative. Landlord shall have the right to pursue any one or all of such remedies, or any other remedy or relief that may be provided by Applicable Laws, whether or not stated in this Lease. No waiver of any default of Tenant hereunder shall be implied from any acceptance by Landlord of any Rent or other payments due hereunder or any omission by Landlord to take any action on account of such default if such default persists or is repeated, and no express waiver shall affect defaults other than as specified in such waiver. Notwithstanding any provision of this Lease to the contrary, in no event shall Landlord be required to mitigate its damages with respect to any default by Tenant, except as required by Applicable Laws. Any such obligation imposed by Applicable Laws upon Landlord to relet the Premises after any termination of this Lease shall be subject to the reasonable requirements of Landlord to (a) lease to high quality tenants on such terms as Landlord may from time to time deem appropriate in its discretion and (b) develop the Project in a harmonious manner with a mix of uses, tenants, floor areas, terms of tenancies, etc., as determined by Landlord. Landlord shall not be obligated to relet the Premises to (y) any Tenant's Affiliate or (z) any party (i) unacceptable to a Lender, (ii) that requires Landlord to make improvements to or re-demise the Premises, (iii) that desires to change the Permitted Use, (iv) that desires to lease the Premises for more or less than the remaining Term or (v) to whom Landlord or an affiliate of Landlord may desire to lease other available space in the Project or at another property owned by Landlord or an affiliate of Landlord.

31.11. Landlord's termination of (a) this Lease or (b) Tenant's right to possession of the Premises shall not relieve Tenant of any liability to Landlord that has previously accrued or that shall arise based upon events that occurred prior to the later to occur of (y) the date of Lease termination and (z) the date Tenant surrenders possession of the Premises.

31.12. To the extent permitted by Applicable Laws, Tenant waives any and all rights of redemption granted by or under any present or future Applicable Laws if Tenant is evicted or dispossessed for any cause, or if Landlord obtains possession of the Premises due to Tenant's default hereunder or otherwise.

31.13. Landlord shall not be in default or liable for damages under this Lease unless Landlord fails to perform obligations required of Landlord within a reasonable time, but in no event shall such failure continue for more than thirty (30) days after written notice from Tenant specifying the nature of Landlord's failure; provided, however, that if the nature of Landlord's obligation is such that more than thirty (30) days are required for its performance, then Landlord shall not be in default if Landlord commences performance within such thirty (30) day period and thereafter diligently prosecutes the same to completion. In no event shall Tenant have the right to terminate or cancel this Lease or to withhold or abate rent or to set off any Claims against Rent as a result of any default or breach by Landlord of any of its covenants, obligations, representations, warranties or promises hereunder, except as may otherwise be expressly set forth in this Lease.

31.14. In the event of any default by Landlord, Tenant shall give notice by registered or certified mail to any (a) beneficiary of a deed of trust or (b) mortgagee under a mortgage covering the Premises, the Building or the Project and to any landlord of any lease of land upon or within which the Premises, the Building or the Project is located, and shall offer such beneficiary, mortgagee or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Building or the Project by power of sale or a judicial action if such should prove necessary to effect a cure; provided that Landlord shall furnish to Tenant in writing, upon written request by Tenant, the names and addresses of all such persons who are to receive such notices.

32. Bankruptcy. In the event a debtor, trustee or debtor in possession under the Bankruptcy Code, or another person with similar rights, duties and powers under any other Applicable Laws, proposes to cure any default under this Lease or to assume or assign this Lease and is obliged to provide adequate assurance to Landlord that (a) a default shall be cured, (b) Landlord shall be compensated for its damages arising from any breach of this Lease

and (c) future performance of Tenant's obligations under this Lease shall occur, then such adequate assurances shall include any or all of the following, as designated by Landlord in its sole and absolute discretion:

32.1. Those acts specified in the Bankruptcy Code or other Applicable Laws as included within the meaning of "adequate assurance," even if this Lease does not concern a shopping center or other facility described in such Applicable Laws;

32.2. A prompt cash payment to compensate Landlord for any monetary defaults or actual damages arising directly from a breach of this Lease;

32.3. A cash deposit in an amount at least equal to the then-current amount of the Security Deposit; or

32.4. The assumption or assignment of all of Tenant's interest and obligations under this Lease.

33. Brokers.

33.1 Tenant represents and warrants that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Lease other than CBRE ("Broker"), and that it knows of no other real estate broker or agent that is or might be entitled to a commission in connection with this Lease. Landlord shall compensate Broker in relation to this Lease pursuant to a separate agreement between Landlord and Broker.

33.2 Tenant represents and warrants that no broker or agent has made any representation or warranty relied upon by Tenant in Tenant's decision to enter into this Lease, other than as contained in this Lease.

33.3 Tenant acknowledges and agrees that the employment of brokers by Landlord is for the purpose of solicitation of offers of leases from prospective tenants and that no authority is granted to any broker to furnish any representation (written or oral) or warranty from Landlord unless expressly contained within this Lease. Landlord is executing this Lease in reliance upon Tenant's representations, warranties and agreements contained within Sections 33.1 and 33.2.

33.4 Tenant agrees to Indemnify the Landlord Indemnitees from any and all cost or liability for compensation claimed by any broker or agent, other than Broker, employed or engaged by Tenant or claiming to have been employed or engaged by Tenant.

33.5 Landlord represents and warrants that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Lease other than Broker, and that it knows of no other real estate broker or agent that is or might be entitled to a commission in connection with this Lease. Landlord agrees to indemnify, save, defend (at Tenant's option and with counsel reasonably acceptable to Tenant) and hold Tenant harmless from any and all cost or liability resulting from Landlord's breach of said representation and warranty.

34. Definition of Landlord. With regard to obligations imposed upon Landlord pursuant to this Lease, the term "Landlord," as used in this Lease, shall refer only to Landlord or Landlord's then-current successor-in-interest. In the event of any transfer, assignment or conveyance of Landlord's interest in this Lease or in Landlord's fee title to or leasehold interest in the Property, as applicable, Landlord herein named (and in case of any subsequent transfers or conveyances, the subsequent Landlord) shall be automatically freed and relieved, from and after the date of such transfer, assignment or conveyance, from all liability for the performance of any covenants or obligations contained in this Lease thereafter to be performed by Landlord and, without further agreement, the transferee, assignee or conveyee of Landlord's in this Lease or in Landlord's fee title to or leasehold interest in the Property, as applicable, shall be deemed to have assumed and agreed to observe and perform any and all covenants

and obligations of Landlord hereunder during the tenure of its interest in the Lease or the Property. Landlord or any subsequent Landlord may transfer its interest in the Premises or this Lease without Tenant's consent.

35. Limitation of Landlord's Liability.

35.1 If Landlord is in default under this Lease and, as a consequence, Tenant recovers a monetary judgment against Landlord, the judgment shall be satisfied only out of (a) the proceeds of sale received on execution of the judgment and levy against the right, title and interest of Landlord in the Building and the Project, (b) rent or other income from such real property receivable by Landlord or (c) the consideration received by Landlord from the sale, financing, refinancing or other disposition of all or any part of Landlord's right, title or interest in the Building or the Project.

35.2 Neither Landlord nor any of its affiliates, nor any of their respective partners, shareholders, directors, officers, employees, members or agents shall be personally liable for Landlord's obligations or any deficiency under this Lease, and service of process shall not be made against any shareholder, director, officer, employee or agent of Landlord or any of Landlord's affiliates. No partner, shareholder, director, officer, employee, member or agent of Landlord or any of its affiliates shall be sued or named as a party in any suit or action, and service of process shall not be made against any partner or member of Landlord except as may be necessary to secure jurisdiction of the partnership, joint venture or limited liability company, as applicable. No partner, shareholder, director, officer, employee, member or agent of Landlord or any of its affiliates shall be required to answer or otherwise plead to any service of process, and no judgment shall be taken or writ of execution levied against any partner, shareholder, director, officer, employee, member or agent of Landlord or any of its affiliates.

35.3 Each of the covenants and agreements of this Article shall be applicable to any covenant or agreement either expressly contained in this Lease or imposed by Applicable Laws and shall survive the expiration or earlier termination of this Lease.

36. Joint and Several Obligations. If more than one person or entity executes this Lease as Tenant, then:

36.1. Each of them is jointly and severally liable for the keeping, observing and performing of all of the terms, covenants, conditions, provisions and agreements of this Lease to be kept, observed or performed by Tenant, and such terms, covenants, conditions, provisions and agreements shall be binding with the same force and effect upon each and all of the persons executing this Agreement as Tenant; and

36.2. The term "Tenant," as used in this Lease, shall mean and include each of them, jointly and severally. The act of, notice from, notice to, refund to, or signature of any one or more of them with respect to the tenancy under this Lease, including any renewal, extension, expiration, termination or modification of this Lease, shall be binding upon each and all of the persons executing this Lease as Tenant with the same force and effect as if each and all of them had so acted, so given or received such notice or refund, or so signed.

37. Representations. Tenant guarantees, warrants and represents that (a) Tenant is duly incorporated or otherwise established or formed and validly existing under the laws of its state of incorporation, establishment or formation, (b) Tenant has and is duly qualified to do business in the state in which the Property is located, (c) Tenant has full corporate, partnership, trust, association or other appropriate power and authority to enter into this Lease and to perform all Tenant's obligations hereunder, (d) each person (and all of the persons if more than one signs) signing this Lease on behalf of Tenant is duly and validly authorized to do so and (e) neither (i) the execution, delivery or performance of this Lease nor (ii) the consummation of the transactions contemplated hereby will violate or conflict with any provision of documents or instruments under which Tenant is constituted or to which Tenant is a party. In addition, Tenant guarantees, warrants and represents that none of

(x) it, (y) its affiliates or partners nor (z) to the best of its knowledge, having made no independent inquiry, its employees, officers, directors, representatives or agents is a person or entity with whom U.S. persons or entities are restricted from doing business under regulations of the Office of Foreign Asset Control ("OFAC") of the Department of the Treasury (including those named on OFAC's Specially Designated and Blocked Persons List) or under any statute, executive order (including the September 24, 2001, Executive Order Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism) or other similar governmental action.

38. Confidentiality. Tenant shall keep the terms and conditions of this Lease and any information provided to Tenant or its employees, agents or contractors pursuant to Article 9 confidential and shall not (a) disclose to any third party any terms or conditions of this Lease or any other Lease-related document (including subleases, assignments, work letters, construction contracts, letters of credit, subordination agreements, non-disturbance agreements, brokerage agreements or estoppels) or the contents of any documents, reports, surveys or evaluations related to the Project or any portion thereof or (b) provide to any third party an original or copy of this Lease (or any Lease-related document or other document referenced in Subsection 38(a)); provided, however, the foregoing shall not apply to any information required to be disclosed by Applicable Laws at any time while Tenant is a corporation whose shares are traded on any nationally recognized stock exchange. Landlord shall not release to any third party any non-public financial information or non-public information about Tenant's ownership structure that Tenant gives Landlord. Notwithstanding the foregoing, confidential information under this Section may be released by Landlord or Tenant under the following circumstances: (x) if required by Applicable Laws or in any judicial proceeding; provided that the releasing party has given the other party reasonable notice of such requirement, if feasible, (y) to a party's attorneys, accountants, brokers, lenders, potential lenders, investors, potential investors and other bona fide consultants or advisers (with respect to this Lease only); provided such third parties agree to be bound by this Section or (z) to bona fide prospective assignees or subtenants of this Lease; provided they agree in writing to be bound by this Section.

39. Notices. Except as otherwise stated in this Lease, any notice, consent, demand, invoice, statement or other communication required or permitted to be given hereunder shall be in writing and shall be given by (a) personal delivery, (b) overnight delivery with a reputable international overnight delivery service, such as FedEx, or (c) facsimile or email transmission, so long as such transmission is followed within one (1) business day by delivery utilizing one of the methods described in Subsection 39(a) or (b). Any such notice, consent, demand, invoice, statement or other communication shall be deemed delivered (x) upon receipt, if given in accordance with Subsection 39(a); (y) one (1) business day after deposit with a reputable international overnight delivery service, if given in accordance with Subsection 39(b); or (z) upon transmission, if given in accordance with Subsection 39(c). Except as otherwise stated in this Lease, any notice, consent, demand, invoice, statement or other communication required or permitted to be given pursuant to this Lease shall be addressed to Tenant at the Premises, or to Landlord or Tenant at the addresses shown in Sections 2.9 and 2.10 or 2.11, respectively. Either party may, by notice to the other given pursuant to this Section, specify additional or different addresses for notice purposes.

40. Miscellaneous.

40.1. Landlord reserves the right to change the name of the Building or the Project in its sole discretion.

40.2. To induce Landlord to enter into this Lease, Tenant agrees that it shall furnish to Landlord, from time to time, within ten (10) business days after receipt of Landlord's written request, the most recent year-end unconsolidated financial statements reflecting Tenant's current financial condition audited by a nationally recognized accounting firm. Tenant shall, within ninety (90) days after the end of Tenant's financial year, furnish Landlord with a certified copy of Tenant's year-end unconsolidated financial statements for the previous year

audited by a nationally recognized accounting firm. Tenant represents and warrants that all financial statements, records and information furnished by Tenant to Landlord in connection with this Lease are true, correct and complete in all respects. If audited financials are not otherwise prepared, unaudited financials complying with generally accepted accounting principles and certified by the chief financial officer of Tenant as true, correct and complete in all respects shall suffice for purposes of this Section. If Tenant fails to deliver to Landlord any financial statement within the time period required under this Section, then Tenant shall be required to pay to Landlord an administrative fee equal to One Thousand Dollars ($1,000) within five (5) business days after receiving written notice from Landlord advising Tenant of such failure (provided, however, that Landlord's acceptance of such fee shall not prevent Landlord from pursuing any other rights or remedies under this Lease, at law or in equity). The provisions of this Section shall not apply at any time while Tenant is a corporation whose shares are traded on any nationally recognized stock exchange.

40.3. Submission of this instrument for examination or signature by Tenant does not constitute a reservation of or option for a lease, and shall not be effective as a lease or otherwise until execution by and delivery to both Landlord and Tenant.

40.4. The terms of this Lease are intended by the parties as a final, complete and exclusive expression of their agreement with respect to the terms that are included herein, and may not be contradicted or supplemented by evidence of any other prior or contemporaneous agreement.

40.5. Upon the request of either Landlord or Tenant, the parties shall execute a document in recordable form containing only such information as is necessary to constitute a Notice of Lease under Massachusetts law. All costs of preparing and recording such notice shall be borne by the requesting party. Within ten (10) days after receipt of written request from Landlord after the expiration or earlier termination of this Lease, Tenant shall execute a termination of any Notice of Lease recorded with respect hereto. Neither party shall record this Lease.

40.6. Where applicable in this Lease, the singular includes the plural and the masculine or neuter includes the masculine, feminine and neuter. The words "include," "includes," "included" and "including" mean "'include,' etc., without limitation." The word "shall" is mandatory and the word "may" is permissive. The word "business day" means a calendar day other than any national or local holiday on which federal government agencies in the County of Middlesex are closed for business, or any weekend. The section headings of this Lease are not a part of this Lease and shall have no effect upon the construction or interpretation of any part of this Lease. Landlord and Tenant have each participated in the drafting and negotiation of this Lease, and the language in all parts of this Lease shall be in all cases construed as a whole according to its fair meaning and not strictly for or against either Landlord or Tenant.

40.7. Except as otherwise expressly set forth in this Lease, each party shall pay its own costs and expenses incurred in connection with this Lease and such party's performance under this Lease; provided that, if either party commences an action, proceeding, demand, claim, action, cause of action or suit against the other party arising from or in connection with this Lease, then the substantially prevailing party shall be reimbursed by the other party for all reasonable costs and expenses, including reasonable attorneys' fees and expenses, incurred by the substantially prevailing party in such action, proceeding, demand, claim, action, cause of action or suit, and in any appeal in connection therewith (regardless of whether the applicable action, proceeding, demand, claim, action, cause of action, suit or appeal is voluntarily withdrawn or dismissed). In addition, Landlord shall, upon demand, be entitled to all reasonable attorneys' fees and all other reasonable costs incurred in the preparation and service of any notice or demand hereunder, regardless of whether a legal action is subsequently commenced, or incurred in connection with any contested matter or other proceeding in bankruptcy court concerning this Lease.

40.8. Time is of the essence with respect to the performance of every provision of this Lease.

40.9. Each provision of this Lease performable by Tenant shall be deemed both a covenant and a condition.

40.10. Notwithstanding anything to the contrary contained in this Lease, Tenant's obligations under this Lease are independent and shall not be conditioned upon performance by Landlord.

40.11. Whenever consent or approval of either party is required, that party shall not unreasonably withhold, condition or delay such consent or approval, except as may be expressly set forth to the contrary.

40.12. Any provision of this Lease that shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof, and all other provisions of this Lease shall remain in full force and effect and shall be interpreted as if the invalid, void or illegal provision did not exist.

40.13. Each of the covenants, conditions and agreements herein contained shall inure to the benefit of and shall apply to and be binding upon the parties hereto and their respective heirs; legatees; devisees; executors; administrators; and permitted successors and assigns. This Lease is for the sole benefit of the parties and their respective heirs, legatees, devisees, executors, administrators and permitted successors and assigns, and nothing in this Lease shall give or be construed to give any other person or entity any legal or equitable rights. Nothing in this Section shall in any way alter the provisions of this Lease restricting assignment or subletting.

40.14. This Lease shall be governed by, construed and enforced in accordance with the laws of the state in which the Premises are located, without regard to such state's conflict of law principles.

40.15. Tenant guarantees, warrants and represents that the individual or individuals signing this Lease have the power, authority and legal capacity to sign this Lease on behalf of and to bind all entities, corporations, partnerships, limited liability companies, joint venturers or other organizations and entities on whose behalf such individual or individuals have signed.

40.16. This Lease may be executed in one or more counterparts, each of which, when taken together, shall constitute one and the same document.

40.17. No provision of this Lease may be modified, amended or supplemented except by an agreement in writing signed by Landlord and Tenant.

40.18. No waiver of any term, covenant or condition of this Lease shall be binding upon Landlord unless executed in writing by Landlord. The waiver by Landlord of any breach or default of any term, covenant or condition contained in this Lease shall not be deemed to be a waiver of any preceding or subsequent breach or default of such term, covenant or condition or any other term, covenant or condition of this Lease.

40.19. To the extent permitted by Applicable Laws, the parties waive trial by jury in any action, proceeding or counterclaim brought by the other party hereto related to matters arising from or in any way connected with this Lease; the relationship between Landlord and Tenant; Tenant's use or occupancy of the Premises; or any claim of injury or damage related to this Lease or the Premises.

41. Rooftop Installation Area.

41.1. Tenant may use those portions of the Building identified as a "Rooftop Installation Area" on Exhibit A attached hereto (the "Rooftop Installation Area") solely to operate, maintain, repair and replace rooftop antennae, mechanical equipment, communications antennas and other equipment installed by Tenant in the Rooftop Installation Area in accordance with this Article ("Tenant's Rooftop Equipment"). Tenant's Rooftop Equipment shall be only for Tenant's use of the Premises for the Permitted Use.

41.2. Tenant shall install Tenant's Rooftop Equipment at its sole cost and expense, at such times and in such manner as Landlord may reasonably designate, and in accordance with this Article and the applicable provisions of this Lease regarding Alterations. Tenant's Rooftop Equipment and the installation thereof shall be subject to Landlord's prior written approval, which approval shall not be unreasonably withheld. Among other reasons, Landlord may withhold approval if the installation or operation of Tenant's Rooftop Equipment could reasonably be expected to damage the structural integrity of the Building or to transmit vibrations or noise or cause other adverse effects beyond the Premises to an extent not customary in first class laboratory buildings, unless Tenant implements measures that are acceptable to Landlord in its reasonable discretion to avoid any such damage or transmission.

41.3. Tenant shall comply with any roof or roof-related warranties. Tenant shall obtain a letter from Landlord's roofing contractor within thirty (30) days after completion of any Tenant work on the rooftop stating that such work did not affect any such warranties. Tenant, at its sole cost and expense, shall inspect the Rooftop Installation Area at least annually, and correct any loose bolts, fittings or other appurtenances and repair any damage to the roof arising from the installation or operation of Tenant's Rooftop Equipment. Tenant shall not permit the installation, maintenance or operation of Tenant's Rooftop Equipment to violate any Applicable Laws or constitute a nuisance. Tenant shall pay Landlord within thirty (30) days after demand (a) all applicable taxes, charges, fees or impositions imposed on Landlord by Governmental Authorities as the result of Tenant's use of the Rooftop Installation Areas in excess of those for which Landlord would otherwise be responsible for the use or installation of Tenant's Rooftop Equipment and (b) the amount of any increase in Landlord's insurance premiums as a result of the installation of Tenant's Rooftop Equipment. Upon Tenant's written request to Landlord, Landlord shall use commercially reasonable efforts to cause other tenants to remedy any interference in the operation of Tenant's Rooftop Equipment arising from any such tenants' equipment installed after the applicable piece of Tenant's Rooftop Equipment; provided, however, that Landlord shall not be required to request that such tenants waive their rights under their respective leases to the extent such rights exist as of the Effective Date.

41.4. If Tenant's Equipment (a) causes physical damage to the structural integrity of the Building, (b) interferes with any telecommunications, mechanical or other systems located at or near or servicing the Building or the Project that were installed prior to the installation of Tenant's Rooftop Equipment, (c) interferes with any other service provided to other tenants in the Building or the Project by rooftop or penthouse installations that were installed prior to the installation of Tenant's Rooftop Equipment or (d) interferes with any other tenants' business, in each case in excess of that permissible under Federal Communications Commission regulations, then Tenant shall cooperate with Landlord to determine the source of the damage or interference and promptly repair such damage and eliminate such interference, in each case at Tenant's sole cost and expense, within ten (10) days after receipt of notice of such damage or interference (which notice may be oral; provided that Landlord also delivers to Tenant written notice of such damage or interference within twenty-four (24) hours after providing oral notice).

41.5. Landlord reserves the right to cause Tenant to relocate Tenant's Rooftop Equipment to comparably functional space on the roof or in the penthouse of the Building by giving Tenant prior written notice thereof. Landlord agrees to pay the reasonable costs thereof. Tenant shall arrange for the relocation of Tenant's Rooftop Equipment within sixty (60) days after receipt of Landlord's notification of such relocation. In the event Tenant fails to arrange for relocation within such sixty (60)-day period, Landlord shall have the right to arrange for the relocation of Tenant's Rooftop Equipment in a manner that does not unnecessarily interrupt or interfere with Tenant's use of the Premises for the Permitted Use.

42. Option to Extend Term. Tenant shall have two (2) options (each, an "Option") to extend the Term by five (5) years each as to the entire Premises (and no less than the entire Premises) upon the following terms and conditions. Any extension of the Term pursuant to an Option shall be on all the same terms and conditions as this Lease, except as follows:

42.1 . Base Rent at the commencement of each Option term shall equal the greater of (a) one hundred three percent (103%) of the then-current Base Rent and (b) the then-current fair market value for comparable office and laboratory space in the Watertown submarket of comparable age, quality, level of finish and proximity to amenities and public transit, and containing the systems and improvements present in the Premises as of the date that Tenant gives Landlord written notice of Tenant's election to exercise such Option ("FMV") (provided, however, that if at the time Tenant elects to exercise an Option, there does not exist any comparable data for the Watertown submarket, as determined by Landlord, then FMV shall be calculated based on comparable data for the West Cambridge submarket but taking into account the historical differences in market conditions between West Cambridge and Watertown including in the office and laboratory building product types (e.g., Class A versus Class B)), and in each case shall be further increased on each annual anniversary of the Option term commencement date, which increase shall be determined in accordance with the FMV. Tenant may, no more than fifteen (15) months prior to the date the Term is then scheduled to expire, request Landlord's estimate of the FMV for the next Option term. Landlord shall, within fifteen (15) days after receipt of such request, give Tenant a written proposal of such FMV. If Tenant gives written notice to exercise an Option, such notice shall specify whether Tenant accepts Landlord's proposed estimate of FMV. If Tenant does not accept the FMV, then the parties shall endeavor to agree upon the FMV, taking into account all relevant factors, including (a) the size of the Premises, (b) the length of the Option term, (c) rent in comparable buildings in the relevant market, including concessions offered to new tenants, such as free rent, tenant improvement allowances and moving allowances, (d) Tenant's creditworthiness and (e) the quality and location of the Building and the Project. In the event that the parties are unable to agree upon the FMV within thirty (30) days after Tenant notifies Landlord that Tenant is exercising an Option, then either party may request that the same be determined as follows: a senior officer of a nationally recognized leasing brokerage firm with local knowledge of the Watertown and West Cambridge laboratory/research and development leasing market (the "Baseball Arbitrator") shall be selected and paid for jointly by Landlord and Tenant. If Landlord and Tenant are unable to agree upon the Baseball Arbitrator, then the same shall be designated by the local chapter of the Judicial Arbitration and Mediation Services or any successor organization thereto (the "JAMS"). The Baseball Arbitrator selected by the parties or designated by JAMS shall (y) have at least ten (10) years' experience in the leasing of laboratory/research and development space in the Watertown or West Cambridge market and (z) not have been employed or retained by either Landlord or Tenant or any affiliate of either for a period of at least ten (10) years prior to appointment pursuant hereto. Each of Landlord and Tenant shall submit to the Baseball Arbitrator and to the other party its determination of the FMV. The Baseball Arbitrator shall grant to Landlord and Tenant a hearing and the right to submit evidence. The Baseball Arbitrator shall determine which of the two (2) FMV determinations more closely represents the actual FMV. The arbitrator may not select any other FMV for the Premises other than one submitted by Landlord or Tenant. The FMV selected by the Baseball Arbitrator shall be binding upon Landlord and Tenant and shall serve as the basis for determination of Base Rent payable for the applicable Option term. If, as of the commencement date of an Option term, the amount of Base Rent payable during the Option term shall not have been determined, then, pending such determination, Tenant shall pay Base Rent equal to the Base Rent payable with respect to the last year of the then-current Term. After the final determination of Base Rent payable for the Option term, the parties shall promptly execute a written amendment to this Lease specifying the amount of Base Rent to be paid during the applicable Option term. Any failure of the parties to execute such amendment shall not affect the validity of the FMV determined pursuant to this Section.

42.2. No Option is assignable separate and apart from this Lease.

42.3. An Option is conditional upon Tenant giving Landlord written notice of its election to exercise such Option at least twelve (12) months prior to the end of the expiration of the then-current Term. Time shall be of the essence as to Tenant's exercise of an Option. Tenant assumes full responsibility for maintaining a record of the deadlines to exercise an Option. Tenant acknowledges that it would be inequitable to require Landlord to accept any exercise of an Option after the date provided for in this Section.

42.4. Notwithstanding anything contained in this Article to the contrary, Tenant shall not have the right to exercise an Option:

(a) During the time commencing from the date Landlord delivers to Tenant a written notice that Tenant is in default under any provisions of this Lease and continuing until Tenant has cured the specified default to Landlord's reasonable satisfaction; or

(b) At any time after any Default as described in Article 31 of the Lease (provided, however, that, for purposes of this Section 42.4(b), Landlord shall not be required to provide Tenant with notice of such Default if Landlord delivered a notice referenced in Section 42.4(a) above) and continuing until Tenant cures any such Default, if such Default is susceptible to being cured; or

(c) If Landlord has given Tenant two (2) or more notices of monetary default under this Lease, whether or not the monetary defaults are cured, during the twelve (12) month period prior to the date on which Tenant seeks to exercise an Option.

42.5.The period of time within which Tenant may exercise an Option shall not be extended or enlarged by reason of Tenant's inability to exercise such Option because of the provisions of Section 42.4.

42.6. All of Tenant's rights under the provisions of an Option shall terminate and be of no further force or effect even after Tenant's due and timely exercise of such Option if, after such exercise, but prior to the commencement date of the new term, (a) Tenant fails to pay to Landlord a monetary obligation of Tenant for a period of twenty (20) days after written notice from Landlord to Tenant, or (b) Tenant fails to commence to cure a default (other than a monetary default) within thirty (30) days after the date Landlord gives notice to Tenant of such default.

43. Right of First Offer. Subject to any other parties' pre-existing rights as of the date hereof with respect to Available ROFO Premises (as defined below), Tenant shall have a one-time right of first offer ("ROFO") as to any rentable premises on the first (1st) floor of the Building for which Landlord is seeking a tenant ("Available ROFO Premises"); provided, however, that in no event shall Landlord be required to lease any Available ROFO Premises to Tenant for any period past the date on which this Lease expires or is terminated pursuant to its terms. To the extent that Landlord renews or extends a then-existing lease with any then-existing tenant or subtenant of any space, or enters into a new lease with such then-existing tenant or subtenant, the affected space shall not be deemed to be Available ROFO Premises. In the event Landlord intends to market Available ROFO Premises, Landlord shall provide written notice thereof to Tenant (the "Notice of Marketing"), specifying the terms and conditions of a proposed lease to Tenant of the Available ROFO Premises.

43.1. Within fifteen (15) business days following its receipt of a Notice of Marketing, Tenant shall advise Landlord in writing whether Tenant elects to lease all (not just a portion) of the Available ROFO Premises on the terms and conditions set forth in the Notice of Marketing. If Tenant fails to notify Landlord of Tenant's election within such fifteen (15) business day period, then Tenant shall be deemed to have elected not to lease the Available ROFO Premises.

43.2. If Tenant timely notifies Landlord that Tenant elects to lease all of the Available ROFO Premises on the terms and conditions set forth in the Notice of Marketing, then Landlord shall lease the Available ROFO Premises to Tenant upon the Terms and conditions set forth in the Notice of Marketing.

43.3. If Tenant notifies Landlord that Tenant elects not to lease the Available ROFO Premises on the terms and conditions set forth in the Notice of Marketing, or Tenant fails to notify Landlord of Tenant's election within the fifteen (15) business day period described above, then Landlord shall have the right to consummate a lease of

the Available ROFO Premises at net effective base rent not less than ninety-five percent (95%) of that stated in the Notice of Marketing, if applicable.

43.4. Notwithstanding anything in this Article to the contrary, Tenant shall not exercise the ROFO during such period of time that Tenant is in default under any provision of this Lease. Any attempted exercise of the ROFO during a period of time in which Tenant is so in default shall be void and of no effect. In addition, Tenant shall not be entitled to exercise the ROFO if Landlord has given Tenant two (2) or more notices of monetary default under this Lease, whether or not the monetary defaults are cured, during the twelve (12) month period prior to the date on which Tenant seeks to exercise the ROFO.

43.5. Notwithstanding anything in this Lease to the contrary, Tenant shall not assign or transfer the ROFO, either separately or in conjunction with an assignment or transfer of Tenant's interest in the Lease (other than in connection with an Exempt Transfer), without Landlord's prior written consent, which consent Landlord may withhold in its sole and absolute discretion.

43.6. If Tenant exercises the ROFO, Landlord does not guarantee that the Available ROFO Premises will be available on the anticipated commencement date for the Lease as to such Premises due to a holdover by the then-existing occupants of the Available ROFO Premises or for any other reason beyond Landlord's reasonable control.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Lease as a sealed Massachusetts instrument as of the date first above written.

LANDLORD:

BRE-BMR GROVE LLC,
a Delaware limited liability company

By: /s/ William Kane

Name: William Kane

Title: EVP East Coast & UK Markets

TENANT:

SELECTA BIOSCIENCES, INC.,
a Delaware corporation

By: /s/ Lloyd Johnston

Name: Lloyd Johnston

Title: Chief Operating Officer

EXHIBIT A

PREMISES

(see attached)

EXHIBIT B

WORK LETTER

This Work Letter (this "Work Letter") is made and entered into as of the 23rd day of July, 2019, by and between BRE-BMR Grove LLC, a Delaware limited liability company ("Landlord"), and Selecta Biosciences, Inc., a Delaware corporation ("Tenant"), and is attached to and made a part of that certain Lease dated as of the date hereof (as the same may be amended, amended and restated, supplemented or otherwise modified from time to time, the "Lease"), by and between Landlord and Tenant for the Premises located at 65 Grove Street, Watertown, Massachusetts. All capitalized terms used but not otherwise defined herein shall have the meanings given them in the Lease.

1. General Requirements.

1.1. Authorized Representatives.

(a) Landlord designates, as Landlord's authorized representative ("Landlord's Authorized Representative"), (i) Edward McDonald (edward.mcdonald@biomedrealty.com) as the person authorized to initial plans, drawings, approvals and to sign change orders pursuant to this Work Letter and (ii) an officer of Landlord as the person authorized to sign any amendments to this Work Letter or the Lease. Tenant shall not be obligated to respond to or act upon any such item until such item has been initialed or signed (as applicable) by the appropriate Landlord's Authorized Representative. Landlord may change either Landlord's Authorized Representative upon one (1) business day's prior written notice to Tenant.

(b) Tenant designates Lloyd Johnston (ljohnston@selectabio.com) ("Tenant's Authorized Representative") as the person authorized to initial and sign all plans, drawings, change orders and approvals pursuant to this Work Letter. Landlord shall not be obligated to respond to or act upon any such item until such item has been initialed or signed (as applicable) by Tenant's Authorized Representative. Tenant may change Tenant's Authorized Representative upon one (1) business day's prior written notice to Landlord.

1.2. Schedule. The schedule for design and development of the Tenant Improvements, including the time periods for preparation and review of construction documents, approvals and performance, shall be in accordance with the schedule attached hereto as Schedule 1 (the "Schedule"). The Schedule shall be subject to adjustment as mutually agreed upon in writing by the parties, or as otherwise provided in this Work Letter.

1.3. Landlord's Architects, Contractors and Consultants. The architect, engineering consultants, design team, general contractor and subcontractors responsible for the construction of the Tenant Improvements shall be selected by Landlord. Landlord hereby selects PIDC Construction as the general contractor, and TRIA Architects, Inc. as the architect.

2. Tenant Improvements. All Tenant Improvements shall be performed by Landlord's contractor, at Tenant's sole cost and expense (subject to Landlord's obligations with respect to any portion of the Base TI Allowance and, if properly requested by Tenant pursuant to the terms of the Lease, the Additional TI Allowance used by Landlord in completing the Tenant Improvements), in a good and workmanlike manner in compliance with all Applicable Laws, and in substantial accordance with the Approved Plans (as defined below), the Lease and this Work Letter. To the extent that the total projected cost of the Tenant Improvements (as projected by Landlord) exceeds the TI Allowance (such excess, the "Excess TI Costs"), Tenant shall pay the costs of the Tenant Improvements on a *pari passu* basis with Landlord as such costs become due within thirty (30) days of Landlord's invoice therefor, in the proportion of Excess TI Costs payable by Tenant to the TI Allowance. If Landlord is delayed in commencing the Tenant Improvements due to Tenant's failure to timely pay the Excess TI Costs to Landlord, Landlord shall be

entitled to a day-for-day extension to achieve Substantial Completion of the Tenant Improvements for the period of such delay and it shall be deemed a Tenant Delay. If the actual Excess TI Costs are less than the Excess TI Costs paid by Tenant to Landlord, Landlord shall credit Tenant with the overage paid by Tenant against Tenant's Rent obligations, beginning after Landlord has completed the final accounting for the Tenant Improvements. If the cost of the Tenant Improvements (as projected by Landlord) increases over Landlord's initial projection, then Landlord may notify Tenant and Tenant shall deposit any additional Excess TI Costs with Landlord in the same way that Tenant deposited the initial Excess TI Costs. If Tenant fails to pay, or is late in paying, any sum due to Landlord under this Work Letter, then Landlord shall have all of the rights and remedies set forth in the Lease for nonpayment of Rent (including the right to interest and the right to assess a late charge), and for purposes of any litigation instituted with regard to such amounts the same shall be considered Rent. All material and equipment furnished by Landlord or its contractors as the Tenant Improvements shall be new or "like new," and the Tenant Improvements shall be performed in a first-class, workmanlike manner.

2.1. Test-Fit Plan. Landlord and Tenant hereby approve the test-fit plan for the Tenant Improvements (the "Test-Fit Plan") attached to this Work Letter as Schedule 2. The parties acknowledge that the Test-Fit Plan shall be paid for by Landlord at its sole cost and expense (and not as part of the TI Allowance). Tenant acknowledges that any vivarium to be constructed as part of the Tenant Improvements shall not exceed 2,000 rentable square feet unless otherwise approved by Landlord. Any such vivarium shall be in a location approved by Landlord in its sole and reasonable discretion, and shall use disposable cages.

2.2. Work Plans. Landlord shall prepare and submit to Tenant for approval schematic plans covering the Tenant Improvements prepared in conformity with the applicable provisions of this Work Letter consistent with and are logical evolutions of the approved test fit plan and incorporate any Tenant-requested revisions (the "Draft Schematic Plans"). The Draft Schematic Plans shall contain sufficient information and detail to accurately describe the proposed design to Tenant. Tenant shall notify Landlord in writing within five (5) business days after receipt of the Draft Schematic Plans whether Tenant approves or objects to the Draft Schematic Plans and of the manner, if any, in which the Draft Schematic Plans are unacceptable. Tenant's failure to respond within such five (5) business day period shall be deemed approval by Tenant. If Tenant reasonably objects to the Draft Schematic Plans, then Landlord shall revise the Draft Schematic Plans and cause Tenant's objections to be remedied in the revised Draft Schematic Plans. Landlord shall then resubmit the revised Draft Schematic Plans to Tenant for approval, such approval not to be unreasonably withheld, conditioned or delayed. Tenant's approval of or objection to revised Draft Schematic Plans and Landlord's correction of the same shall be in accordance with this Section until Tenant has approved the Draft Schematic Plans in writing or been deemed to have approved them. The iteration of the Draft Schematic Plans that is approved or deemed approved by Tenant without objection shall be referred to herein as the "Approved Schematic Plans." In the event that the Draft Schematic Plans are not approved by Tenant within the initial five (5) business day period specified in this Section 2.2, then, notwithstanding anything in the Lease or this Work Letter to the contrary (but subject to the following sentence), it shall be deemed a Tenant Delay, and in accordance with Section 4.2 of the Lease, the Term Commencement Date shall be the date that the Term Commencement Date would have occurred but for such Tenant Delay. Notwithstanding the foregoing, it shall not be deemed a Tenant Delay if Tenant provides written notice to Landlord within the initial five (5) business day period detailing a specific reason why the Draft Schematic Plans do not comply with either (a) Applicable Laws, or (b) the logical evolution of the Test-Fit Plan, together with any mutually agreed upon revisions (provided Tenant's Authorized Representative attends the project meetings with Landlord and the architect).

2.3. Construction Plans. Landlord shall prepare final plans and specifications for the Tenant Improvements that (a) are consistent with and are logical evolutions of the Approved Schematic Plans and (b) incorporate any other Tenant-requested (and Landlord-approved) Changes (as defined below). As soon as such final plans and specifications ("Construction Plans") are completed, Landlord shall deliver the same to Tenant for Tenant's approval, which approval shall not be unreasonably withheld, conditioned or delayed. Such Construction Plans

shall be approved or disapproved by Tenant within five (5) days after delivery to Tenant. Tenant's failure to respond within such five (5) day period shall be deemed approval by Tenant. If the Construction Plans are disapproved by Tenant, then Tenant shall notify Landlord in writing of its reasonable objections to such Construction Plans, and the parties shall confer and negotiate in good faith to reach agreement on the Construction Plans. Promptly after the Construction Plans are approved by Landlord and Tenant, two (2) copies of such Construction Plans shall be initialed and dated by Landlord and Tenant, and Landlord shall promptly submit such Construction Plans to all appropriate Governmental Authorities for approval. The Construction Plans so approved, and all change orders specifically permitted by this Work Letter, are referred to herein as the "Approved Plans." In the event that the Construction Plans are not approved by Tenant within the initial five (5) business day period specified in this Section 2.3, then, notwithstanding anything in the Lease or this Work Letter to the contrary (but subject to the following sentence), it shall be deemed a Tenant Delay, and in accordance with Section 4.2 of the Lease, the Term Commencement Date shall be the date that the Term Commencement Date would have occurred but for such Tenant Delay. Notwithstanding the foregoing, it shall not be deemed a Tenant Delay if Tenant provides written notice to Landlord within the initial five (5) business day period detailing a specific reason why the Construction Plans do not comply with either (a) Applicable Laws, or (b) the logical evolution of the Approved Schematic Plans, together with any mutually agreed upon revisions (provided Tenant's Authorized Representative attends the project meetings with Landlord and the architect).

2.4. Changes to the Tenant Improvements. Any changes to the Approved Plans (each, a "Change") shall be requested and instituted in accordance with the provisions of this Article 2 and shall be subject to the written approval of the non-requesting party in accordance with this Work Letter.

(a) Change Request. Either Landlord or Tenant may request Changes after Tenant approves the Approved Plans by notifying the other party thereof in writing in substantially the same form as the AIA standard change order form (a "Change Request"), which Change Request shall detail the nature and extent of any requested Changes, including (a) the Change, (b) the party required to perform the Change and (c) any modification of the Approved Plans and the Schedule, as applicable, necessitated by the Change. If the nature of a Change requires revisions to the Approved Plans, then the requesting party shall be solely responsible for the cost and expense of such revisions and any increases in the cost of the Tenant Improvements as a result of such Change. Notwithstanding the foregoing, to the extent any Landlord-requested Change related to the Approved Plans is required due to a base building condition, the cost for such Change shall be paid for from the contingency for the Tenant Improvements. Change Requests shall be signed by the requesting party's Authorized Representative.

(b) Approval of Changes. All Change Requests shall be subject to the other party's prior written approval, which approval shall not be unreasonably withheld, conditioned or delayed. The non-requesting party shall have five (5) business days after receipt of a Change Request to notify the requesting party in writing of the non-requesting party's decision either to approve or object to the Change Request. The non-requesting party's failure to respond within such five (5) business day period shall be deemed approval by the non-requesting party.

3. Requests for Consent. Except as otherwise provided in this Work Letter, Tenant shall respond to all requests for consents, approvals or directions made by Landlord pursuant to this Work Letter within five (5) days following Tenant's receipt of such request. Tenant's failure to respond within such five (5) day period shall be deemed approval by Tenant.

4. TI Allowance.

4.1. Application of TI Allowance. Landlord shall contribute, in the following order, the Base TI Allowance and, if properly requested by Tenant pursuant to the terms of the Lease, the Additional TI Allowance; and any Excess TI Costs advanced by Tenant to Landlord toward the costs and expenses incurred in connection with the performance of the Tenant Improvements, in accordance with Article 4 of the Lease. If the entire TI Allowance

is not applied toward or reserved for the costs of the Tenant Improvements, then Tenant shall not be entitled to a credit of such unused portion of the TI Allowance. If the entire Excess TI Costs advanced by Tenant to Landlord are not applied toward the costs of the Tenant Improvements, then Landlord shall promptly return such excess to Tenant following completion of the Tenant Improvements. Tenant may apply the Base TI Allowance and, if properly requested by Tenant pursuant to the terms of the Lease, the Additional TI Allowance for the payment of construction and other costs in accordance with the terms and provisions of the Lease.

4.2. Approval of Budget for the Tenant Improvements. The parties agree that the budget for the Tenant Improvements attached hereto as Schedule 3 is a preliminary budget (the "Preliminary Budget"). Landlord anticipates obtaining from its contractor updated budgets in connection with the design process, which shall be subject to the review and approval of Landlord and Tenant. Notwithstanding anything to the contrary set forth elsewhere in this Work Letter or the Lease, Landlord shall not have any obligation to expend any portion of the TI Allowance until Landlord and Tenant shall have approved in writing a final budget for the Tenant Improvements (the "Approved Budget"). Tenant shall promptly reimburse Landlord for costs or expenses relating to the Tenant Improvements that exceed the amount of the TI Allowance. Notwithstanding anything herein to the contrary, the Approved Budget shall not be exceeded, and Excess TI Costs, if any, shall not increase, except pursuant an approved Change Request.

5. Miscellaneous.

5.1. Incorporation of Lease Provisions. Sections 40.6 through 40.19 of the Lease are incorporated into this Work Letter by reference, and shall apply to this Work Letter in the same way that they apply to the Lease.

5.2. General. Except as otherwise set forth in the Lease or this Work Letter, this Work Letter shall not apply to improvements performed in any additional premises added to the Premises at any time or from time to time, whether by any options under the Lease or otherwise; or to any portion of the Premises or any additions to the Premises in the event of a renewal or extension of the original Term, whether by any options under the Lease or otherwise, unless the Lease or any amendment or supplement to the Lease expressly provides that such additional premises are to be delivered to Tenant in the same condition as the initial Premises.

5.3. Base Building Improvements. Landlord shall perform the Base Building Improvements at Landlord's sole cost and expense, which cost will not be reimbursable from the TI Allowance. Any work to the Common Areas required by Applicable Laws as a result of the Base Building Improvements shall be considered Base Building Improvements and shall be undertaken at Landlord's sole cost and expense. Any work to the Common Areas required by Applicable Laws as a result of the Tenant Improvements shall be considered Tenant Improvements and shall be undertaken by Landlord and shall be paid for in accordance with Section 4.4 of the Lease and this Work Letter.

5.4. Notices. Notwithstanding anything to the contrary set forth in the Lease, for the purposes of delivering notices, requests and responses related to the Tenant Improvements under this Work Letter, delivery by electronic mail to Landlord's Authorized Representative and Tenant's Authorized Representative shall be deemed sufficient.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, Landlord and Tenant have executed this Work Letter as a sealed Massachusetts instrument to be effective on the date first above written.

LANDLORD:

BRE-BMR Grove LLC,
a Delaware limited liability company

By: /s/ William Kane

Name: William Kane

Title: EVP East Coast & UK Markets

TENANT:

Selecta Biosciences, Inc.,
a Delaware corporation

By: /s/ Lloyd Johnston

Name: Lloyd Johnston

Title: Chief Operating Officer

SCHEDULE 1 TO WORK LETTER

SCHEDULE FOR TENANT IMPROVEMENTS

(see attached)

SCHEDULE 2 TO WORK LETTER

TEST-FIT PLAN

(see attached)

SCHEDULE 3 TO WORK LETTER

PRELIMINARY BUDGET

(see attached)

EXHIBIT B-1

TENANT WORK INSURANCE SCHEDULE

Tenant shall be responsible for requiring all of Tenant contractors doing construction or renovation work to purchase and maintain such insurance as shall protect it from the claims set forth below which may arise out of or result from any Tenant Work whether such Tenant Work is completed by Tenant or by any Tenant contractors or by any person directly or indirectly employed by Tenant or any Tenant contractors, or by any person for whose acts Tenant or any Tenant contractors may be liable:

1. Claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Tenant Work to be performed.

2. Claims for damages because of bodily injury, occupational sickness or disease, or death of employees under any applicable employer's liability law.

3. Claims for damages because of bodily injury, or death of any person other than Tenant's or any Tenant contractors' employees.

4. Claims for damages insured by usual personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by Tenant or any Tenant contractors or (b) by any other person.

5. Claims for damages, other than to the Tenant Work itself, because of injury to or destruction of tangible property, including loss of use therefrom.

6. Claims for damages because of bodily injury or death of any person or property damage arising from the ownership, maintenance or use of any motor vehicle.

Tenant contractors' Commercial General Liability Insurance shall include premises/operations (including explosion, collapse and underground coverage if such Tenant Work involves any underground work), elevators, independent contractors, products and completed operations, and blanket contractual liability on all written contracts, all including broad form property damage coverage.

Tenant contractors' Commercial General, Automobile, Employers and Umbrella Liability Insurance shall be written for not less than limits of liability as follows:

a. Commercial General Liability: Bodily Injury and Property Damage	Not less than (a) for the general contractor , $2,000,000 per occurrence and $5,000,000 general aggregate, with $5,000,000 products and completed operations aggregate, and (b) for all other contractors and subcontractors, $1,000,000 per occurrence and $2,000,000 general aggregate, with $2,000,000 products and completed operations aggregate
b. Commercial Automobile Liability: Bodily Injury and Property Damage	Coverage for liability arising from the use or operation of any auto on behalf of Tenant or invited by Tenant (including those owned, hired, rented, leased, borrowed, scheduled or non-owned). Coverage shall be on a broad-based occurrence form in an amount not less than $2,000,000 combined single limit per accident. Such coverage shall apply to all vehicles and persons, whether accessing the property with active or passive consent
c. Employer's Liability: Each Accident Disease – Policy Limit Disease – Each Employee	$1,000,000 $1,000,000 $1,000,000
d. Umbrella Liability: Bodily Injury and Property Damage	(Excess of coverages a, b and c above) of not less than $5,000,000 per occurrence / aggregate
e. Workers' Compensation:	As required by Applicable Laws

All subcontractors for Tenant contractors shall carry the same coverages and limits as specified above, unless different limits are reasonably approved by Landlord. The foregoing policies shall contain a provision that coverages afforded under the policies shall not be canceled or not renewed until at least thirty (30) days' prior written notice has been given to the Landlord. Certificates of insurance including required endorsements showing such coverages to be in force shall be filed with Landlord prior to the commencement of any Tenant Work and prior to each renewal. Coverage for completed operations must be maintained for the lesser of ten (10) years and the applicable statue of repose following completion of the Tenant Work, and certificates evidencing this coverage must be provided to Landlord. The minimum A.M. Best's rating of each insurer shall be A- VII. the Landlord Parties shall be named as an additional insureds under Tenant contractors' Commercial General Liability, Commercial Automobile Liability, Umbrella Liability and, to the extent required by the Lease, the Work Letter or this Exhibit, Pollution Legal Liability Insurance policies as respects liability arising from work or operations performed, or ownership, maintenance or use of any autos, by or on behalf of such contractors. Each contractor and its insurers shall provide waivers of subrogation with respect to all insurance required by the Lease, the Work Letter or this Exhibit.

If any contractor's work involves the handling or removal of asbestos, lead or other Hazardous Materials (as determined by Landlord in its sole and absolute discretion), such contractor shall also carry Pollution Legal Liability insurance. Such coverage shall include bodily injury, sickness, disease, death or mental anguish or shock sustained by any person; property damage, including physical injury to or destruction of tangible property (including the resulting loss of use thereof), clean-up costs and the loss of use of tangible property that has not been physically injured or destroyed; and defense costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such damages. Coverage shall apply to both sudden and non-sudden pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water. Claims-made coverage is permitted, provided the policy retroactive date is continuously maintained prior to the Term Commencement Date, and coverage is continuously maintained during all periods in which Tenant occupies the Premises. Coverage shall be maintained with limits of not less than $1,000,000 per incident with a $2,000,000 policy aggregate.

EXHIBIT B-2

BASE BUILDING IMPOVEMENTS

ARCHITECTURAL

- New Enclosed Mechanical Penthouse with capacity for tenant equipment
- New 4,500 lb Freight |Passenger Elevator
- New Service Corridor and Loading Entrance to provide access to new freight elevator
- Installation of furniture and art throughout 2nd and 3rd floor lobbies

STRUCTURAL

- Modifications required to support new base building architectural and MEP upgrades \

MECHANICAL

- Two new rooftop air handling units to provide 1.25 CFM of 100% outside air across lab areas (assumed to be 50% of RSF). Office areas will be served by existing office AHU's
- Two new rooftop lab exhaust air units with energy recovery and exhaust risers to provide 1.25 CFM of 100% outside air across lab areas (assumed to be 50% of RSF)
- New gas-fired hot water boiler plant and associated pumps to provide heating for lab supply air

ELECTRICAL

- Upgrade of base building electrical service from 3,000 Amps to 4,000 Amps to support lab requirements
- New natural gas generator to provide stand-by power to select base building equipment and 5 watts/RSF across lab areas (assumed to be 50% of RSF) for tenant stand-by loads

PLUMBING

- Modifications required to support new base building architectural and MEP upgrades
- New central lab waste treatment system including pump and treatment tank
- New Tempered Water System for emergency showers and eyewash stations, including water tank and vertical riser

FIRE PROTECTION

- Modifications required to support base building Architectural and MEP upgrades

EXHIBIT C

ACKNOWLEDGEMENT OF TERM COMMENCEMENT DATE
AND TERM EXPIRATION DATE

THIS ACKNOWLEDGEMENT OF TERM COMMENCEMENT DATE AND TERM EXPIRATION DATE is entered into as of [_____], 20[__], with reference to that certain Lease (the "Lease") dated as of [_____], 20[__], by Selecta Biosciences, Inc., a Delaware corporation ("Tenant"), in favor of BRE-BMR Grove LLC, a Delaware limited liability company ("Landlord"). All capitalized terms used herein without definition shall have the meanings ascribed to them in the Lease.

Tenant hereby confirms the following:

1. Tenant accepted possession of the Premises for use in accordance with the Permitted Use on [_____], 20[__]. Tenant first occupied the Premises for the Permitted Use on [_____], 20[__].

2. The Premises are in good order, condition and repair.

3. The Tenant Improvements are Substantially Complete.

4. All conditions of the Lease to be performed by Landlord as a condition to the full effectiveness of the Lease have been satisfied, and Landlord has fulfilled all of its duties in the nature of inducements offered to Tenant to lease the Premises.

5. In accordance with the provisions of Article 4 of the Lease, the Term Commencement Date is [_____], 20[__], and, unless the Lease is terminated prior to the Term Expiration Date pursuant to its terms, the Term Expiration Date shall be [_____], 20[__].

6. The Lease is in full force and effect, and the same represents the entire agreement between Landlord and Tenant concerning the Premises[, except [_____]].

7. Tenant has no existing defenses against the enforcement of the Lease by Landlord, and there exist no offsets or credits against Rent owed or to be owed by Tenant.

8. The obligation to pay Rent is presently in effect and all Rent obligations on the part of Tenant under the Lease commenced to accrue on [_____], 20[__], with Base Rent payable on the dates and amounts set forth in the chart below:

Dates	**Square Feet of Rentable Area**	**Base Rent per Square Foot of Rentable Area**	**Monthly Base Rent**	**Annual Base Rent**
Rent Commencement Date – the day immediately prior to the first (1st) annual anniversary of the Rent Commencement Date	25,078 square feet	$66.00 annually	$137,929.00	$1,655,148.00

Note: Subject to adjustment to reflect disbursement of Additional TI Allowance, as provided in Section 4.5 of the Lease

9. The undersigned Tenant has not made any prior assignment, transfer, hypothecation or pledge of the Lease or of the rents thereunder or sublease of the Premises or any portion thereof.

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IN WITNESS WHEREOF, Tenant has executed this Acknowledgment of Term Commencement Date and Term Expiration Date as of the date first written above.

TENANT:

Selecta Biosciences, Inc.,
a Delaware corporation

By: _____

Name: _____

Title: _____

EXHIBIT D

FORM OF ADDITIONAL TI ALLOWANCE ACCEPTANCE LETTER

[TENANT LETTERHEAD]

BRE-BMR Grove LLC
17190 Bernardo Center Drive
San Diego, California 92128
Attn: Legal Department

[Date]

Re: Additional TI Allowance

To Whom It May Concern:

This letter concerns that certain Lease dated as of [_____], 20[__] (the "Lease"), between BRE-BMR Grove LLC ("Landlord") and Selecta Biosciences, Inc. ("Tenant"). Capitalized terms not otherwise defined herein shall have the meanings given them in the Lease.

Tenant hereby notifies Landlord that it wishes to exercise its right to utilize the Additional TI Allowance in the amount of [_____] Dollars ($_____) per square foot of Rentable Area, for a total amount of [_____] Dollars ($_____) pursuant to Article 4 of the Lease.

If you have any questions, please do not hesitate to call [_____] at ([___]) [___]-[____].

Sincerely,

[Name]
[Title of Authorized Signatory]

cc: Karen Sztraicher
Jon Bergschneider
John Lu
Kevin Simonsen

EXHIBIT E

FORM OF LETTER OF CREDIT

[On letterhead or L/C letterhead of Issuer]

LETTER OF CREDIT

IRREVOCABLE STANDBY LETTER OF CREDIT NUMBER _____

ISSUE DATE: _____

ISSUING BANK:

SILICON VALLEY BANK
3003 TASMAN DRIVE
2ND FLOOR, MAIL SORT HF210
SANTA CLARA, CALIFORNIA 95054

BENEFICIARY:

BRE-BMR GROVE LLC
17190 BERNARDO CENTER DRIVE
SAN DIEGO, CALIFORNIA 92128
ATTN: LEGAL DEPARTMENT

APPLICANT:

SELECTA BIOSCIENCES, INC.
480 ARSENAL WAY
WATERTOWN, MASSACHUSETTS 02472

AMOUNT:
US$$1,379,290.00 (ONE MILLION, THREE HUNDRED SEVENTY-NINE THOUSAND, TWO HUNDRED NINETY AND 00/100 U.S.DOLLARS)

EXPIRATION DATE [INSERT DATE ONE YEAR FROM DATE OF ISSUANCE]

PLACE OF EXPIRATION: ISSUING BANK'S COUNTERS AT ITS ABOVE ADDRESS

DEAR SIR/MADAM:

WE HEREBY ESTABLISH IN FAVOR OF BENEFICIARY OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. SVBSF_____ (THE "L/C") AVAILABLE BY PAYMENT AGAINST YOUR PRESENTATION TO US OF THE FOLLOWING DOCUMENTATATION (THE "DRAWING DOCUMENTATION"):

(A) THE ORIGINAL L/C; AND
(B) A SIGHT DRAFT IN THE FORM OF EXHIBIT A, WITH BLANKS FILLED IN AND BRACKETED ITEMS PROVIDED AS APPROPRIATE.
NO OTHER EVIDENCE OF AUTHORITY, CERTIFICATE, OR DOCUMENTATION IS REQUIRED.

DRAWING DOCUMENTATION MUST BE PRESENTED AT ISSUER'S OFFICE AT 3003 TASMAN DRIVE, SANTA CLARA, CA 95054 ON OR BEFORE THE EXPIRATION DATE BY PERSONAL PRESENTATION, COURIER, MESSENGER SERVICE, OR FACSIMILE. EACH FACSIMILE TRANSMISSION SHALL BE MADE AT: (408) 496-2418 OR (408) 969-6510; AND UNDER CONTEMPORANEOUS TELEPHONE ADVICE TO: (408) --- ---- OR (408) --- ----, ATTENTION: GLOBAL TRADE FINANCE. ABSENCE OF THE AFORESAID TELEPHONE ADVICE SHALL NOT AFFECT OUR OBLIGATION TO HONOR ANY DRAW REQUEST. IN CASE OF FACSIMILE DRAWING, THE ORIGINAL DOCUMENTS ARE NOT REQUIRED FOR PRESENTATION.

PARTIAL DRAWS AND MULTIPLE PRESENTATIONS ARE ALLOWED.

WE SHALL HAVE NO DUTY OR RIGHT TO INQUIRE INTO THE VALIDITY OF OR BASIS FOR ANY DRAW UNDER THIS L/C OR ANY DRAWING DOCUMENTATION.

THIS LETTER OF CREDIT SHALL BE AUTOMATICALLY EXTENDED FOR AN ADDITIONAL PERIOD OF ONE YEAR, WITHOUT AMENDMENT, FROM THE PRESENT OR EACH FUTURE EXPIRATION DATE UNLESS AT LEAST 60 DAYS PRIOR TO THE THEN CURRENT EXPIRATION DATE WE SEND TO YOU A NOTICE BY REGISTERED OR CERTIFIED MAIL OR OVERNIGHT COURIER SERVICE AT THE ABOVE ADDRESS THAT THIS LETTER OF CREDIT WILL NOT BE EXTENDED BEYOND THE THEN CURRENT EXPIRATION DATE. IN NO EVENT SHALL THIS LETTER OF CREDIT BE AUTOMATICALLY EXTENDED BEYOND _____.

THIS LETTER OF CREDIT IS TRANSFERABLE IN WHOLE BUT NOT IN PART ONE OR MORE TIMES, BUT IN EACH INSTANCE ONLY TO A SINGLE BENEFICIARY AS TRANSFEREE AND FOR THE THEN AVAILABLE AMOUNT, AT NO COST OR EXPENSE TO BENEFICIARY, ASSUMING SUCH TRANSFER TO SUCH TRANSFEREE WOULD BE IN COMPLIANCE WITH THEN APPLICABLE LAW AND REGULATION, INCLUDING BUT NOT LIMITED TO THE REGULATIONS OF THE U.S. DEPARTMENT OF TREASURY AND U.S. DEPARTMENT OF COMMERCE. AT THE TIME OF TRANSFER, THE ORIGINAL LETTER OF CREDIT AND ORIGINALS OR COPIES OF ALL AMENDMENTS, IF ANY, TO THIS LETTER OF CREDIT MUST BE SURRENDERED TO US AT OUR ADDRESS INDICATED IN THIS LETTER OF CREDIT TOGETHER WITH OUR TRANSFER FORM ATTACHED HERETO AS EXHIBIT B DULY EXECUTED. APPLICANT SHALL PAY OUR TRANSFER FEE OF ¼ OF 1% OF THE TRANSFER AMOUNT (MINIMUM US$250.00) UNDER THIS LETTER OF CREDIT, HOWEVER, APPLICANT'S PAYMENT OF SUCH TRANSFER FEE SHALL NOT BE A CONDITION OF SUCH TRANSFER. EACH TRANSFER SHALL BE EVIDENCED BY EITHER (1) OUR ENDORSEMENT ON THE REVERSE OF THE LETTER OF CREDIT AND WE SHALL FORWARD THE ORIGINAL OF THE LETTER OF CREDIT SO ENDORSED TO THE TRANSFEREE OR (2) OUR ISSUING A REPLACEMENT LETTER OF CREDIT TO THE TRANSFEREE ON THE SAME TERMS AND CONDITIONS AS THE TRANSFERRED LETTER OF CREDIT (IN WHICH EVENT THE TRANSFERRED LETTER OF CREDIT SHALL HAVE NO FURTHER EFFECT).

ANY NOTICE TO BENEFICIARY SHALL BE IN WRITING AND DELIVERED BY HAND WITH RECEIPT ACKNOWLEDGED OR BY OVERNIGHT DELIVERY SERVICE SUCH AS FEDEX OR UPS (WITH PROOF OF DELIVERY) AT THE ABOVE ADDRESS, OR SUCH OTHER ADDRESS AS BENEFICIARY MAY SPECIFY BY WRITTEN NOTICE TO ISSUER.

NO AMENDMENT THAT ADVERSELY AFFECTS BENEFICIARY SHALL BE EFFECTIVE WITHOUT BENEFICIARY'S WRITTEN CONSENT.

WE HEREBY AGREE, IRREVOCABLY WITH YOU THAT DOCUMENTS PRESENTED UNDER AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT, WITHIN THE

MAXIMUM AMOUNT OF THIS L/C, SHALL BE DULY HONORED UPON PRESENTATION TO SILICON VALLEY BANK, IF PRESENTED ON OR BEFORE THE EXPIRATION DATE OF THIS CREDIT, AS SPECIFIED ABOVE.

EXCEPT AS EXPRESSLY STATED HEREIN, THIS UNDERTAKING IS NOT SUBJECT TO ANY AGREEMENT, CONDITION OR QUALIFICATION. OUR OBLIGATION UNDER THIS LETTER OF CREDIT SHALL BE OUR INDIVIDUAL OBLIGATION AND IS IN NO WAY CONTINGENT UPON THE REIMBURSEMENT WITH RESPECT THERETO, OR UPON OUR ABILITY TO PERFECT ANY LIEN, SECURITY INTEREST OR ANY OTHER REIMBURSEMENT

IF ANY INSTRUCTIONS ACCOMPANYING A DRAWING UNDER THIS LETTER OF CREDIT REQUEST THAT PAYMENT IS TO BE MADE BY TRANSFER TO YOUR ACCOUNT WITH ANOTHER BANK, WE WILL ONLY EFFECT SUCH PAYMENT BY FED WIRE TO A U.S. REGULATED BANK, AND WE AND/OR SUCH OTHER BANK MAY RELY ON AN ACCOUNT NUMBER SPECIFIED IN SUCH INSTRUCTIONS EVEN IF THE NUMBER IDENTIFIES A PERSON OR ENTITY DIFFERENT FROM THE INTENDED PAYEE.

THIS LETTER OF CREDIT IS SUBJECT TO THE INTERNATIONAL STANDBY PRACTICES (ISP98), INTERNATIONAL CHAMBER OF COMMERCE, PUBLICATION NO. 590.

AUTHORIZED SIGNATURE	AUTHORIZED SIGNATURE

EXHIBIT A

FORM OF SIGHT DRAFT

[BENEFICIARY LETTERHEAD]

TO:

[Name and Address of Issuer]

SIGHT DRAFT

AT SIGHT, pay to the Order of _____, the sum of _____ United States Dollars ($_____). Drawn under [Issuer] Letter of Credit No. _____ dated _____.

[Issuer is hereby directed to pay the proceeds of this Sight Draft solely to the following account: _____.]

[Name and signature block, with signature or purported signature of Beneficiary]

Date: _____

EXHIBIT B

FORM OF TRANSFER NOTICE

DATE: _____

TO: SILICON VALLEY BANK

3003 TASMAN DRIVE

SANTA CLARA, CA 95054

ATTN: GLOBAL TRADE FINANCE

STANDBY LETTERS OF CREDIT

RE: IRREVOCABLE STANDBY LETTER OF CREDIT

NO. _____ ISSUED BY

SILICON VALLEY BANK, SANTA CLARA

L/C AMOUNT: _____

LADIES AND GENTLEMEN:

FOR VALUE RECEIVED, THE UNDERSIGNED BENEFICIARY HEREBY IRREVOCABLY TRANSFERS TO:

_____
(NAME OF TRANSFEREE)

_____
(ADDRESS)

ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY TO DRAW UNDER THE ABOVE LETTER OF CREDIT UP TO ITS AVAILABLE AMOUNT AS SHOWN ABOVE AS OF THE DATE OF THIS TRANSFER.

BY THIS TRANSFER, ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY IN SUCH LETTER OF CREDIT ARE TRANSFERRED TO THE TRANSFEREE. TRANSFEREE SHALL HAVE THE SOLE RIGHTS AS BENEFICIARY THEREOF, INCLUDING SOLE RIGHTS RELATING TO ANY AMENDMENTS, WHETHER INCREASES OR EXTENSIONS OR OTHER AMENDMENTS, AND WHETHER NOW EXISTING OR HEREAFTER MADE. ALL AMENDMENTS ARE TO BE ADVISED DIRECTLY TO THE TRANSFEREE WITHOUT NECESSITY OF ANY CONSENT OF OR NOTICE TO THE UNDERSIGNED BENEFICIARY.

THE ORIGINAL OF SUCH LETTER OF CREDIT IS RETURNED HEREWITH, AND WE ASK YOU TO EITHER (1) ENDORSE THE TRANSFER ON THE REVERSE THEREOF, AND FORWARD IT DIRECTLY TO THE TRANSFEREE WITH YOUR CUSTOMARY NOTICE OF TRANSFER, OR (2) ISSUE A REPLACEMENT LETTER OF CREDIT TO THE TRANSFEREE ON SUBSTANTIALLY THE SAME TERMS AND CONDITIONS AS THE TRANSFERRED LETTER OF CREDIT (IN WHICH EVENT THE TRANSFERRED LETTER OF CREDIT SHALL HAVE NO FURTHER EFFECT).

SINCERELY,

(BENEFICIARY'S NAME)

_____

(SIGNATURE OF BENEFICIARY)

_____

(NAME AND TITLE)

SIGNATURE AUTHENTICATED

The name(s), title(s), and signature(s) conform to that/those on file with us for the company and the signature(s) is/are authorized to execute this instrument.

_____

(Name of Bank)

_____

(Address of Bank)

_____

(City, State, ZIP Code)

EXHIBIT F

RULES AND REGULATIONS

NOTHING IN THESE RULES AND REGULATIONS ("RULES AND REGULATIONS") SHALL SUPPLANT ANY PROVISION OF THE LEASE. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THESE RULES AND REGULATIONS AND THE LEASE, THE LEASE SHALL PREVAIL.

1. No Tenant Party shall encumber or obstruct the common entrances, lobbies, elevators, sidewalks and stairways of the Building(s) or the Project or use them for any purposes other than ingress or egress to and from the Building(s) or the Project.

2. Except as specifically provided in the Lease, no sign, placard, picture, advertisement, name or notice shall be installed or displayed on any part of the outside of the Premises or the Building(s) without Landlord's prior written consent. Landlord shall have the right to remove, at Tenant's sole cost and expense and without notice, any sign installed or displayed in violation of this rule.

3. If Landlord objects in writing to any curtains, blinds, shades, screens, hanging plants or other similar objects attached to or used in connection with any window or door of the Premises or placed on any windowsill, and (a) such window, door or windowsill is visible from the exterior of the Premises and (b) such curtain, blind, shade, screen, hanging plant or other object is not included in plans approved by Landlord, then Tenant shall promptly remove such curtains, blinds, shades, screens, hanging plants or other similar objects at its sole cost and expense.

4. No deliveries shall be made that impede or interfere with other tenants in or the operation of the Project. Movement of furniture, office equipment or any other large or bulky material(s) through the Common Area shall be restricted to such hours as Landlord may designate and shall be subject to reasonable restrictions that Landlord may impose. A temporary loading permit is required for all temporary parking and such permit, which permit Landlord may provide in its sole and absolute discretion.

5. Tenant shall not place a load upon any floor of the Premises that exceeds the load per square foot that (a) such floor was designed to carry or (b) is allowed by Applicable Laws. Fixtures and equipment that cause noises or vibrations that may be transmitted to the structure of the Building(s) to such a degree as to be objectionable to other tenants shall be placed and maintained by Tenant, at Tenant's sole cost and expense, on vibration eliminators or other devices sufficient to eliminate such noises and vibrations to levels reasonably acceptable to Landlord and the affected tenants of the Project.

6. Tenant shall not use any method of HVAC other than that approved in writing by Landlord.

7. Tenant shall not install any radio, television or other antennae; cell or other communications equipment; or other devices on the roof or exterior walls of the Premises except in accordance with the Lease. Tenant shall not interfere with radio, television or other digital or electronic communications at the Project or elsewhere.

8. Canvassing, peddling, soliciting and distributing handbills or any other written material within, on or around the Project (other than within the Premises) are prohibited. Tenant shall cooperate with Landlord to prevent such activities by any Tenant Party.

9. Tenant shall store all of its trash, garbage and Hazardous Materials in receptacles within its Premises or in receptacles designated by Landlord outside of the Premises. Tenant shall not place in any such receptacle any material that cannot be disposed of in the ordinary and customary manner of trash, garbage and Hazardous Materials disposal. Any Hazardous Materials transported through Common Area shall be held in secondary containment

devices. Tenant shall be responsible, at its sole cost and expense, for Tenant's removal of its trash, garbage and Hazardous Materials. Tenant is encouraged to participate in the waste removal and recycling program in place at the Project.

10. The Premises shall not be used for lodging or for any improper, immoral or objectionable purpose. No cooking shall be done or permitted in the Premises; provided, however, that Tenant may use (a) equipment approved in accordance with the requirements of insurance policies that Landlord or Tenant is required to purchase and maintain pursuant to the Lease for brewing coffee, tea, hot chocolate and similar beverages, (b) microwave ovens for employees' use and (c) equipment shown on Tenant Improvement plans approved by Landlord; provided, further, that any such equipment and microwave ovens are used in accordance with Applicable Laws.

11. Tenant shall not, without Landlord's prior written consent, use the name of the Project, if any, in connection with or in promoting or advertising Tenant's business except as Tenant's address.

12. Tenant shall comply with all safety, fire protection and evacuation procedures and regulations established by Landlord or any Governmental Authority.

13. Tenant assumes any and all responsibility for protecting the Premises from theft, robbery and pilferage, which responsibility includes keeping doors locked and other means of entry to the Premises closed.

14. Tenant shall not modify any locks to the Premises without Landlord's prior written consent, which consent Landlord shall not unreasonably withhold, condition or delay. Tenant shall furnish Landlord with copies of keys, pass cards or similar devices for locks to the Premises.

15. Tenant shall cooperate and participate in all reasonable security programs affecting the Premises.

16. Tenant shall require its employees and agents to sign Landlord's waiver of liability in order for such individuals to use the fitness center, to the extent required by Landlord, and Tenant shall comply with all rules and regulations posted in or around the fitness center related thereto.

17. Tenant shall not permit any animals in the Project, other than for service animals or for use in laboratory experiments.

18. Bicycles shall not be taken into the Building(s) (including the elevators and stairways of the Building) except into areas designated by Landlord.

19. The water and wash closets and other plumbing fixtures shall not be used for any purposes other than those for which they were constructed, and no sweepings, rubbish, rags or other substances shall be deposited therein.

20. Discharge of industrial sewage shall only be permitted if Tenant, at its sole expense, first obtains all necessary permits and licenses therefor from all applicable Governmental Authorities.

21. Smoking is prohibited at the Project.

22. The Project's hours of operation are currently 6:00 a.m. to 6:00 p.m., Monday through Friday, except for federal holidays. Tenant shall have access to the Premises 24 hours a day, seven days a week.

23. Tenant shall comply with all orders, requirements and conditions now or hereafter imposed by Applicable Laws or Landlord ("Waste Regulations") regarding the collection, sorting, separation and recycling of waste products, garbage, refuse and trash generated by Tenant (collectively, "Waste Products"), including (without

limitation) the separation of Waste Products into receptacles reasonably approved by Landlord and the removal of such receptacles in accordance with any collection schedules prescribed by Waste Regulations.

24. Tenant, at Tenant's sole cost and expense, shall cause the Premises to be exterminated as necessary to Landlord's reasonable satisfaction and shall cause all portions of the Premises used for the storage, preparation, service or consumption of food or beverages to be cleaned daily in a manner reasonably satisfactory to Landlord, and to be treated against infestation by insects, rodents and other vermin and pests whenever there is evidence of any infestation. Tenant shall not permit any person to enter the Premises or the Project for the purpose of providing such extermination services, unless such persons have been approved by Landlord. If requested by Landlord, Tenant shall, at Tenant's sole cost and expense, store any refuse generated in the Premises by the consumption of food or beverages in a cold box or similar facility.

25. If Tenant desires to use any portion of the Common Area for a Tenant-related event, Tenant must notify Landlord in writing at least thirty (30) days prior to such event on the form attached as Attachment 1 to this Exhibit, which use shall be subject to Landlord's prior written consent, not to be unreasonably withheld, conditioned or delayed. Notwithstanding anything in this Lease or the completed and executed Attachment to the contrary, Tenant shall be solely responsible for setting up and taking down any equipment or other materials required for the event, and shall promptly pick up any litter and report any property damage to Landlord related to the event. Any use of the Common Area pursuant to this Section shall be subject to the provisions of Article 28 of the Lease.

Landlord may waive any one or more of these Rules and Regulations for the benefit of Tenant or any other tenant, but no such waiver by Landlord shall be construed as a waiver of such Rules and Regulations in favor of Tenant or any other tenant, nor prevent Landlord from thereafter enforcing any such Rules and Regulations against any or all of the tenants of the Project, including Tenant. These Rules and Regulations are in addition to, and shall not be construed to in any way modify or amend, in whole or in part, the terms covenants, agreements and conditions of the Lease. Landlord reserves the right to make such other and reasonable additional rules and regulations as, in its judgment, may from time to time be needed for safety and security, the care and cleanliness of the Project, or the preservation of good order therein; provided, however, that Tenant shall not be obligated to adhere to such additional rules or regulations until Landlord has provided Tenant with written notice thereof. Tenant agrees to abide by these Rules and Regulations and any such additional rules and regulations issued or adopted by Landlord. Tenant shall be responsible for the observance of these Rules and Regulations by all Tenant Parties.

ATTACHMENT 1 TO EXHIBIT F

REQUEST FOR USE OF COMMON AREA

REQUEST FOR USE OF COMMON AREA

Date of Request:

Landlord/Owner: _____

Tenant/Requestor: _____

Property Location: _____

Event Description: _____

_____

_____

Proposed Plan for Security & Cleaning: _____

_____

_____

Date of Event: _____

Hours of Event: (to include set-up and take down): _____

Location at Property (see attached map): _____

Number of Attendees: _____

Open to the Public? [___] YES [___] NO

Food and/or Beverages? [___] YES [___] NO

If YES:

- Will food be prepared on site? [___] YES [___] NO
- Please describe: _____
- Will alcohol be served? [___] YES [___] NO
- Please describe _____
- Will attendees be charged for alcohol? [___] YES [___] NO
- Is alcohol license or permit required? [___] YES [___] NO
- Does caterer have alcohol license or permit: [___] YES [___] NO

Other Amenities (tent, booths, band, food trucks, bounce house, etc.): _____

Other Event Details or Special Circumstances:

The undersigned certifies that the foregoing is true, accurate and complete and he/she is duly authorized to sign and submit this request on behalf of the Tenant/Requestor named above.

[*INSERT NAME OF TENANT/REQUESTOR*]

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT G

TENANT'S PROPERTY

(see attached)

EXHIBIT H

FORM OF ESTOPPEL CERTIFICATE

To: BRE-BMR Grove LLC
17190 Bernardo Center Drive
San Diego, California 92128
Attention: Legal Department

BioMed Realty II LP
17190 Bernardo Center Drive
San Diego, California 92128

Re: Suite [____] (the "Premises") at 65 Grove Street, Watertown, Massachusetts (the "Property")

The undersigned tenant ("Tenant") hereby certifies to you as follows:

1. Tenant is a tenant at the Property under a lease (the "Lease") for the Premises dated as of [_____], 20[__]. The Lease has not been cancelled, modified, assigned, extended or amended [except as follows: [_____]], and there are no other agreements, written or oral, affecting or relating to Tenant's lease of the Premises or any other space at the Property. The lease term expires on [_____], 20[__].

2. Tenant took possession of the Premises, currently consisting of 24,788 square feet, on [_____], 20[__], and commenced to pay rent on [_____], 20[__]. Tenant has full possession of the Premises, has not assigned the Lease or sublet any part of the Premises, and does not hold the Premises under an assignment or sublease[, except as follows: [_____]].

3. All base rent, rent escalations and additional rent under the Lease have been paid through [_____], 20[__]. There is no prepaid rent[, except $[_____]][, and the amount of security deposit is $[_____] [in cash][OR][in the form of a letter of credit]]. Tenant currently has no right to any future rent abatement under the Lease.

4. Base rent is currently payable in the amount of $[_____] per month.

5. Tenant is currently paying estimated payments of additional rent of $[_____] per month on account of real estate taxes, insurance, management fees and Common Area maintenance expenses.

6. All work to be performed for Tenant under the Lease has been performed as required under the Lease and has been accepted by Tenant[, except [_____]], and all allowances to be paid to Tenant, including allowances for tenant improvements, moving expenses or other items, have been paid.

7. The Lease is in full force and effect, free from default and free from any event that could become a default under the Lease, and Tenant has no claims against the landlord or offsets or defenses against rent, and there are no disputes with the landlord. Tenant has received no notice of prior sale, transfer, assignment, hypothecation or pledge of the Lease or of the rents payable thereunder[, except [_____]].

8. Tenant has no rights or options to purchase the Property.

9. To Tenant's knowledge, no hazardous wastes have been generated, treated, stored or disposed of by or on behalf of Tenant in, on or around the Premises or the Project in violation of any environmental laws.

10. The undersigned has executed this Estoppel Certificate with the knowledge and understanding that [INSERT NAME OF LANDLORD, PURCHASER OR LENDER, AS APPROPRIATE] or its assignee is [acquiring the Property/making a loan secured by the Property] in reliance on this certificate and that the undersigned shall be bound by this certificate. The statements contained herein may be relied upon by [INSERT NAME OF PURCHASER OR LENDER, AS APPROPRIATE], BRE-BMR Grove LLC, BioMed Realty II LP, and any [other]mortgagee of the Property and their respective successors and assigns.

Any capitalized terms not defined herein shall have the respective meanings given in the Lease.

Dated this [____] day of [_____], 20[__].

Selecta Biosciences, Inc.,
a Delaware corporation

By: _____
Name: _____
Title: _____

Exhibit 31.1

CERTIFICATIONS

I, Carsten Brunn, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Selecta Biosciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; 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 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.

November 8, 2019

/s/ Carsten Brunn, Ph.D.

Carsten Brunn, Ph.D.

President and Chief Executive Officer, and Director

Exhibit 31.2

CERTIFICATIONS

I, Bradford D. Dahms, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Selecta Biosciences, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; 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 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.

November 8, 2019

/s/ Bradford D. Dahms

Bradford D. Dahms

Chief Financial Officer

(Principal Financial Officer)

Exhibit 32.1

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

I, Carsten Brunn, President and Chief Executive Officer of Selecta Biosciences, Inc. (the "Company"), hereby certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. The Quarterly Report on Form 10-Q of the Company for the period ended September 30, 2019 (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 Company.

November 8, 2019

/s/ Carsten Brunn, Ph.D.

Carsten Brunn, Ph.D.

President and Chief Executive Officer, and Director

Exhibit 32.2

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

I, Bradford D. Dahms, Chief Financial Officer of Selecta Biosciences, Inc. (the "Company"), hereby certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. The Quarterly Report on Form 10-Q of the Company for the period ended September 30, 2019 (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 Company.

November 8, 2019

/s/ Bradford D. Dahms

Bradford D. Dahms
Chief Financial Officer
(Principal Financial Officer)