UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended **September 30, 2016**

OR

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

For the Transition Period from to

Commission File Number: **001-34949**

ARBUTUS BIOPHARMA CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

British Columbia, Canada	**98-0597776**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

100-8900 Glenlyon Parkway, Burnaby, BC, Canada V5J 5J8

(Address of Principal Executive Offices)

604-419-3200

(Registrant's Telephone Number, Including Area Code)

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 [X] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes [X] No [ ]

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

Large accelerated filer [ ]	Accelerated filer [X]	Non-accelerated filer [ ] (Do not check if a smaller reporting company)	Smaller reporting company [ ]

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes [ ] No [X]

As of October 31, 2016, the registrant had 54,841,494 common shares, no par value, outstanding.

ARBUTUS BIOPHARMA CORP.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (UNAUDITED)

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Balance Sheets
(Unaudited)

(Expressed in thousands of U.S. dollars, except share and per share amounts)
(Prepared in accordance with US GAAP)

	September 30, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	**$ 26,630**	$ 166,779
Short-term investments (note 2)	**123,052**	14,525
Accounts receivable	**395**	1,008
Accrued revenue	**128**	128
Investment tax credits receivable	**148**	246
Prepaid expenses and other assets	**1,459**	1,196
Total current assets	**151,812**	183,882
Long-term investments (note 2)	**—**	10,070
Property and equipment	**14,555**	12,912
Less accumulated depreciation	**(10,469)**	(9,729)
Property and equipment, net of accumulated depreciation	**4,086**	3,183
Intangible assets (note 3)	**196,318**	352,642
Goodwill (note 3)	**162,514**	162,514
Total assets	**$ 514,730**	$ 712,291
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable and accrued liabilities (note 5)	**$ 7,132**	$ 8,827
Deferred revenue (note 4)	**15**	868
Liability-classified options (notes 2 and 6)	**948**	—
Warrants (note 2)	**297**	883
Total current liabilities	**8,392**	10,578
Deferred revenue, net of current portion (note 4)	**—**	213
Contingent consideration (note 8)	**8,253**	7,497
Deferred tax liability	**81,460**	146,324
Total liabilities	**98,105**	164,612
Stockholders' equity:		

Common shares (note 6)				
Authorized - unlimited number with no par value				
Issued and outstanding: 54,841,494 (December 31, 2015 - 54,570,691)		**864,375**		834,240
Additional paid-in capital		**34,486**		30,206
Deficit		**(432,454)**		(266,985)
Accumulated other comprehensive loss		**(49,782)**		(49,782)
Total stockholders' equity		**416,625**		547,679
Total liabilities and stockholders' equity	**$**	**514,730**	$	712,291

Nature of business and future operations (note 1)
Contingencies and commitments (note 8)
Subsequent event (note 9)
See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)

(Expressed in thousands of U.S. dollars, except share and per share amounts)
(Prepared in accordance with US GAAP)

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	**2016**	2015
Revenue (note 4)				
Collaborations and contracts	**$ 87**	$ 3,035	**$ 226**	$ 8,865
Licensing fees, milestone and royalty payments	**687**	1,030	**1,460**	3,322
Total revenue	**774**	4,065	**1,686**	12,187
Expenses				
Research, development, collaborations and contracts	**15,738**	16,354	**44,097**	36,601
General and administrative	**3,720**	7,706	**34,705**	18,084
Depreciation of property and equipment	**291**	153	**760**	420
Acquisition costs	**—**	—	**—**	9,656
Impairment of intangible assets (note 3)	**—**	37,990	**156,324**	37,990
Total expenses	**19,749**	62,203	**235,886**	102,751
Loss from operations	**(18,975)**	(58,138)	**(234,200)**	(90,564)
Other income (losses)				
Interest income	**425**	183	**1,104**	466
Foreign exchange gains (losses)	**(795)**	11,801	**2,180**	16,268
Gain on disposition of financial instrument (note 4)	**—**	—	**1,000**	—
Decrease in fair value of warrant liability (note 2)	**10**	1,976	**339**	2,777
Increase in fair value of contingent consideration (note 8)	**(260)**	—	**(756)**	—
Total other income (losses)	**(620)**	13,960	**3,867**	19,511
Loss before income taxes	**(19,595)**	(44,178)	**(230,333)**	(71,053)
Income tax benefit	**—**	15,196	**64,864**	15,196
Net loss	**$ (19,595)**	$ (28,982)	**$ (165,469)**	$ (55,857)
Loss per common share				
Basic and diluted	**$ (0.37)**	$ (0.57)	**$ (3.15)**	$ (1.28)
Weighted average number of common shares				
Basic and diluted	**53,652,007**	50,756,484	**52,588,505**	43,580,555
Comprehensive loss				
Cumulative translation adjustment	**—**	(10,101)	**—**	(19,275)
Comprehensive loss	**$ (19,595)**	$ (39,083)	**$ (165,469)**	$ (75,132)

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)

(Expressed in thousands of U.S. dollars, except share and per share amounts)
(Prepared in accordance with US GAAP)

	Number of shares	Share capital	Additional paid-in capital	Deficit	Accumulated other comprehensive loss	Total stockholders' equity
December 31, 2015	**54,570,691**	**$ 834,240**	**$ 30,206**	**$ (266,985)**	**$ (49,782)**	**$ 547,679**
Stock-based compensation	—	28,968	4,570	—	—	33,538
Reclassification of equity to liability stock option awards (notes 2 and 6)	—	—	(3,243)	—	—	(3,243)
Certain fair value adjustments to liability stock option awards (notes 2 and 6)	—		3,170	—	—	3,170
Issuance of common shares pursuant to exercise of options	100,303	475	(217)	—	—	258
Issuance of common shares pursuant to exercise of warrants	170,500	692	—	—	—	692
Net loss	—	—	—	(165,469)	—	(165,469)
Balance, September 30, 2016	**54,841,494**	**$ 864,375**	**$ 34,486**	**$ (432,454)**	**$ (49,782)**	**$ 416,625**

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Statements of Cash Flow
(Unaudited)

(Expressed in thousands of U.S. dollars)
(Prepared in accordance with US GAAP)

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	**2016**	2015
OPERATING ACTIVITIES				
Net loss for the period	**$ (19,595)**	$ (28,982)	**$ (165,469)**	$ (55,857)
Items not involving cash:				
Deferred income taxes	**—**	(15,196)	**(64,864)**	(15,196)
Depreciation of property and equipment	**291**	153	**760**	420
Stock-based compensation - research, development, collaborations and contract expenses	**2,759**	2,671	**8,225**	5,376
Stock-based compensation - general and administrative expenses	**1,695**	4,832	**26,253**	9,357
Unrealized foreign exchange (gains) losses	**826**	(11,790)	**(2,130)**	(16,208)
Change in fair value of warrant liability	**(10)**	(1,976)	**(339)**	(2,777)
Change in fair value of contingent consideration	**260**	—	**756**	—
Impairment of intangible assets (note 3)	**—**	37,990	**156,324**	37,990
Net change in non-cash operating items:				
Accounts receivable	**61**	4,047	**613**	(577)
Accrued revenue	**—**	(164)	**—**	14
Investment tax credits receivable	**—**	—	**98**	—
Prepaid expenses and other assets	**584**	469	**(263)**	171
Accounts payable and accrued liabilities	**(887)**	2,408	**(1,961)**	(2,935)
Deferred revenue	**(696)**	3,011	**(1,066)**	2,054
Net cash used in operating activities	**(14,712)**	(2,527)	**(43,063)**	(38,168)
INVESTING ACTIVITIES				
Disposition (acquisition) of short and long-term investments, net	**(712)**	(17,144)	**(98,457)**	10,275
Cash acquired through acquisition	—	—	**—**	324
Acquisition of property and equipment	**(168)**	(589)	**(1,397)**	(1,113)
Net cash provided by (used) in investing activities	**(880)**	(17,733)	**(99,854)**	9,486
FINANCING ACTIVITIES				
Proceeds from issuance of common shares, net of issuance costs	—	—	**—**	142,177
Issuance of common shares pursuant to exercise of options	**76**	116	**192**	1,675
Issuance of common shares pursuant to exercise of warrants	—	—	**445**	43
Net cash provided by financing activities	**76**	116	**637**	143,895
Effect of foreign exchange rate changes on cash and cash equivalents	**(824)**	(5,972)	**2,131**	(6,311)
(Decrease) Increase in cash and cash equivalents	**(16,340)**	(26,116)	**(140,149)**	108,902
Cash and cash equivalents, beginning of period	**42,970**	207,205	**166,779**	72,187
Cash and cash equivalents, end of period	**$ 26,630**	$ 181,089	**$ 26,630**	$ 181,089
Supplemental cash flow information				
Non-cash transactions:				
Investment tax credit received	**—**	$ —	**$ —**	24
Acquisition of Arbutus Inc. excluding cash acquired	**—**	$ —	**$ —**	381,618
Acquired property and equipment in trade payables	**(266)**	—	**$ (266)**	—

See accompanying notes to the condensed consolidated financial statements.

1. Nature of business and future operations

Arbutus Biopharma Corporation (the "Company" or "Arbutus") is a biopharmaceutical business dedicated to discovering, developing, and commercializing a cure for patients suffering from chronic hepatitis B infection, a disease of the liver caused by the hepatitis B virus ("HBV").

The success of the Company is dependent on obtaining the necessary regulatory approvals to bring its products to market and achieve profitable operations. The continuation of the research and development activities and the commercialization of its products are dependent on the Company's ability to successfully complete these activities and to obtain adequate financing through a combination of financing activities and operations. It is not possible to predict either the outcome of future research and development programs or the Company's ability to continue to fund these programs in the future.

2. Significant accounting policies

Basis of presentation

These unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles of the United States of America ("U.S. GAAP") for interim financial statements and accordingly, do not include all disclosures required for annual financial statements. These statements should be read in conjunction with the Company's audited consolidated financial statements and notes thereto for the year ended December 31, 2015 and included in the Company's 2015 annual report on Form 10-K. The unaudited condensed consolidated financial statements reflect, in the opinion of management, all adjustments and reclassifications necessary to present fairly the financial position, results of operations and cash flows at September 30, 2016 and for all periods presented. The results of operations for the three and nine months ended September 30, 2016 and September 30, 2015 are not necessarily indicative of the results for the full year. These unaudited condensed consolidated financial statements follow the same significant accounting policies as those described in the notes to the audited consolidated financial statements of the Company for the year ended December 31, 2015, except as described below.

Principles of Consolidation

These unaudited condensed consolidated financial statements include the accounts of the Company and two of its wholly-owned subsidiaries, Arbutus Biopharma Inc. ("Arbutus Inc.") and Protiva Biotherapeutics Inc. ("Protiva"). All intercompany transactions and balances have been eliminated on consolidation.

In addition to Arbutus Inc. and Protiva, the Company's former wholly-owned subsidiary, Protiva Agricultural Development Company Inc. ("PADCo"), was previously recorded by the Company using the equity method. On March 4, 2016, Monsanto exercised its option to acquire 100% of the outstanding shares of PADCo, as described in note 4.

Foreign currency translation and functional currency conversion

Prior to January 1, 2016, the Company's functional currency was the Canadian dollar. Translation gains and losses from the application of the U.S. dollar as the reporting currency while the Canadian dollar was the functional currency are included as part of cumulative currency translation adjustment, which is reported as a component of shareholders' equity under accumulated other comprehensive loss.

The Company re-assessed its functional currency and determined as at January 1, 2016, its functional currency changed from the Canadian dollar to the U.S. dollar based on management's analysis of changes in the primary economic environment in which the Company operates. The change in functional currency is accounted for prospectively from January 1, 2016 and financial statements prior to and including the period ended December 31, 2015 have not been restated for the change in functional currency.

For periods prior to January 1, 2016, the effects of exchange rate fluctuations on translating foreign currency monetary assets and liabilities into Canadian dollars were included in the statement of operations and comprehensive loss as foreign exchange gain/loss. Revenue and expense transactions were translated into the U.S. dollar reporting currency at the balance sheet date at average exchange rates during the period, and assets and liabilities were translated at end of period exchange rates, except for equity transactions, which were translated at historical exchange rates. Translation gains and losses from the application of the U.S. dollar as the reporting currency while the Canadian dollar was the functional currency are included as part of the cumulative foreign currency translation adjustment, which is reported as a component of shareholders' equity in accumulated other comprehensive loss.

For periods commencing January 1, 2016, monetary assets and liabilities denominated in foreign currencies are translated into U.S. dollars using exchange rates in effect at the balance sheet date. Opening balances related to non-monetary assets and liabilities are based on prior period translated amounts, and non-monetary assets and non-monetary liabilities incurred after January 1, 2016 are translated at the approximate exchange rate prevailing at the date of the transaction. Revenue and expense transactions are translated at the approximate exchange rate in effect at the time of the transaction. Foreign exchange gains and losses are included in the statement of operations and comprehensive loss as foreign exchange gains.

Income or loss per share

Income or loss per share is calculated based on the weighted average number of common shares outstanding. Diluted loss per share does not differ from basic loss per share since the effect of the Company's stock options, liability-classified stock option awards, and warrants is anti-dilutive. During the nine months ended September 30, 2016, potential common shares of 4,978,101 (September 30, 2015 – 6,481,295) were excluded from the calculation of loss per common share because their inclusion would be anti-dilutive, of which 1,007,058 (September 30, 2015 - 3,625,411) relates to shares issued subject to repurchase provisions as part of consideration paid for the acquisition of Arbutus Inc.

Fair value of financial instruments

The Company measures certain financial instruments and other items at fair value.

To determine the fair value, the Company uses the fair value hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use to value an asset or liability and are developed based on market data obtained from independent sources. Unobservable inputs are inputs based on assumptions about the factors market participants would use to value an asset or liability. The three levels of inputs that may be used to measure fair value are as follows:

- Level 1 inputs are quoted market prices for identical instruments available in active markets.
- 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 contractual term, the input must be observable for substantially the full term. An example includes quoted market prices for similar assets or liabilities in active markets.
- Level 3 inputs are unobservable inputs for the asset or liability and will reflect management's assumptions about market assumptions that would be used to price the asset or liability.

The following table presents information about the Company's assets and liabilities that are measured at fair value on a recurring basis, in thousands, and indicates the fair value hierarchy of the valuation techniques used to determine such fair value:

	Level 1	Level 2	Level 3	September 30, 2016
Assets				
Cash and cash equivalents	$ 26,630	—	—	$ 26,630
Short-term investments	123,052	—	—	123,052
Total	$ 149,682	—	—	$ 149,682
Liabilities				
Liability-classified options	—	—	$ 948	$ 948
Warrants	—	—	297	297
Contingent consideration	—	—	8,253	8,253
Total	—	—	$ 9,498	$ 9,498

	Level 1	Level 2	Level 3	December 31, 2015
Assets				
Cash and cash equivalents	$ 166,779	—	—	$ 166,779
Short-term investments	14,525	—	—	14,525
Term deposit	10,070	—	—	10,070
Total	$ 191,374	—	—	$ 191,374
Liabilities				
Warrants	—	—	$ 883	$ 883
Contingent consideration	—	—	7,497	7,497
Total	—	—	$ 8,380	$ 8,380

The following table presents the changes in fair value of the Company's warrants:

	Liability at beginning of the period	Fair value of warrants exercised in the period	Increase (decrease) in fair value of warrants	Foreign exchange (gain) loss	Liability at end of the period
Nine months ended September 30, 2015	$ 5,099	$ (334)	$ (2,777)	$ (493)	$ 1,495
Nine months ended September 30, 2016	$ 883	$ (247)	$ (339)	$ —	$ 297

The change in fair value of warrant liability for the nine months ended September 30, 2016 is recorded in the statement of operations and comprehensive loss.

The weighted average Black-Scholes option-pricing assumptions and the resultant fair values, for warrants outstanding at September 30, 2016 and at December 31, 2015 are as follows:

		September 30, 2016		December 31, 2015
Dividend yield		**—%**		—%
Expected volatility		**49.69%**		49.07%
Risk-free interest rate		**0.51%**		0.48%
Expected average term		**0.4 years**		0.6 years
Fair value of warrants outstanding	**$**	**1.48**	$	2.33
Aggregate fair value of warrants outstanding	**$**	**297**	$	883
Number of warrants outstanding		**201,000**		379,500

Contingent consideration is a liability assumed by the Company from its acquisition of Arbutus Inc. in March 2015. To determine the fair value of the contingent consideration, the Company uses a probability weighted assessment of the likelihood the milestones would be met and the estimated timing of such payments, and then the potential contingent payments are discounted to their present value using a probability adjusted discount rate that reflects the early stage nature of the development program, time to complete the program development, and overall biotech indices, as detailed in note 8. The Company revalues the contingent consideration at the end of each reporting period and records any change in value to the statement of operations and comprehensive loss.

	Liability at beginning of the period[1]	Increase in fair value of Contingent Consideration	Liability at end of the period
Nine months ended September 30, 2015	$ 4,736	$ 1,929	$ 6,665
Nine months ended September 30, 2016	$ 7,497	$ 756	$ 8,253

1. Contingent consideration was assumed by the Company as part of its acquisition of Arbutus Inc. As such, the beginning balance for the nine-months ended September 30, 2015 was the fair value as at the acquisition date of March 4, 2015. The beginning balance for the nine-months ended September 30, 2016 was the fair value as at December 31, 2015.

Liability-classified stock option awards

The Company accounts for liability-classified stock option awards ("liability options") under ASC 718 - Compensation - Stock Compensation ("ASC 718"), under which awards of options that provide for an exercise price that is not denominated in: (a) the currency of a market in which a substantial portion of the Company's equity securities trades, (b) the currency in which the employee's pay is denominated, or (c) the Company's functional currency, are required to be classified as liabilities. Due to the change in functional currency as of January 1, 2016, certain stock option awards with exercise prices denominated in Canadian dollars changed from equity classification to liability classification. As such, the historic equity classification of these stock option awards changed to liability classification effective January 1, 2016. The change in classification resulted in reclassification of these awards from, additional paid-in capital to liability-classified options.

Liability options are re-measured to their fair values at each reporting date with changes in the fair value recognized in share-based compensation expense or additional paid-in capital until settlement or cancellation. Under ASC 718, when an award is reclassified from equity to liability, if at the reclassification date the original vesting conditions are expected to be satisfied, then the minimum amount of compensation cost to be recognized is based on the grant date fair value of the original award. Fair value changes below this minimum amount are recorded in additional paid-in capital.

Revenue recognition

The Company earns revenue from research and development collaboration and contract services, licensing fees, milestone and royalty payments. In arrangements with multiple deliverables, the delivered item or items is considered a separate unit of accounting if: (1) the delivered item has value to the customer on a standalone basis; and (2) if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in the Company's control. If the elements of the arrangement do not meet both of the criteria above, they are recognized as a single unit of accounting. If the elements do meet the criteria above, arrangement consideration is allocated to the separate units of accounting based upon their relative selling price. Non-refundable payments received under collaborative research and development agreements are recorded as revenue as services are performed and related expenditures are incurred. Non-refundable upfront license fees from collaborative licensing and development arrangements are recognized as the Company fulfills its obligations related to the various elements within the agreements, in accordance with the contractual arrangements with third parties and the term over which the underlying benefit is being conferred. If non-refundable license fees have values to the customer on a standalone basis, separate from undelivered performance obligations, they are recognized upon delivery. To date, the Company has not recognized any non-refundable license fees upon delivery.

The Company evaluates new arrangements for any substantive milestones by considering: whether substantive uncertainty exists upon execution of the arrangement; if the event can only be achieved based in whole or in part on the Company’s performance, or occurrence of a specific outcome resulting from the Company’s performance; any future performance required, and payment is reasonable relative to all deliverables; and, the payment terms in the arrangement. Payments received upon the achievement of substantive milestones are recognized as revenue in their entirety. Payments received upon the occurrence of milestones that are non-substantive are deferred and recognized as revenue over the estimated period of performance applicable to the associated collaborative agreement.

Revenue earned under research and development manufacturing collaborations where the Company bears some or all of the risk of a product manufacturing failure is recognized when the purchaser accepts the product and there are no remaining rights of return.

Revenue earned under research and development collaborations where the Company does not bear any risk of product manufacturing failure is recognized in the period the work is performed. For contracts where the manufacturing amount is specified, revenue is recognized as product is manufactured in proportion to the total amount specified under the contract.

Recent accounting pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB) or other standard setting bodies that are adopted by the Company as of the specified effective date.

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (ASC 606). The standard, as subsequently amended, is intended to clarify the principles for recognizing revenue and to develop a common revenue standard for U.S. GAAP and IFRS by creating a new Topic 606, Revenue from Contracts with Customers. This guidance supersedes the revenue recognition requirements in ASC 605, Revenue Recognition, and supersedes some cost guidance included in Subtopic 605-35, Revenue Recognition – Construction-Type and Production-Type Contracts. The core principle of the accounting standard is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those good or services. The amendments should be applied by either (1) retrospectively to each prior reporting period presented; or (2) retrospectively with the cumulative effect of initially applying this ASU recognized at the date of initial application. The new guidance would be effective for fiscal years beginning after December 15, 2017, which for the Company means January 1, 2018. The Company has begun its evaluation and, at this time, does not expect adoption of this guidance to materially impact its financial statements.

In March 2016, the FASB issued ASU 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The update is intended to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification of the statement of cash flows. Under this update, there are five simplifications for public companies. All excess tax benefits and tax deficiencies should be recognized as income tax expense or benefit in the income statement and the tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. Excess tax benefits should be classified along with other tax cash flows as an operating activity. An entity can make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures when they occur. Cash paid by an employee when directly withholding shares for tax withholding purposes should be classified as financing activity. The amendments in this update would be effective for annual periods beginning after December 15, 2016, which for the Company means January 1, 2017. Early application is permitted. The Company has begun its evaluation and, at this time, does not expect adoption of this guidance to materially impact its financial statements.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842): Recognition and Measurement of Financial Assets and Financial Liabilities. The update supersedes Topic 840, Leases and requires the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous GAAP. Topic 842 retains a distinction between finance leases and operating leases, with cash payments from operating leases classified within operating activities in the statement of cash flows. The amendments in this update are effective for fiscal years beginning after December 15, 2018 for public business entities, which for the Company means January 1, 2019. The Company does not plan to early adopt this update. The extent of the impact of this adoption has not yet been determined.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. The update addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. Under this update, the classification of cash receipts and payments that have aspects of more than one class of cash flows should be determined first by applying specific guidance in GAAP. In the absence of specific guidance, an entity should determine each separately identifiable source or use within the cash receipts and cash payments on the basis of the nature of the underlying cash flows. An entity should then classify each separately identifiable source or use within the cash receipts and payments on the basis of their nature in financing, investing, or operating activities. In situations in which cash receipts and payments have aspects of more than one class of cash flows and cannot be separated by source or use, the appropriate classification should depend on the activity that is likely to be the predominant source or use of cash flows for the item. The amendments in this update are effective for public business entities for fiscal years beginning after December 31, 2017, which for the Company means January 1, 2018, and interim periods within those fiscal years. The Company has begun its evaluation and, at this time, does not expect the update to materially impact its statement of cash flows.

3. Impairment evaluations for intangible assets and goodwill

All in-process research and development (IPR&D) acquired is currently classified as indefinite-lived and is not currently being amortized. IPR&D becomes definite-lived upon the completion or abandonment of the associated research and development efforts, and will be amortized from that time over an estimated useful life based on respective patent terms. The Company evaluates the recoverable amount of intangible assets on an annual basis and performs an annual evaluation of goodwill as of December 31 each year, unless there is an event or change in the business that could indicate impairment, in which case earlier testing is performed.

Impairment of intangible assets

During the three months ended June 30, 2016, the Company recorded an impairment charge of $156,324,000 and a corresponding income tax benefit of $64,864,000 related to the decrease in deferred tax liability for the discontinuance of the ARB-1598 program in the Immune Modulator drug class after extensive research and analysis, as well as a delay for additional exploration of the biology of the cccDNA Sterilizer drug class.

As a result of the impairment in the carrying values of the specified intangibles, as set out above, the Company reassessed the fair value of all of the IPR&D, which fair values were calculated to be above the respective carrying values; therefore, no additional impairment was recorded. At September 30, 2016, the Company did not identify any new indicators of impairment therefore a quantitative assessment was not performed.

The following table summarizes the carrying values, net of impairment of the intangible assets as at September 30, 2016:

	September 30, 2016	December 31, 2015
IPR&D – Immune Modulators	**73,243**	183,103
IPR&D – Antigen Inhibitors	**36,437**	36,437
IPR&D – cccDNA Sterilizers	**86,638**	133,102
Total IPR&D	**$ 196,318**	**$ 352,642**

Impairment evaluation of goodwill

The Company further determined that the impairment of the intangible assets triggers earlier evaluation of the carrying value of goodwill prior to the scheduled annual impairment testing date of December 31. As part of the evaluation of the recoverability of goodwill, the Company has identified only one reporting unit to which the total carrying amount of goodwill has been assigned. The income approach is used to estimate the fair value of the reporting unit, which requires estimating future cash flows and risk-adjusted discount rates. Changes in these estimates and assumptions could materially affect the determination of fair value of the reporting unit and may result in impairment charges in future periods.

As at June 30, 2016, the fair value of the reporting unit exceeded the carrying value of the reporting unit, and as such the second step of the impairment test, which measures the amount of impairment charge if any, was not required. In estimating the fair value of the reporting unit, the Company prepared a discounted cash flow model using its current best estimates of future income and a discount rate appropriate to the business, as well as by considering the Company's market capitalization. At September 30, 2016, the Company did not identify any new indicators of impairment. No impairment charge on goodwill was recorded for the period ended September 30, 2016.

4. Collaborations, contracts and licensing agreements

The following tables set forth revenue recognized under collaborations, contracts and licensing agreements, in thousands:

	Three months ended September 30,		Nine months ended September 30,	
	2016	2015	**2016**	2015
Collaborations and contracts				
DoD (a)	**$ —**	$ 2,002	**—**	$ 6,909
Monsanto (b)	**—**	309	**—**	826
Dicerna (c)	**87**	724	**226**	1,130
Total research and development collaborations and contracts	**87**	3,035	**226**	8,865
Licensing fees, milestone and royalty payments				
Monsanto licensing fees and milestone payments (b)	**—**	727	**—**	2,374
Dicerna licensing fee (c)	**640**	263	**1,066**	789
Other milestone and royalty payments (d)	**47**	40	**394**	159
Total licensing fees, milestone and royalty payments	**687**	1,030	**1,460**	3,322
Total revenue	**$ 774**	$ 4,065	**$ 1,686**	$ 12,187

The following table sets forth deferred collaborations and contracts revenue:

	September 30, 2016	December 31, 2015
DoD (a)	**$ 15**	$ 15
Dicerna current portion (c)	**—**	853
Deferred revenue, current portion	**15**	868
Dicerna long-term portion (c)	**—**	213
Total deferred revenue	**$ 15**	$ 1,081

(a) Contract with United States Government's Department of Defense ("DoD") to develop TKM-Ebola

On July 14, 2010, the Company signed a contract with the DoD to advance TKM-Ebola, an RNAi therapeutic utilizing the Company's lipid nanoparticle technology to treat Ebola virus infection.

On October 1, 2015, the Company received formal notification from the DoD that, due to the unclear development path for TKM-Ebola and TKM-Ebola-Guinea, the Ebola-Guinea Manufacturing and the Ebola-Guinea IND submission statements of work had been terminated, subject to the completion of certain post-termination obligations. The TKM-Ebola portion of the contract was completed in November 2015. The Company is currently conducting contract close out procedures with the DoD.

(b) Option and Services Agreements with Monsanto Company ("Monsanto")

On January 13, 2014, the Company and Monsanto signed an Option Agreement and a Services Agreement (together, the "Agreements"). Under the Agreements, Monsanto had an option to obtain a license to use the Company's proprietary delivery technology and related intellectual property for use in agriculture.

Under the Agreements, the Company established a wholly-owned subsidiary, PADCo. The Company determined that PADCo was a variable interest entity ("VIE"); however, Monsanto is the primary beneficiary of the arrangement. PADCo was established to perform research and development activities, which were funded by Monsanto in return for a call option to acquire the equity or all of the assets of PADCo. On March 4, 2016, Monsanto exercised its option to acquire 100% of the outstanding shares of PADCo and paid the Company an option exercise fee of $1,000,000. From the acquisition of PADCo, Monsanto received a worldwide, exclusive right to use the Company's proprietary delivery technology in the field of agriculture. The Company recorded the exercise fee received as gain on disposition of financial instrument on its consolidated statement of operations and comprehensive loss for the nine months ended September 30, 2016.

(c) License and Development and Supply Agreement with Dicerna Pharmaceuticals, Inc. ("Dicerna")

On November 16, 2014, the Company signed a License Agreement and a Development and Supply Agreement (together, the "Agreements") with Dicerna to develop, manufacture, and commercialize products directed to the treatment of Primary Hyperoxaluria 1 ("PH1"). In consideration for the rights granted under the Agreements, Dicerna paid the Company an upfront cash payment of $2,500,000. The Company is also entitled to receive payments from Dicerna on manufacturing and services provided, as well as further payments with the achievement of development and regulatory milestones of up to $22,000,000, in aggregate, and potential commercial royalties. Further, under the Agreements, a joint development committee has been established to provide guidance and direction on the progression of the collaboration.

The Company determined the deliverables under the Agreements included the rights granted, participation in the joint development committee, materials manufactured and other services provided, as directed under the joint development committee. The license and participation in the joint development committee have been determined by the Company to not have standalone value due to the uniqueness of the subject matter under the Agreements. Therefore, these deliverables are treated as one unit of accounting and recognized as revenue over the performance period. In September 2016, Dicerna announced the discontinuation of their DCR-PH1 program using the Company's technology. As such, the Company revised the estimated completion date of performance period from March 2017 to September 30, 2016, at which time the Company has no further remaining performance obligations. This resulted in the recognition of $640,000 and $1,066,000 in Dicerna license fee revenue for the three and nine months ended September 30, 2016, respectively.

The Company has determined that manufacturing services and other services provided have standalone value, as a separate statement of work is executed and invoiced for each manufacturing or service work order. The relative fair values are determined as a batch price or fee is estimated upon the execution of each work order, with actual expenditures charged at comparable market rates with embedded margins on each work order.

Manufacturing work orders are invoiced at the time of execution of the work order, at the initiation of manufacture, and at the release of materials. The Company has deferred the recognition of revenue on all cash deposit payments received for manufacturing work orders until acceptance of inventory. Revenue from service work orders is recognized as the services are performed.

(d) Agreements with Spectrum Pharmaceuticals, Inc. ("Spectrum")

On May 6, 2006, the Company signed a number of agreements with Talon Therapeutics, Inc. ("Talon", formerly Hana Biosciences, Inc.) including the grant of worldwide licenses (the "Talon License Agreement") for three of the Company's chemotherapy products, Marqibo®, Alocrest ™ (Optisomal Vinorelbine) and Brakiva ™ (Optisomal Topotecan).

On August 9, 2012, the Company announced that Talon had received accelerated approval for Marqibo from the FDA for the treatment of adult patients with Philadelphia chromosome negative acute lymphoblastic leukemia in second or greater relapse or whose disease has progressed following two or more anti-leukemia therapies. Marqibo is a liposomal formulation of the chemotherapy drug vincristine. In the year ended December 31, 2012, the Company received a milestone of $1,000,000 based on the FDA's approval of Marqibo and will receive royalty payments based on Marqibo's commercial sales. There are no further milestones related to Marqibo but the Company is eligible to receive total milestone payments of up to $18,000,000 on Alocrest and Brakiva.

Talon was acquired by Spectrum in July 2013. The acquisition does not affect the terms of the license between Talon and the Company. On September 3, 2013, Spectrum announced that they had shipped the first commercial orders of Marqibo. For the three and nine months ended September 30, 2016, the Company recorded $50,000 and $136,000 in Marqibo royalty revenue (three and nine months ended September 30, 2015 - $40,000 and $159,000 respectively). For the nine months ended September 30, 2016, the Company accrued 2.5% in royalties due to TPC in respect of the Marqibo royalty earned by the Company – see note 8, contingencies and commitments.

5. Accounts payable and accrued liabilities

Accounts payable and accrued liabilities are comprised of the following, in thousands:

		September 30, 2016		December 31, 2015
Trade accounts payable	**$**	**2,071**	$	2,610
Research and development accruals		**2,568**		2,358
Professional fee accruals		**264**		640
Deferred lease inducements		**244**		297
Payroll accruals		**1,252**		2,331
Other accrued liabilities		**733**		591
	$	**7,132**	$	8,827

6. Share Capital

(a) Financing

On March 25, 2015, the Company announced that it had completed an underwritten public offering of 7,500,000 common shares, at a price of $20.25 per share, representing gross proceeds of $151,875,000. The Company also granted the underwriters a 30 day option to purchase an additional 1,125,000 shares for an additional $22,781,000 to cover any over-allotments. The underwriters did not exercise the option. The cost of financing, including commissions and professional fees, was $9,700,000, resulting in net proceeds of $142,175,000.

(b) Stock-based compensation

At the Company's annual general and special meeting of shareholders on May 19, 2016, the shareholders of the Company approved the adoption of the Company's 2016 Omnibus Share and Incentive Plan (the "2016 Plan") and the reserve of 5,000,000 shares of the Company issuable pursuant to awards under the 2016 Plan. These include both equity-classified and liability-classified stock options. The Company's 2011 Omnibus Share Compensation Plan, as amended, also remains in effect.

(c) Liability-classified stock options

Valuation assumptions

Liability options are re-measured to their fair values at each reporting date, using the Black-Scholes valuation model. The methodology and assumptions prevailing at the re-measurement date used to estimate the fair values of liability options remain unchanged from the date of grant of equity classified stock option awards. Assumptions about the Company's expected stock-price volatility are based on the historical volatility of the Company's publicly traded stock. The risk-free interest rate used for each grant is equal to the zero coupon rate for instruments with a similar expected life. Expected life assumptions are based on the Company's historical data. The weighted average Black-Scholes option-pricing assumptions and the resultant fair values as at the reclassification date of January 1, 2016, and as at September 30, 2016, are presented in the following table:

		September 30, 2016		**January 1, 2016**
Dividend yield		**—%**		—%
Expected volatility		**70.56%**		97.78%
Risk-free interest rate		**0.66%**		0.86%
Expected average term (years)		**3.9**		5.3
Fair value of options outstanding	**$**	**1.52**	$	3.33
Aggregate fair value of options outstanding (in thousands)	**$**	**948**	$	1,909
Number of options outstanding		**639,500**		718,333

Stock option activity for liability options

	Number of optioned common shares		Weighted average exercise price (C$)		Weighted average exercise price (US$)		Aggregate intrinsic value (US$)
Balance, January 1, 2016	718,333	$	7.24	$	5.23	$	604
Options exercised	(30,000)		3.00		2.29		35
Options forfeited, canceled or expired	(48,833)		8.19		6.24		—
Balance, September 30, 2016	639,500	$	7.36	$	5.61	$	251

Liability options expire at various dates from August 6, 2017 to May 22, 2024.

The following table summarizes information pertaining to liability options outstanding at September 30, 2016:

			Options outstanding September 30, 2016			Options exercisable September 30, 2016	
Range of Exercise prices (US$)			Number of options outstanding	Weighted average remaining contractual life (years)	Weighted average exercise price (US$)	Number of options exercisable	Weighted average exercise price (US$)
$1.30	to	$1.83	120,000	4.3	$ 1.52	120,000	$ 1.52
$2.94	to	$3.93	120,000	4.2	3.50	120,000	3.50
$4.06	to	$4.38	74,000	5.9	4.32	74,000	4.32
$4.96	to	$6.33	76,250	5.6	5.97	76,250	5.97
$6.95	to	$6.95	150,000	7.0	6.95	112,500	6.95
$9.55	to	$12.50	99,250	7.4	11.79	83,500	11.71
$1.30	to	$12.50	639,500	5.8	$ 5.61	586,250	$ 5.35

At September 30, 2016, there were 586,250 liability options exercisable with a weighted average exercise price of $5.35 (C$7.02). The weighted average remaining contractual life of exercisable liability options as at September 30, 2016 was 5.6 years.

A summary of the Company's non-vested liability stock option activity and related information at September 30, 2016 is as follows:

	Number of optioned common shares	Weighted average fair value (US$)
Non-vested at January 1, 2016	134,000	$ 3.61
Options vested	(55,750)	0.72
Non-vested options forfeited	(25,000)	0.16
Non-vested at September 30, 2016	53,250	$ 1.77

The weighted average remaining contractual life for liability options expected to vest at September 30, 2016 was 7.1 years and the weighted average exercise price for these options was $8.50 (C$11.16) per share.

The total fair value of liability options that vested during the nine months ended September 30, 2016 was $40,300.

7. Concentrations of credit risk

Credit risk is defined by the Company as an unexpected loss in cash and earnings if a collaborative partner is unable to pay its obligations on a timely basis. The Company’s main source of credit risk is related to its accounts receivable balance which principally represents temporary financing provided to collaborative partners in the normal course of operations.

The Company does not currently maintain a provision for bad debts as the majority of accounts receivable are from collaborative partners or government agencies and are considered low risk.

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at September 30, 2016 was the accounts receivable balance of $395,000 (December 31, 2015 -$1,008,000).

All accounts receivable balances were current as at September 30, 2016 and at December 31, 2015.

8. Contingencies and commitments

Property lease

On August 9, 2016, the Company signed a new lease agreement with a target renovation start date of November 1, 2016, subsequently amended to October 7, 2016. The new location, 701 Veterans Circle, Warminster, Pennsylvania, has approximately 35,000 square feet of laboratory facilities and office space. Once renovations are complete, this facility will replace the current Doylestown, Pennsylvania facility. The term of the lease is 10.6 years and expires on April 30, 2027, with the option to extend for up to two 5-year terms. The estimated total facility commitment, including operating costs, is approximately $6,900,000.

Product development partnership with the Canadian Government

The Company entered into a Technology Partnerships Canada ("TPC") agreement with the Canadian Federal Government on November 12, 1999. Under this agreement, TPC agreed to fund 27% of the costs incurred by the Company, prior to March 31, 2004, in the development of certain oligonucleotide product candidates up to a maximum contribution from TPC of $7,179,000 (C$9,323,000). As at September 30, 2016, a cumulative contribution of $2,823,000 (C$3,702,000) has been received and the Company does not expect any further funding under this agreement. In return for the funding provided by TPC, the Company agreed to pay royalties on the share of future licensing and product revenue, if any, that is received by the Company on certain non-siRNA oligonucleotide product candidates covered by the funding under the agreement. These royalties are payable until a certain cumulative payment amount is achieved or until a pre-specified date. In addition, until a cumulative amount equal to the funding actually received under the agreement has been paid to TPC, the Company agreed to pay 2.5% royalties on any royalties the Company receives for Marqibo. For the three and nine months ended September 30, 2016, the Company earned royalties on Marqibo sales in the amount of $50,000 and $136,000 respectively (three and nine months ended September 30, 2015 – $40,000 and $159,000 respectively) (see note 4(d)), resulting in $3,000 being recorded by the Company as royalty payable to TPC (September 30, 2015 -$4,000). The cumulative amount paid or accrued up to September 30, 2016 was $15,000, resulting in the contingent amount due to TPC being $2,808,000 (C$3,683,000)

License agreement with Marina Biotech, Inc. (“Marina”)

On November 29, 2012 the Company announced a worldwide, non-exclusive license to a novel RNAi payload technology called Unlocked Nucleobase Analog (“UNA”) from Marina for the development of RNAi therapeutics.

UNA technology can be used in the development of RNAi therapeutics, which treats disease by silencing specific disease causing genes. UNAs can be incorporated into RNAi drugs and have the potential to improve them by increasing their stability and reducing off-target effects.

Under the license agreement the Company paid Marina an upfront fee of $300,000. A further license payment of $200,000 was paid in 2013 and the Company will make milestone payments of up to $3,250,000 and royalties on each product developed by the Company that uses Marina’s UNA technology. The payments to Marina are expensed to research, development, collaborations and contracts expense.

Effective August 9, 2013, Marina’s UNA technology was acquired by Arcturus Therapeutics, Inc. (“Arcturus”) and the UNA license agreement between the Company and Marina was assigned to Arcturus. The terms of the license are otherwise unchanged.

Arbitration with the University of British Columbia (“UBC”)

Certain early work on lipid nanoparticle delivery systems and related inventions was undertaken at Inex Pharmaceuticals Inc and assigned to the University of British Columbia (UBC). These inventions are licensed to the Company by UBC under a license agreement, initially entered in 1998 as amended in 2001, 2006 and 2007. The Company has granted sublicenses under the UBC license to Alnylam. Alnylam has in turn sublicensed back to the Company under the licensed UBC patents for discovery, development and commercialization of siRNA products.

On November 10, 2014, UBC filed a notice of arbitration against the Company and on January 16, 2015, filed a Statement of Claim, which alleges entitlement to $3,500,000 in allegedly unpaid royalties based on publicly available information, and an unspecified amount based on non-public information. UBC also seeks interest and costs, including legal fees. The Company continues to dispute UBC's allegations, and no dates have been scheduled for this arbitration. However, the Company notes that arbitration is subject to inherent uncertainty and an arbitrator could rule against the Company. The Company has not recorded an estimate of the possible loss associated with this arbitration, due to the uncertainties related to both the likelihood and amount of any possible loss or range of loss. However, the defense of arbitration and related matters are costly and may divert the attention of the Company's management and other resources that would otherwise be engaged in other activities. Costs related to the arbitration are recorded by the Company as incurred.

Contingent consideration from Arbutus Inc. acquisition of Enantigen and License Agreements between Enantigen and the Baruch S. Blumberg Institute ("Blumberg") and Drexel University ("Drexel")

In October 2014, Arbutus Inc. acquired all of the outstanding shares of Enantigen pursuant to a stock purchase agreement. Through this transaction, Arbutus Inc. acquired a HBV surface antigen secretion inhibitor program and a capsid assembly inhibitor program, each of which are now assets of Arbutus, following the Company's merger with Arbutus Inc.

Under the stock purchase agreement, Arbutus Inc. agreed to pay up to a total of $21,000,000 to Enantigen's selling stockholders upon the achievement of certain triggering events related to Enantigen's two programs in pre-clinical development related to HBV therapies. The first triggering event is the enrollment of first patient in Phase 1b clinical trial in HBV patients, which the Company does not expect to occur in the next twelve-month period.

The regulatory, development and sales milestone payments have an estimated fair value of approximately $6,727,000 as at the date of acquisition of Arbutus Inc., and have been treated as contingent consideration payable in the purchase price allocation, based on information available at the date of acquisition, using a probability weighted assessment of the likelihood the milestones would be met and the estimated timing of such payments, and then the potential contingent payments were discounted to their present value using a probability adjusted discount rate that reflects the early stage nature of the development program, time to complete the program development, and overall biotech indices.

Contingent consideration is recorded as a financial liability, and measured at its fair value at each reporting period with any changes in fair value from the previous reporting period recorded in the statement of operations and comprehensive loss (see note 2).

Drexel and Blumberg

In February 2014, Arbutus Inc. entered into a license agreement with Blumberg and Drexel that granted an exclusive, worldwide, sub-licensable license to three different compound series: cccDNA inhibitors, capsid assembly inhibitors and HCC inhibitors.

In partial consideration for this license, Arbutus Inc. paid a license initiation fee of $150,000 and issued warrants to Blumberg and Drexel. The warrants were exercised in 2014. Under this license agreement, Arbutus Inc. also agreed to pay up to $3,500,000 in development and regulatory milestones per licensed compound series, up to $92,500,000 in sales performance milestones per licensed product, and royalties in the mid-single digits based upon the proportionate net sales of licensed products in any commercialized combination. The Company is obligated to pay Blumberg and Drexel a double digit percentage of all amounts received from the sub-licensees, subject to customary exclusions.

In November 2014, Arbutus Inc. entered into an additional license agreement with Blumberg and Drexel pursuant to which it received an exclusive, worldwide, sub-licensable license under specified patents and know-how controlled by Blumberg and Drexel covering epigenetic modifiers of cccDNA and STING agonists. In consideration for these exclusive licenses, Arbutus Inc. made an upfront payment of $50,000. Under this agreement, the Company is required to pay up to $1,200,000 for each licensed product upon the achievement of a specified regulatory milestone and a low single digit royalty, based upon the proportionate net sales of compounds covered by this intellectual property in any commercialized combination. The Company is also obligated to pay Blumberg and Drexel a double digit percentage of all amounts received from its sub-licensees, subject to exclusions.

Research Collaboration and Funding Agreement with Blumberg

In October 2014, Arbutus Inc. entered into a research collaboration and funding agreement with Blumberg under which the Company will provide $1,000,000 per year of research funding for three years, renewable at the Company's option for an additional three years, for Blumberg to conduct research projects in HBV and liver cancer pursuant to a research plan to be agreed upon by the parties. Blumberg has exclusivity obligations to Arbutus with respect to HBV research funded under the agreement. In addition, the Company has the right to match any third party offer to fund HBV research that falls outside the scope of the research being funded under the agreement. Blumberg has granted the Company the right to obtain an exclusive, royalty bearing, worldwide license to any intellectual property generated by any funded research project. If the Company elects to exercise its right to obtain such a license, the Company will have a specified period of time to negotiate and enter into a mutually agreeable license agreement with Blumberg. This license agreement will include the following pre negotiated upfront, milestone and royalty payments: an upfront payment in the amount of $100,000; up to $8,100,000 upon the achievement of specified development and regulatory milestones; up to $92,500,000 upon the achievement of specified commercialization milestones; and royalties at a low single to mid-single digit rates based upon the proportionate net sales of licensed products from any commercialized combination.

On June 5, 2016, the Company and Blumberg entered into an amended and restated research collaboration and funding agreement, primarily to: (i) increase the annual funding amount to Blumberg from $1,000,000 to $1,100,000; (ii) extend the initial term through to October 29, 2018; (iii) provide an option for the Company to extend the term past October 29, 2018 for two additional one year terms; and (iv) expand our exclusive license under the Agreement to include the sole and exclusive right to obtain and exclusive, royalty-bearing, worldwide and all-fields license under Blumberg's rights in certain other inventions described in the agreement.

NeuroVive Pharmaceutical AB ("NeuroVive")

In September 2014, Arbutus Inc. entered into a license agreement with NeuroVive that granted them an exclusive, worldwide, sub-licensable license to develop, manufacture and commercialize, for the treatment of HBV, oral dosage form sanglifehrin based cyclophilin inhibitors (including OCB-30).

In 2015, the Company discontinued the OCB-30 development program based on significant research and analysis. In July 2016, the Company provided NeuroVive with a notice of termination of the license agreement.The parties agreed to terminate the agreement in October 2016.

Cytos Biotechnology Ltd ("Cytos")

On December 30, 2014, Arbutus Inc. entered into an exclusive, worldwide, sub-licensable (subject to certain restrictions with respect to licensed viral infections other than hepatitis) license to six different series of compounds. The licensed compounds are Qbeta-derived virus-like particles that encapsulate TLR9, TLR7 or RIG-I agonists and may or may not be conjugated with antigens from the hepatitis virus or other licensed viruses. The Company has an option to expand this license to include additional viral infections other than influenza and Cytos will retain all rights for influenza, all non-viral infections, and all viral infections (other than hepatitis) for which it has not exercised its option.

In partial consideration for this license, the Company is obligated to pay Cytos up to a total of $67,000,000 for each of the six licensed compound series upon the achievement of specified development and regulatory milestones; for hepatitis and each additional licensed viral infection, up to a total of $110,000,000 upon the achievement of specified sales performance milestones; and tiered royalty payments in the high-single to low-double digits, based upon the proportionate net sales of licensed products in any commercialized combination. In 2016, the Company discontinued the TLR9 development program based on significant levels of research and analysis (refer to note 3 above).

9. Subsequent event

Termination of License Agreement with Acuitas

In December 2013, the Company entered into a cross-license agreement with Acuitas Therapeutics Inc., or Acuitas. The terms of the cross-license agreement provided Acuitas with access to certain of the Company's earlier intellectual property generated prior to April 2010 for a specific field. On August 29, 2016, the Company provided Acuitas with notice that it considered Acuitas to be in material breach of the cross-license agreement. The cross-license agreement provides that it may be terminated upon any material breach by the other party 60 days after receipt of written notice of termination describing the material breach in reasonable detail. On October 25, 2016, Acuitas filed a Notice of Civil Claim in the Supreme Court of British Columbia seeking an order that the Company perform its obligations under the Cross License Agreement, for damages ancillary to specific performance, injunctive relief, interest and costs. The Company disputes Acuitas' position and have not recorded an estimate of the possible loss associated with this claim, due to the uncertainties related to both the likelihood and amount of any possible loss or range of loss. The Company will file its response within the time frame prescribed by the Court.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis by our management of our financial position and results of operations in conjunction with our audited consolidated financial statements and related notes thereto included as part of our Annual Report on Form 10-K for the year ended December 31, 2015 and our unaudited condensed consolidated financial statements for the three and nine month period ended September 30, 2016. Our consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles and are presented in U.S. dollars.

FORWARD-LOOKING STATEMENTS

The information in this report contains forward-looking statements within the meaning of the Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, and forward looking information within the meaning of Canadian securities laws (collectively, "forward-looking statements"). Forward-looking statements in this report include statements about our strategy, future operations, clinical trials, prospects and the plans of management; the discovery, development and commercialization of a cure for HBV; our beliefs and development path and strategy to achieve a cure for HBV; evaluating combinations of two or more drug candidates in cohorts of patients with chronic HBV infection, and using the results to adaptively design additional treatment regimens for the next cohorts; closing out our contract with the DoD; the timing of triggering events with Enantigen; evaluating different treatment durations to determine the optimal finite duration of therapy, until we select combination therapy regimens and treatment durations to conduct Phase III clinical trials intended to ultimately support regulatory filings for marketing approval; multi-dose HBsAg reduction data on ARB-1467 in 2H16; filing an IND (or equivalent) for ARB-1740 in 2H16; filing an IND (or equivalent) for AB-423 in 2H16; discontinuing the ARB-1598 development program; not expecting adoption of new accounting guidance to materially impact our financial statements; the design of the ARB-1467 Phase II multi-dosing study; the effectiveness of surface antigen secretion inhibitors; the effectiveness of core protein inhibitors; exploring partnership opportunities to enable further study of TKM-PLK-1 in HCC; a New Drug Application filing for Alnylam's patisiran program in 2017; low-single-digit royalty payments as Alnylam's LNP-enabled products are commercialized; mid-single digit royalty payments based on Marqibo's commercial sales; and filing a response to the Acuitas Notice of Civil Claim within the time frame prescribed by the Court..

With respect to the forward-looking statements contained in this report, we have made numerous assumptions regarding, among other things: LNP's status as a leading RNAi delivery technology; our research and development capabilities and resources; the effectiveness of our products as a treatment for chronic Hepatitis B infection or other diseases; the timing and quantum of payments to be received under contracts with our partners; assumptions related to our share price volatility, expected lives of warrants and options; and our financial position and its ability to execute its business strategy. While we consider these assumptions to be reasonable, these assumptions are inherently subject to significant business, economic, competitive, market and social uncertainties and contingencies.

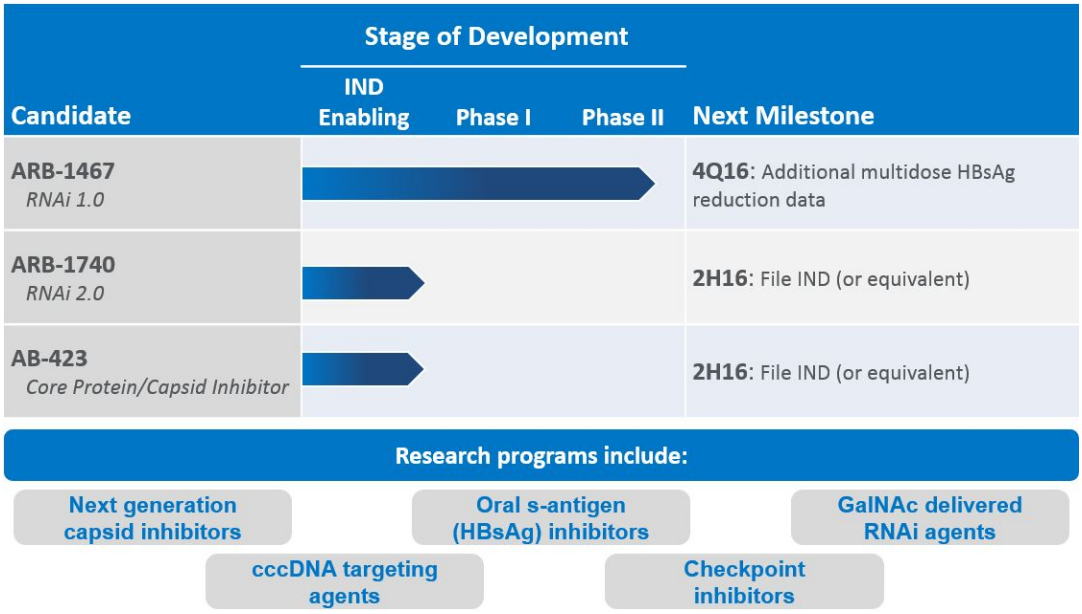
Our actual results could differ materially from those discussed in the forward-looking statements as a result of a number of important factors, including the risk factors discussed in this report and the risk factors discussed in our Annual Report on Form 10-K under the heading "Risk Factors," and the risks discussed in our other filings with the Securities and Exchange Commission and Canadian Securities Regulators. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis, judgment, belief or expectation only as of the date hereof. All forward-looking statements herein are qualified in their entirety by this cautionary statement, and we explicitly disclaim any obligation to revise or update any such forward-looking statements or to publicly announce the result of any revisions to any of the forward-looking statements contained herein to reflect future results, events or developments, except as required by law.

OVERVIEW

Arbutus Biopharma Corporation ("Arbutus", the "Company", "we", "us", and "our") is a publicly traded industry-leading Hepatitis B Virus (HBV) therapeutic solutions company. HBV represents a significant unmet medical need, and given the complex biology of the disease, we believe combination therapies are the key to HBV treatment and a potential cure, and development can be accelerated when multiple components of a combination therapy regimen are controlled by the same company. We have assembled an HBV pipeline consisting of multiple drug candidates with complementary mechanisms of action, and plan to continue to broaden our pipeline.

HBV Product Pipeline

Our product pipeline, like our business, is focused on finding a cure for chronic HBV infection, with the objective of developing a combination of products that intervene at different points in the viral life cycle, and reactivating the host immune system. Given our strong scientific and research capabilities in-house, we are able to conduct preclinical combination studies to evaluate combinations of our proprietary pipeline candidates. Once compounds within the portfolio with sufficient activity have been identified, we intend, subject to discussions with regulatory authorities, to evaluate combinations of two or more drug candidates in cohorts of patients with chronic HBV infection. We expect to use these results to adaptively design additional treatment regimens for the next cohorts. We also plan to evaluate different treatment durations to determine the optimal finite duration of therapy. We plan to continue this iterative process until we select combination therapy regimens and treatment durations to conduct Phase III clinical trials intended to ultimately support regulatory filings for marketing approval.



We intend to continue to expand our HBV pipeline through internal development, acquisitions and in-licenses. We also have a research collaboration agreement with the Baruch S. Blumberg Institute that provides exclusive rights to in-license any intellectual property generated through the collaboration.

RNAi (ARB-1467 & ARB-1740)

Our lead RNAi HBV candidate, ARB-1467 (formerly TKM-HBV), is designed to reduce Hepatitis B surface antigen (HBsAg) expression in patients chronically infected with HBV. Reducing HBsAg is thought to be a key prerequisite to enable a patient's immune system to raise an adequate immune response against the virus. The ability of ARB-1467 to inhibit numerous viral elements in addition to HBsAg increases the likelihood of affecting the viral infection.

ARB-1467 is a multi-component RNAi therapeutic that simultaneously targets three sites on the HBV genome, including the HBsAg coding region. Targeting three distinct and highly conserved sites on the HBV genome is intended to facilitate potent knockdown of all viral mRNA transcripts and viral antigens across a broad range of HBV genotypes and reduce the risk of developing antiviral resistance. In preclinical models, ARB-1467 treatment results in reductions in intrahepatic and serum HBsAg, HBV DNA, cccDNA, Hepatitis B e antigen (HBeAg) and Hepatitis B c antigen (HBcAg). ARB-1467 was evaluated in a Phase I Single Ascending Dose (SAD) trial designed to assess the safety, tolerability and pharmacokinetics of intravenous administration of the product in healthy adult subjects. In the Phase I SAD study, healthy volunteer subjects were dosed up to a dose of 0.4 mg/kg but a defined maximum tolerated dose was not reached.

The Phase II trial is a multi-dose study in chronic HBV patients who are also receiving nucleot(s)ide analog therapy. The trial consists of three cohorts, each enrolling eight subjects; six receiving three monthly doses of ARB-1467, and two receiving placebo. The first two cohorts include HBeAg- patients, followed by a third cohort in HBeAg+ patients. ARB-1467 is administered at 0.2 mg/kg and 0.4 mg/kg in the HBeAg- cohorts (Cohorts 1 and 2), and at 0.4 mg/kg in the HBeAg+ cohort (Cohort 3). Interim results from this trial based on single dose administration of ARB-1467 in Cohorts 1 and 2 demonstrate significant reductions in serum HBsAg levels, and multiple dose results from Cohort 1 show a step-wise, additive reduction in serum HBsAg. This trial is ongoing and additional data is expected by the end of 2016, and final data from Cohorts 1-3 is expected in the first half of 2017. In addition, we expect to add an additional cohort to evaluate an alternate dosing regimen.

While we are focused on development of our lead HBV product candidates, we believe in continuous innovation and will incorporate technological and product design advancements that may result in an improvement in safety and/or efficacy. An example of this is our follow-on RNAi HBV candidate, ARB-1740. ARB-1740 is more potent than ARB-1467 in preclinical studies and has the potential to be effective at lower clinical doses than ARB-1467. ARB-1740 is chemically distinct from ARB-1467 (includes different target sequences) and employs the same LNP formulation as ARB-1467. We plan to file an Investigational New Drug (IND) application (or equivalent filing) for ARB-1740 by the end of 2016.

Core Protein/ Capsid Assembly Inhibitor (AB-423)

HBV core protein, or capsid, is required for viral replication and core protein may have additional roles in cccDNA function. Current nucleot(s)side analog therapy significantly reduces HBV DNA levels in the serum but HBV replication continues in the liver, thereby enabling HBV infection to persist. Effective therapy for patients requires new agents which will effectively block viral replication. We are developing core protein inhibitors (also known as capsid assembly inhibitors) as oral therapeutics for the treatment of chronic HBV infection. By inhibiting assembly of the viral capsid, the ability of hepatitis B virus to replicate is impaired, resulting in reduced cccDNA. We presented preclinical combination data from our lead core protein/capsid assembly inhibitor AB-423 at scientific conferences in April 2016 and June 2016. We plan to file an IND (or equivalent filing) for AB-423 by the end of 2016. In addition to AB-423, our core protein/capsid assembly inhibitor discovery effort is active and ongoing and has already generated promising back-up compounds.

Our Proprietary Delivery Technology

Development of RNAi therapeutic products is currently limited by the instability of the RNAi trigger molecules in the bloodstream and the inability of these molecules to access target cells or tissues following administration. Delivery technology is necessary to protect these drugs in the bloodstream to allow efficient delivery and cellular uptake by the target cells. Arbutus has developed a proprietary delivery platform called Lipid Nanoparticle (LNP). The broad applicability of this platform to RNAi development has established Arbutus as a leader in this new area of innovative medicine.

Our proprietary LNP delivery technology allows for the successful encapsulation of RNAi trigger molecules in LNP administered intravenously, which travel through the bloodstream to target tissues or disease sites. LNPs are designed to protect the triggers, and stay in the circulation long enough to accumulate at disease sites, such as the liver or cancerous tumors. LNPs are then taken up into the target cells by a process called endocytosis. Subsequent activation by the changing environment inside the cell causes the LNP to release the trigger molecules, which can then successfully mediate RNAi.

Ongoing Advancements in LNP Technology

Our LNP technology represents the most widely adopted delivery technology in RNAi, which has enabled several clinical trials and has been administered to hundreds of human subjects. We continue to explore opportunities to generate value from our LNP platform technology, which is well suited to deliver therapies based on RNAi, mRNA, and gene editing constructs. We have also made progress in developing a proprietary GalNAc conjugate technology to enable subcutaneous delivery of an RNAi therapeutic targeting hepatitis B surface antigen and/or other HBV targets.

Suspended Non-HBV RNAi Assets

Our intent is to focus our efforts on discovering, developing and commercializing a cure for patients suffering from chronic HBV infection. As such, we have suspended further development of our non-HBV assets and are exploring different strategic options to maximize the value of these assets. Additional information on these programs can be found in Part I, Item 1, “— Business-Suspended Non-HBV RNAi Assets,” of the annual report on Form 10-K, filed on March 9, 2016.

TKM-PLK1

We have completed the Phase I/II TKM-PLK1 clinical study in patients with advanced Hepatocellular Carcinoma (HCC). Topline results from this study show that TKM-PLK1 was well-tolerated at a dose of 0.6 mg/kg, 51% of subjects showed overall stable disease (SD) according to RECIST criteria, 22% of subjects showed an overall partial response (PR) according to Choi response criteria, and tumor density was reduced by up to 59%. We intend to explore partnership opportunities to enable further study of TKM-PLK-1 in HCC.

Partner Programs

Patisiran (ALN-TTR02)

Alnylam has a license to use our intellectual property to develop and commercialize products and may only grant access to our LNP technology to its partners if it is part of a product sublicense. Alnylam's license rights are limited to patents that we have filed, or that claim priority to a patent that was filed, before April 15, 2010. Alnylam's patisiran (ALN-TTR02) program represents the most clinically advanced application of our LNP delivery technology, and results demonstrate that multi-dosing with our LNP has been well-tolerated with treatments out to 25 months. A New Drug Application filing for Alnylam's patisiran program is expected in 2017. We are entitled to low to mid-single-digit royalty payments escalating based on sales performance as Alnylam's LNP-enabled products are commercialized.

Marqibo®

Marqibo®, originally developed by Arbutus, is a novel, sphingomyelin/cholesterol liposome-encapsulated formulation of the FDA-approved anticancer drug vincristine. Marqibo's approved indication is for the treatment of adult patients with Philadelphia chromosome-negative acute lymphoblastic leukemia (Ph-ALL) in second or greater relapse or whose disease has progressed following two or more lines of anti-leukemia therapy. Our licensee, Spectrum Pharmaceuticals, Inc. (Spectrum), launched Marqibo through its existing hematology sales force in the United States. Spectrum has ongoing trials evaluating Marqibo in three additional indications, which are: first line use in patients with Philadelphia Negative Acute Lymphoblastic Leukemia (Ph-ALL), Pediatric ALL and Non-Hodgkin's lymphoma. We are entitled to mid-single digit royalty payments based on Marqibo's commercial sales.

DCR-PH1

In November 2014, we signed a licensing and collaboration agreement with Dicerna Pharmaceuticals, Inc. to utilize our LNP delivery technology exclusively in Dicerna's primary hyperoxaluria type 1 (DCR-PH1) development program. Data from the DCR-PH1-102 clinical trial, in which 21 subjects were randomized to receive DCR-PH1 at doses of 0.005, 0.015 and 0.05 mg/kg or placebo, showed an increase in urine glycolate levels, a biomarker of DCR-PH1 treatment activity, in the top two DCR-PH1 dosing groups. In September 2016, Dicerna announced the discontinuation of its DCR-PH1 program.

Recent Developments

Facility Lease Agreement

In August 2016, we entered into a lease agreement for approximately 35,155 square feet of space in Warminster, Pennsylvania. This facility includes a research and development laboratory and will represent Arbutus' primary U.S. site.

NeuroVive Pharmaceutical AB

In September 2014, Arbutus Inc. entered into a license agreement with NeuroVive that granted them an exclusive, worldwide, sub-licensable license to develop, manufacture and commercialize, for the treatment of HBV, oral dosage form sanglifehrin based cyclophilin inhibitors (including OCB-30). In 2015, we discontinued the OCB-30 development program based on significant research and analysis. In July 2016, we provided NeuroVive with a notice of termination of the license agreement. The parties agreed to terminate the agreement in October 2016.

Acuitas Therapeutics Inc.

In December 2013 we entered into a cross-license agreement with Acuitas Therapeutics Inc., or Acuitas. The terms of the cross-license agreement provided Acuitas with access to certain of our earlier intellectual property (IP) generated prior to April 2010 for a specific field. On August 29, 2016, Arbutus provided Acuitas with notice that Arbutus considered Acuitas to be in material breach of the cross-license agreement. The cross-license agreement provides that it may be terminated upon any material breach by the other party 60 days after receipt of written notice of termination describing the material breach in reasonable detail. On October 25, 2016, Acuitas filed a Notice of Civil Claim in the Supreme Court of British Columbia seeking an order that Arbutus perform its obligations under the Cross License Agreement, for damages ancillary to specific performance, injunctive relief, interest and costs. We will file our response within the time frame prescribed by the Court.

Dicerna Pharmaceuticals, Inc.

In September 2016, Dicerna Pharmaceuticals Inc. announced the discontinuation of its DCR-PH1 program.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Liability-classified stock option awards valuation / The valuation of liability-classified stock option awards is a critical accounting estimate due to the value of liabilities recorded and the many assumptions that are required to calculate the liability, resulting in the classification of our liability-classified stock option awards as level 3 financial instruments.

We account for liability-classified stock option awards ("liability options") under ASC 718 - Compensation - Stock Compensation, under which awards of options that provide for an exercise price that is not denominated in: (a) the currency of a market in which a substantial portion of the Company's equity securities trades, (b) the currency in which the employee's pay is denominated, or (c) the Company's functional currency, are required to be classified as liabilities. Due to the change in functional currency as of January 1, 2016, certain stock option awards with exercise prices denominated in Canadian dollars changed from equity classification to liability classification. As such, the historic equity classification of these stock option awards changed to liability classification effective January 1, 2016. The change in classification resulted in reclassification of these awards from, additional paid-in capital to liability-classified options.

We classify liability options in our consolidated balance sheet as liabilities and revalue them at each balance sheet date. Any change in valuation is recorded in our statement of operations as increases or decreases in share-based compensation expense or additional paid-in capital until settlement or cancellation. We use the Black-Scholes pricing model to value the options. Determining the appropriate fair-value model and calculating the fair value of liability options requires considerable judgment. A small change in the estimates used may cause a relatively large change in the estimated valuation. Due to ongoing changes in our business and general stock market conditions, we continuously assess our fair value assumptions. We adjust the estimated expected life as appropriate, based on the pattern of exercises of our stock option awards. As at the reclassification date of January 1, 2016 and the balance sheet date of September 30, 2016, for the purpose of calculating the fair value, the weighed-average expected life of outstanding was 5.3 and 3.9 years, respectively; the weighted-average risk-free interest rate was 0.86% and 0.66%, respectively; the weighted-average volatility was 97.8% and 70.56%, respectively; and the dividend yield was 0% based on no history of dividend payment by the Company. For the nine month period ended September 30, 2016, we recorded a total share-based compensation expense related to the change in fair value of liability options of $940,000.

Share purchase warrant valuation / The valuation of share purchase warrants is a critical accounting estimate due to the value of liabilities recorded and the many assumptions that are required to calculate the liability, resulting in the classification of our warrant liability as a level 3 financial instrument.

We classify warrants in our consolidated balance sheet as liabilities and revalue them at each balance sheet date. Any change in valuation is recorded in our statement of operations. We use the Black-Scholes pricing model to value the warrants. Determining the appropriate fair-value model and calculating the fair value of registered warrants requires considerable judgment. A small change in the estimates used may cause a relatively large change in the estimated valuation. Due to ongoing changes in our business and general stock market conditions, we continuously assess our warrant fair value assumptions. We adjust the estimated expected life as appropriate, based on the pattern of exercises of our warrants. As at December 31, 2015, for the purpose of calculating the fair value, the expected life of outstanding warrants was three months for warrants expiring in June 2016, and eleven months for warrants expiring in February 2017. Based on the pattern of decreasing exercises of warrants, we increased the expected life to five and a half months for outstanding warrants expiring in June 2016 effective January 1, 2016. As at September 30, 2016, the remaining expected life is five months for outstanding warrants expiring in February 2017. The change in fair value from the previous balance sheet date relating to the warrants that expired in June 2016 has been included in our statement of comprehensive loss. For the three and nine month period ended September 30, 2016, we recorded a gain in earnings due to the decrease in fair value of warrant liability of $10,000 and $339,000 respectively.

Goodwill and intangible assets - Impairment / Intangible assets classified as indefinite-lived and goodwill are not amortized, but are evaluated for impairment annually using a measurement date of December 31. In addition, if there is a major event indicating that the carrying value of an intangible asset or goodwill may not be recoverable, management performs an interim impairment test by comparing the estimated fair value, calculated by reference to the asset's or reporting unit's discounted cash flow value, to each asset’s carrying value or to the reporting unit's carrying value, as applicable, to determine if a write down is necessary. Such indicators include, but are not limited to, on an ongoing basis: (a) industry and market considerations such as an increased competitive environment or an adverse change in legal factors including an adverse assessment by regulators; (b) an accumulation of costs significantly in excess of the amount originally expected for the development of the asset; (c) current period operating or cash flow losses combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the use of the asset or by the reporting unit; (d) if applicable, a sustained decrease in share price; and (e) adverse research and development program results.

In assessing impairment, significant judgments are required by management to estimate the timing and extent of future net cash flows, appropriate discount rates, probability of program success and other estimates and assumptions that could materially affect the determination of fair value. These judgments include the use of, but are not limited to: projected results of operations and forecast net cash flows based on our corporate model as approved by our Board of Directors, third party forecasts and data and other macroeconomic indicators that forecasts market conditions and our estimated future revenues and growth. As assumptions related to the probability of program success and timing and amount of potential future cash flows related to these programs is highly uncertain due to the unpredictable nature of these programs, management risk adjusts the estimated cash flows to reflect these uncertainties.

In June 2016, we disclosed in a webcast conference presentation that we would not be filing an IND (or equivalent filing) for our cccDNA formation inhibitor in the second half of 2016, due to additional exploration of the biology of this program. We continue to enhance our knowledge of this important factor in chronic HBV infection and we remain highly committed to developing new product candidates to impact cccDNA. In July 2016, based on extensive research and analysis, we decided to discontinue our development of ARB-1598, a product candidate within our immune modulator program. As a result of these program changes we conducted impairment testing on all of our intangible asset classes which resulted in an impairment charge of $156.3 million, $109.9 million for immune modulators and $46.4 million for cccDNA sterilizers, in our statement of operations and cumulative loss for the period ended June 30, 2016.

Goodwill is subject to a two-step impairment test. The first step compares the fair value of the reporting unit to the carrying amount, which includes goodwill. If the carrying amount exceeds the implied fair value of the goodwill, the second step measures the amount of the impairment loss. As part of the impairment evaluation of goodwill, we identified only one reporting unit to which the total carrying amount of goodwill has been assigned. The impairment of certain intangible assets was considered a triggering event requiring an impairment test of goodwill at June 30, 2016. In estimating the fair value of the reporting unit and the recoverable value of the intangible assets, management prepared a discounted cash flow model using its current best estimates of future net cash flows, probability of program success, and a discount rate appropriate to the business as well as considering the Company's market capitalization. The cash-flow projections are based on forecasts developed by management that include revenue and cost projections, capital spending trends, and investment in working capital to support anticipated revenue growth. These assumptions are updated at least annually and reviewed by management. The selected discount rate considers the risk and nature of the cash flows and the rates of return market participants would require. The probability of program success is determined based on management's best estimates and includes consideration of available industry data. Our methodology for determining fair values remained consistent for the periods presented.

Based on our analysis as at June 30, 2016, the fair value of the reporting unit exceeded its carrying value and step two of the impairment test is not required. Fair value determinations require considerable judgment and are sensitive to changes in underlying assumptions and factors. A hypothetical decrease in the reporting unit's fair value as at June 30, 2016 of approximately 20% could trigger an impairment of goodwill. Although we believe our assumptions are reasonable, the significant level of judgment needed to determine our assumptions, the uncertainty inherent in these assumptions and the extended time frame over which we are required to make our estimates, increases the risk that actual results will vary significantly which, increases the risk of a material goodwill impairment charge in the future. Given the dependency of our cash flow models on the successful development, production and sale of products from our existing programs, if any significant programs are unsuccessful then, excluding other possible changes in our forecasts, our estimated future cash flows will be reduced and such reduction may be significant enough to result in an impairment of the carrying value of our intangible assets and goodwill. The outcome of our programs are subject to a variety of risks, including, but not limited to, technological risk associated with IPR&D assets, dependency on regulatory approval and competitive, legal and other regulatory forces. See "Risk Factors" in our annual report on Form 10-K for additional risk factors.

At September 30, 2016, we did not identify any new indicators of impairment to intangibles or goodwill therefore a quantitative assessment was not performed.

There are no other changes to our critical accounting policies and estimates from those disclosed in our annual MD&A contained in our 2015 Annual Report filed on Form 10-K.

RECENT ACCOUNTING PRONOUNCEMENTS

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (FASB) or other standard setting bodies that are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (ASC 606). The standard, as subsequently amended, is intended to clarify the principles for recognizing revenue and to develop a common revenue standard for U.S. GAAP and IFRS by creating a new Topic 606, Revenue from Contracts with Customers, a clarification of ASU 2014-09 (see above). This guidance supersedes the revenue recognition requirements in ASC 605, Revenue Recognition, and supersedes some cost guidance included in Subtopic 605-35, Revenue Recognition – Construction-Type and Production-Type Contracts. The core principle of the accounting standard is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those good or services. The amendments should be applied by either (1) retrospectively to each prior reporting period presented; or (2) retrospectively with the cumulative effect of initially applying this ASU recognized at the date of initial application. The new guidance would be effective for fiscal years beginning after December 15, 2017, which for us means January 1, 2018. We have begun our evaluation and, at this time, do not expect adoption of this guidance to materially impact our financial statements.

In March 2016, the FASB issued ASU 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The update is intended to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification of the statement of cash flows. Under this update, there are five simplifications for public companies. All excess tax benefits and tax deficiencies should be recognized as income tax expense or benefit in the income statement and the tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. Excess tax benefits should be classified along with other tax cash flows as an operating activity. An entity can make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures when they occur. Cash paid by an employee when directly withholding shares for tax withholding purposes should be classified as financing activity. The amendments in this update would be effective for annual periods beginning after December 15, 2016, which for the Company means January 1, 2017. Early application is permitted. We do not plan to early adopt this update. We have begun our evaluation and, at this time, do not expect adoption of this guidance to materially impact our financial statements.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842): Recognition and Measurement of Financial Assets and Financial Liabilities. The update supersedes Topic 840, Leases and requires the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous GAAP. Topic 842 retains a distinction between finance leases and operating leases, with cash payments from operating leases classified within operating activities in the statement of cash flows. The amendments in this update are effective for fiscal years beginning after December 15, 2018 for public business entities, which for the Company means January 1, 2019. We do not plan to early adopt this update. The extent of the impact of this adoption has not yet been determined.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. The update addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. Under this update, the classification of cash receipts and payments that have aspects of more than one class of cash flows should be determined first by applying specific guidance in GAAP. In the absence of specific guidance, an entity should determine each separately identifiable source or use within the cash receipts and cash payments on the basis of the nature of the underlying cash flows. An entity should then classify each separately identifiable source or use within the cash receipts and payments on the basis of their nature in financing, investing, or operating activities. In situations in which cash receipts and payments have aspects of more than one class of cash flows and cannot be separated by source or use, the appropriate classification should depend on the activity that is likely to be the predominant source or use of cash flows for the item. The amendments in this update are effective for public business entities for fiscal years beginning after December 31, 2017, and interim periods within those fiscal years. We do not expect the update to materially impact our statement of cash flows.

SUMMARY OF QUARTERLY RESULTS

The following table presents our unaudited quarterly results of operations for each of our last eight quarters. These data have been derived from our unaudited condensed consolidated financial statements, which were prepared on the same basis as our annual audited financial statements and, in our opinion, include all adjustments necessary, consisting solely of normal recurring adjustments, for the fair presentation of such information.

(in millions $ except per share data) – unaudited

	Q3 2016	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015	Q4 2014
Revenue								
Collaborations and contracts:								
DoD	$ —	$ —	$ —	$ (0.1)	$ 2.0	$ 1.9	$ 3.0	$ 2.8
Monsanto	—	—	—	3.9	0.3	0.3	0.2	0.3
Dicerna	0.1	—	0.1	0.7	0.7	0.2	0.2	0.3
	0.1	—	0.1	4.5	3.0	2.4	3.4	3.4
Monsanto licensing fees and milestone payments	—	—	—	7.9	0.7	0.8	0.8	0.9
Dicerna licensing fee	0.6	0.2	0.2	0.3	0.3	0.3	0.3	0.1
Other milestone and royalty payments	—	0.1	0.3	0.1	0.1	0.1	0.1	—
Total revenue	**0.7**	**0.3**	**0.6**	**12.7**	**4.1**	**3.6**	**4.6**	**4.4**
Expenses	(19.7)	(195.6)	(20.6)	(24.4)	(62.2)	(17.9)	(22.7)	(15.6)
Other income (losses)	(0.6)	0.4	4.1	5.5	14.0	(0.5)	6.0	5.0
Loss before income taxes	**(19.6)**	**(194.9)**	**(15.9)**	**(6.2)**	**(44.2)**	**(14.8)**	**(12.1)**	**(6.2)**
Income tax benefit	—	**64.9**	—	**1.0**	**15.2**	—	—	—
Net loss	**(19.6)**	**(130.0)**	**(15.9)**	**(5.2)**	**(29.0)**	**(14.8)**	**(12.1)**	**(6.2)**
Basic and diluted net loss per share	**$ (0.37)**	**$ (2.47)**	**$ (0.31)**	**$ (0.10)**	**$ (0.57)**	**$ (0.27)**	**$ (0.40)**	**$ (0.27)**

Quarterly Trends

Revenue / Our revenue is derived from research and development collaborations and contracts, licensing fees, milestone and royalty payments. Over the past two years, our principal source of ongoing revenue has been our contract with the DoD to advance TKM-Ebola which began in July 2010 and terminated in October 2015.

In Q3 2010 we signed a contract with the DoD to develop TKM-Ebola and have since incurred significant program costs related to equipment, materials and preclinical and clinical studies. These costs are included in our research, development, collaborations and contracts expenses. These costs were fully reimbursed by the DoD, and this reimbursement amount was recorded as revenue. DoD revenue from the TKM-Ebola program also compensated us for labor and overheads and provided an incentive fee. As described in our critical accounting policies in our Annual Report, we estimated the labor and overhead rates to be charged under the TKM-Ebola contract and updated these rate estimates throughout the year. In July 2015, we announced that activities had been suspended and in Q4 2015 the DoD contract was terminated. We are currently conducting contract close out procedures with the DoD.

In January 2014, we signed an Option Agreement and a Services Agreement with Monsanto for the use of our proprietary delivery technology and related intellectual property in agriculture. Over the option period, which was expected to be approximately four years, Monsanto made payments to us to maintain their option rights. In Q1 2014, we received $14.5 million of the $17.5 million near term payments, of which $4.5 million relates to research services and $10.0 million for the use of our technology. In June 2014 and October 2014, we received further payments of $1.5 million each, following the completion of specified program developments. In 2015, we received an additional $1.3 million related to research services. The payments were being recognized as revenue on a straight-line basis over the option period. In Q4 2015, we did not receive further payments from Monsanto for the continuance of research activities under the arrangement. As such, we revised our estimated option period end date to December 31, 2015, resulting in the full release of Monsanto deferred revenue and recognition of $11.8 million in Monsanto revenue in Q4 2015. In March 2016, Monsanto exercised its option to acquire 100% of the outstanding shares of Protiva Agricultural Development Company Inc. (PADCo), for which Monsanto paid us an exercise fee of $1.0 million in Q1 2016. We recorded this receipt in Q1 2016 as Other Income.

In November 2014, we signed a License Agreement and a Development and Supply Agreement with Dicerna for the use of our proprietary delivery technology and related technology intended to develop, manufacture, and commercialize products related to the treatment of PH1. In Q4 2014, we received an upfront payment of $2.5 million, which is being recognized over the period over which we provide services to Dicerna. In September 2016, Dicerna announced the discontinuation of their DCR-PH1 program using our technology. As such, in Q3 2016, we recognized the remaining balance of Dicerna license fee revenue of $0.6 million, as well as other Dicerna collaboration revenue for the provision of development services.

Under our licensing and collaboration arrangements with Alnylam and Acuitas, we earn licensing fee revenue from Acuitas as well as further potential development and commercial milestones and royalties from Alnylam for the use of our LNP technology.

In 2013, we began to earn royalties from Spectrum with respect to the commercial sales of Marqibo.

Expenses / Expenses consist primarily of clinical and pre-clinical trial expenses, personnel expenses, consulting and third party expenses, reimbursable collaboration expenses, consumables and materials, patent filing expenses, facilities, stock-based compensation and general corporate costs. Impairment of intangible assets is also included in operating expenses.

Our underlying expenses have increased in the past eight quarters due to an increase in our research and development activities as we seek to move more products into the clinic. In Q4 2014, we filed a Canadian Clinical Trial Application (CTA) for ARB-1467 and received clearance to conduct a Phase I Clinical Trial, as well as initiated manufacturing of TKM-Ebola-Guinea for emergency use in West Africa. In Q1 2015, we initiated a Phase I Clinical Trial for ARB-1467 and incurred significant material costs related to the TKM-Ebola-Guinea contract with the DoD. In addition, we incurred $9.3 million in costs for professional fees related to completing the merger with Arbutus Inc. (formerly OnCore Biopharma Inc.). In Q2 2015, we incurred an incremental $2.9 million R&D expenses related to our HBV programs acquired through the merger with Arbutus Inc. In Q3 2015, we incurred $5.5 million in incremental R&D expenses primarily related to an increase in HBV and HCC clinical trial expenses due to an increase in patient enrollment and a ramp up in spending on other Arbutus Inc. HBV programs. Also in Q3 2015, we recorded an estimated impairment charge of $38.0 million as we discontinued our cyclophilin inhibitor program based on our conclusion that cyclophilins do not play a meaningful role in HBV biology. From Q4 2015 to Q 2016, we continued to incur significant R&D expense related to our HBV programs, including initiation of our ARB-1467 in Phase II clinical trials. In Q2, 2016, we recorded an impairment charge of $156.3 million for the discontinuance of the ARB-1598 program in the Immune Modulators drug class after extensive research and analysis, as well as a delay for additional exploration of the biology of the cccDNA Sterilizer drug class. Following the merger with Arbutus Inc., we have recorded to date non-cash compensation expense of $46.0 million related to the expiry of repurchase rights on shares issued as part of the consideration paid for the merger with Arbutus Inc. - see "Results of Operations".

Other income (losses) / Other income (losses) consist primarily of changes in the fair value of our warrant liability and foreign exchange gains and losses. Increases in our share price from the previous reporting date results in an increase in the fair value of our warrant liability, and vice versa.

We have recorded large foreign exchange gains and losses over the past eight quarters including a gain of $11.8 million in Q3 2015. Up until December 31, 2015, our foreign exchange gains and losses largely related to U.S. dollar cash and investment holdings and fluctuations in the U.S./Canadian dollar exchange rate. We expect to record future foreign exchange gains and losses, on conversion from the Canadian dollar, to the U.S. dollar, as the functional currency for the company changed to the U.S. dollar effective January 1, 2016. This change in functional currency results in a smaller proportion of our cash and investments being held in a foreign currency and therefore reduces the level of gains and losses we expect to record in this respect.

In Q1 2016, other income included a $1.0 million gain on disposition of financial instrument related to the option exercise fee we received from Monsanto for the acquisition of PADCo in March 2016.

Income tax benefit / Income tax benefit relates to the decrease in deferred tax liability associated with the impairment charge recorded on acquired intangible assets. In Q3 2015, we recorded $15.2 million of income tax benefit for the estimated impairment of our cyclophilin inhibitor program, OCB-030. In Q4 2015, we recorded a further $1.0 million in income tax benefit due to the revision of fair value of cyclophilins. In Q2 2016, we recorded $64.9 million in income tax benefit associated with the impairment charge recorded as described above.

Net loss / Fluctuations in our net loss are explained by changes in revenue, expenses, other income (losses) and taxes as discussed above.

RESULTS OF OPERATIONS

The following summarizes the results of our operations for the periods shown, in thousands (except for per share figures):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	**2015**	**2016**	**2015**
Total revenue	**$ 774**	$ 4,065	**$ 1,686**	$ 12,187
Operating expenses	**19,749**	62,203	**235,886**	102,751
Loss from operations	**(18,975)**	(58,138)	**(234,200)**	(90,564)
Net loss	**$ (19,595)**	$ (28,982)	**$ (165,469)**	$ (55,857)
Basic and diluted loss per share	**(0.37)**	(0.57)	**(3.15)**	(1.28)

Revenue / Revenue is summarized in the following table, in thousands:

	Three months ended September 30,			
	2016	**% of Total**	2015	% of Total
DoD	$ —	**—%**	$ 2,002	49%
Monsanto	**—**	**—%**	309	8%
Dicerna	**87**	**11%**	724	18%
Total collaborations and contracts revenue	**87**	**11%**	3,035	75%
Monsanto licensing fee and milestone payments	**—**	**—%**	727	18%
Dicerna licensing fee	**640**	**83%**	263	6%
Other milestone and royalty payments	**47**	**6%**	40	1%
Total revenue	**$ 774**		$ 4,065	

	Nine months ended September 30,			
	2016	**% of Total**	2015	% of Total
DoD	$ —	**—%**	$ 6,909	57%
Monsanto	**—**	**—%**	826	7%
Dicerna	**226**	**13%**	1,130	9%
Total collaborations and contracts revenue	**226**	**13%**	8,865	73%
Monsanto licensing fee and milestone payments	**—**	**—%**	2,374	19%
Dicerna licensing fee	**1,066**	**63%**	789	6%
Other milestone and royalty payments	**394**	**23%**	159	1%
Total revenue	**$ 1,686**		$ 12,187	

Revenue contracts are covered in more detail in the overview section of this discussion.

DoD revenue

In July 2015, we announced that Ebola related activities were being suspended and, in Q4 2015, we received formal notification from the DoD terminating the contract, subject to the completion of certain post-termination obligations.

Monsanto revenue

In January 2014, we received $14.5 million, of which $4.5 million relates to research services and $10.0 million for the use of our technology. In June and October 2014, we received payments of $1.5 million each, following the completion of specified program developments. In May and September 2015, we received $1.05 million and $0.75 million for research services. We were recognizing this revenue on a straight-line basis over the option period. As we did not receive further payments from Monsanto for the continuance of research activities under the arrangement, we revised our estimated option period end date as at December 31, 2015, resulting in the full release of Monsanto deferred revenue of $11.8 million and a total of $15.0 million in Monsanto revenue for the year ended December 31, 2015. In March 2016, Monsanto exercised its option to acquire 100% of the outstanding shares of the Company's wholly-owned subsidiary, Protiva Agricultural Development Company. We received $1.0 million exercise fee, which has been recorded as other income for the nine-months ended September 30, 2016.

Dicerna revenue

In November 2014, we signed a License Agreement and a Development and Supply Agreement with Dicerna for the use of our proprietary delivery technology and related technology intended to develop, manufacture, and commercialize products related to the treatment of PH1. In September 2016, Dicerna announced the discontinuance of their DCR-PH1 program using our technology. As such, we have no further performance obligations related to the licensing fee and recognized licensing revenue of $0.6 and $1.1 million for the three and nine months ended September 30, 2016. In addition, we recognized collaboration revenue of $0.09 million and $0.23 million respectively for the three and nine months ended September 30, 2016 earned on material manufactured for, and services provided to, Dicerna.

Other milestone and royalty payments

Under our licensing and collaboration arrangements with Alnylam and Acuitas, we earn licensing fee revenue from Acuitas as well as further potential development and commercial milestones from Alnylam for the use of our LNP technology.

In September 2013, Spectrum announced that they had shipped the first commercial orders of Marqibo. We continue to earn royalties on the sales of Marqibo, which uses a license to our technology.

Expenses / Expenses are summarized in the following table, in thousands:

	Three months ended September 30,			
	2016	**% of Total**	2015	% of Total
Research, development, collaborations and contracts	**$ 15,738**	**80%**	$ 16,354	26%
General and administrative	**3,720**	**19%**	7,706	12%
Depreciation	**291**	**1%**	153	—%
Acquisition costs	—	**—%**	—	—%
Impairment of intangible assets	**—**	**—%**	$ 37,990	61%
Total operating expenses	**$ 19,749**		$ 62,203	

	Nine months ended September 30,			
	2016	**% of Total**	2015	% of Total
Research, development, collaborations and contracts	**$ 44,097**	**19%**	$ 36,601	36%
General and administrative	**34,705**	**15%**	18,084	18%
Depreciation	**760**	**—%**	420	—%
Acquisition costs	—	**—%**	9,656	9%
Impairment of intangible assets	**156,324**	**66%**	37,990	37%
Total operating expenses	**$ 235,886**		$ 102,751	

Research, development, collaborations and contracts

Research, development, collaborations and contracts expenses consist primarily of clinical and pre-clinical trial expenses, personnel expenses, consulting and third party expenses, consumables and materials, as well as a portion of stock-based compensation and general overhead costs. R&D expenses decreased in the three months ended September 2016 as compared to the three months ended September 30, 2015 partly due to our collaboration programs with the DoD, Monsanto, and Dicerna have wound down or ended since September 30, 2015. Research and development expenses increased in the nine months ended September 30, 2016 as compared to the nine months ended September 30, 2015 as we increased spending on ARB-1467 for which Phase II clinical trials were initiated in December 2015. We also continue to incur incremental costs related to an increase in activities for the research and preclinical HBV programs, focusing on advancing the development of our candidates to support future clinical combination studies. This spending on our internal programs more than offset the decrease in research and development spending on collaborative programs for the nine month period.

R&D compensation expense increased in the three and nine months ended September 30, 2016 as compared to the three and nine months ended September 30, 2015 due to an increase in the number of employees in support of our expanded portfolio of product candidates, as well as from our merger with Arbutus Inc. In addition, in the three and nine months ended September 30, 2016 we incurred a total of $3.0 million and $29.0 million respectively, of non-cash compensation expense, as compared to $5.7 million and $11.0 million for the three and nine months ended September 30, 2015, related to the expiry of repurchase rights on shares issued as part of the consideration paid for the merger with Arbutus Inc. For the three and nine months ended September 30, 2016, $1.5 million and $4.5 million has been included as part of research, development, collaborations and contracts expense, and $1.5 million and $24.5 million included as part of general and administrative expense respectively.

A significant portion of our research, development, collaborations and contracts expenses are not tracked by project as they benefit multiple projects or our technology platform and because our most-advanced programs are not yet in late-stage clinical development. However, our collaboration agreements contain cost-sharing arrangements pursuant to which certain costs incurred under the project are reimbursed. Costs reimbursed under collaborations typically include certain direct external costs and hourly or full-time equivalent labor rates for the actual time worked on the project. In addition, we have been reimbursed under government contracts for certain allowable costs including direct internal and external costs. As a result, although a significant portion of our research, development, collaborations and contracts expenses are not tracked on a project-by-project basis, we do, however, track direct external costs attributable to, and the actual time our employees worked on, our collaborations and government contracts.

General and administrative

General and administrative expenses were lower in the three months ended September 30, 2016 compared to the three months ended September 30, 2015 due to a decrease in non-cash compensation expense recorded related to the expiry of repurchase rights effective Q3 2016 due to the departure of two of the four former Arbutus Inc. shareholders in June 2016. General and administrative expenses were higher in the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 due largely to an increase in compensation expense linked to our increase in employee base and incremental corporate expenses to support the growth of the Company following the completion of our merger with Arbutus Inc. This includes a cumulative non-cash compensation expense of $24.5 million we incurred related to the expiry of repurchase rights on shares issued as part of consideration paid for the merger with Arbutus Inc. (see above). The following table summarizes the non-cash compensation expense recorded related to the expiry of repurchase rights:

	Q3 2016	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015
Research and development	$ 1.5	$ 1.5	$ 1.5	$ 1.5	$ 1.4	$ 1.0	$ 0.3
General and administrative	1.5	18.5	4.5	4.5	4.3	3.1	0.9
Total non-cash compensation for repurchase rights expiration	$ 3.0	$ 20.0	$ 6.0	$ 6.0	$ 5.7	$ 4.1	$ 1.2

Acquisition costs

In the nine months ended September 30, 2015, we incurred $9.7 million in costs for professional fees related to completing the merger with Arbutus Inc. This cost is specific to the merger with Arbutus Inc.

Impairment of intangible assets

For the nine months ended September 30, 2016, we recorded an impairment charge of $156.3 million for the discontinuance of the ARB-1598 program in the Immune Modulator drug class after extensive research and analysis, as well as a delay for additional exploration of the biology of the cccDNA Sterilizer drug class. For the nine months ended September 30, 2015, we recorded an estimated impairment charge of $38.0 million based on our decision to discontinue our cyclophilin inhibitors program, OCB-030.

Other income (losses) / Other income (losses) are summarized in the following table, in thousands:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	**2016**	2015
Interest income	**$ 425**	$ 183	**$ 1,104**	$ 466
Foreign exchange gains (losses)	**(795)**	11,801	**2,180**	16,268
Gain on disposition of financial instrument	**—**	—	**1,000**	—
Decrease in fair value of warrant liability	**10**	1,976	**339**	2,777
Increase in fair value of contingent consideration	**(260)**	—	**(756)**	—
Total other income (losses)	**$ (620)**	$ 13,960	**$ 3,867**	$ 19,511

Foreign exchange gains (losses)

On January 1, 2016, our functional currency changed from the Canadian dollar to the U.S. dollar based on our analysis of changes in the primary economic environment in which we operate. We will continue to incur substantial expenses and hold cash and investment balances in Canadian dollars, and as such, will remain subject to risks associated with foreign currency fluctuations. For the three months ended September 30, 2016, we recorded a foreign exchange loss of $0.8 million which is primarily an unrealized loss related to a depreciation in the value of our Canadian dollar funds from the previous period, when converted to our functional currency of U.S. dollars.

Gain on disposition of financial instrument

On March 4, 2016, Monsanto exercised its option to acquire 100% of the outstanding shares of our wholly-owned subsidiary, PADCo, as described above and paid us an exercise fee of $1.0 million.

Decrease in fair value of warrant liability

In conjunction with equity and debt financing transactions in 2011 and an equity private placement that closed on February 29, 2012, we issued warrants to purchase our common share. We are accounting for the warrants under the authoritative guidance on accounting for derivative financial instruments indexed to, and potentially settled in, a company's own stock, on the understanding that in compliance with applicable securities laws, the registered warrants require the issuance of registered securities upon exercise and do not sufficiently preclude an implied right to net cash settlement. At each balance sheet date the warrants are revalued using the Black-Scholes model and the change in value is recorded in the consolidated statement of operations and comprehensive income (loss). In June 2016, the warrants from our 2011 debt financing expired and the fair value of unexercised warrants were recorded in decrease in fair value of warrant liability for the nine months ended September 30, 2016.

Generally, a decrease in our share price from the previous reporting date results in a decrease in the fair value of our warrant liability and vice versa.

We expect to see future changes in the fair value of our warrant liability and these changes will largely depend on the change in the Company's share price, any change in our assumed rate of share price volatility, our assumptions for the expected lives of the warrants and warrant issuances or exercises.

Income tax benefit

During the nine months ended September 30, 2016, we recorded an income tax benefit of $64.9 million due to the decrease in deferred tax liability resulting from the impairment charge we recorded in Q2 2016, as discussed above. During the nine months ended September 30, 2015, we recorded an income tax benefit of $15.2 million due to the decrease in deferred tax liability resulting from the estimated impairment charged recorded for our cyclophilin inhibitors program, OCB-030.

LIQUIDITY AND CAPITAL RESOURCES

The following table summarizes our cash flow activities for the periods indicated, in thousands:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	**2016**	2015
Net loss for the period	**$ (19,595)**	$ (28,982)	**$ (165,469)**	$ (55,857)
Adjustments to reconcile net loss to net cash provided by operating activities	**5,821**	16,684	**124,985**	18,962
Changes in operating assets and liabilities	**(938)**	9,771	**(2,579)**	(1,273)
Net cash used in operating activities	**(14,712)**	(2,527)	**(43,063)**	(38,168)
Net cash provided by (used in) investing activities	**(880)**	(17,733)	**(99,854)**	9,486
Net cash provided by financing activities	**76**	116	**637**	143,895
Effect of foreign exchange rate changes on cash & cash equivalents	**(824)**	(5,972)	**2,131**	(6,311)
Net increase (decrease) in cash and cash equivalents	**(16,340)**	(26,116)	**(140,149)**	108,902
Cash and cash equivalents, beginning of period	**42,970**	207,205	**166,779**	72,187
Cash and cash equivalents, end of period	**26,630**	181,089	**26,630**	181,089

Since our incorporation, we have financed our operations through the sales of shares, units, debt, revenues from research and development collaborations and licenses with corporate partners, interest income on funds available for investment, and government contracts, grants and tax credits.

At September 30, 2016, we had an aggregate of $149.7 million in cash and cash equivalents and short-term investments as compared to an aggregate of $191.4 million in cash and cash equivalents and short and long-term investments at December 31, 2015.

For the nine months ended September 30, 2016, operating activities used $43.1 million in cash as compared to $38.2 million of cash used in the nine months ended September 30, 2015. The increase in cash used from operating activities is primarily related to an increase in our product portfolio and the supporting infrastructure and staff.

For the nine months ended September 30, 2016, investing activities used $100.0 million in cash as we acquired short-term investments.

On March 25, 2015, we completed an underwritten public offering of 7,500,000 common shares, at a price of $20.25 per share, representing gross proceeds of $151.9 million. The cost of financing, including commissions and professional fees, was approximately $9.7 million, which gave us net proceeds of $142.2 million. We are using these proceeds to develop and advance product candidates through clinical trials, as well as for working capital and general corporate purposes.

Cash requirements / At September 30, 2016 we held $26.6 million in cash and cash equivalents and $123.1 million in short and long-term investments. We believe we have sufficient cash resources for at least the next 12 months. In the future, substantial additional funds will be required to continue with the active development of our pipeline products and technologies. In particular, our funding needs may vary depending on a number of factors including:

- the need for additional capital to fund future business development programs;

- revenues earned from our legacy collaborative partnerships and licensing agreements, including milestone payments from Alnylam and royalties from sales of Marqibo from Spectrum;
- the extent to which we continue the development of our product candidates, add new product candidates to our pipeline, or form collaborative relationships to advance our products;
- our decisions to in-license or acquire additional products or technology for development, in particular for our HBV therapeutics programs;
- our ability to attract and retain corporate partners, and their effectiveness in carrying out the development and ultimate commercialization of our product candidates;
- whether batches of drugs that we manufacture fail to meet specifications resulting in delays and investigational and remanufacturing costs;
- the decisions, and the timing of decisions, made by health regulatory agencies regarding our technology and products;
- competing technological and market developments; and
- costs associated with prosecuting and enforcing our patent claims and other intellectual property rights, including litigation and arbitration arising in the course of our business activities.

We will seek to obtain funding to maintain and advance our business from a variety of sources including public or private equity or debt financing, collaborative arrangements with pharmaceutical companies and government grants and contracts. There can be no assurance that funding will be available at all or on acceptable terms to permit further development of our products.

If adequate funding is not available, we may be required to delay, reduce or eliminate one or more of our research or development programs or reduce expenses associated with non-core activities. We may need to obtain funds through arrangements with collaborators or others that may require us to relinquish most or all of our rights to product candidates at an earlier stage of development or on less favorable terms than we would otherwise seek if we were better funded. Insufficient financing may also mean failing to prosecute our patents or relinquishing rights to some of our technologies that we would otherwise develop or commercialize.

Material commitments for capital expenditures / In October 2016 we began work on the renovation of our newly leased Warminster, Pennsylvania facility. We have budgeted approximately $12.0 million in leasehold improvements and equipment purchases for this build-out.

OFF-BALANCE SHEET ARRANGEMENTS

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

CONTRACTUAL OBLIGATIONS

Facility lease / On August 9, 2016, we signed a new lease agreement effective November 1, 2016, subsequently amended to October 7, 2016, to move our U.S. office to 701 Veterans Circle, Warminster, Pennsylvania. The new location has approximately 35,000 square feet of lab facilities and office space. The lease expires on April 30, 2027 for an estimated total lease and operating cost commitment of approximately $6.9 million. We also have the option of extending the lease for two 5-year terms.

The following table summarizes our contractual obligations as at September 30, 2016:

(in millions)	Payments Due by Period				
	Total	**Less than 1 year**	**1 – 3 years**	**3 – 5 years**	**More than 5 years**
Contractual Obligations					
Facility lease	$ 9.5	$ 1.3	$ 3.6	$ 1.4	$ 3.3

IMPACT OF INFLATION

Inflation has not had a material impact on our operations.

RELATED PARTY TRANSACTIONS

We have not entered into any related party transactions in the periods covered by this discussion.

OUTSTANDING SHARE DATA

At October 31, 2016, we had 54,841,494 common shares issued and outstanding, outstanding options to purchase an additional 3,749,741 common shares and outstanding warrants to purchase an additional 201,000 common shares.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Other than the discussion below, there have been no material changes in our quantitative and qualitative disclosures about market risk from those disclosed in our Annual Report on the Form 10-K for the fiscal year ended December 31, 2015.

Interest rate risk

We are exposed to market risk related to changes in interest rates, which could adversely affect the value of our interest rate sensitive assets and liabilities. In addition to our warrant liability as disclosed in our Form 10-K, our liability-classified stock option awards are sensitive to interest rate changes due to their fair values being determined using the Black-Scholes model, which uses interest rate as an input. We have estimated the effects on our liability-classified stock option awards based on a one percentage point hypothetical adverse change in interest rates as of September 30, 2016. We determined the hypothetical fair value using the same Black-Scholes model, and determined that an increase in the interest rates of one percentage point would have had an immaterial change to our warrant liability, and liability-classified stock option awards as at September 30, 2016.

Foreign currency exchange risk

On January 1, 2016, our functional currency changed from the Canadian dollar to the U.S. dollar based on our analysis of changes in the primary economic environment in which we operate. We will continue to incur substantial expenses and hold cash and investment balances in Canadian dollars, and as such, will remain subject to risks associated with foreign currency fluctuations. As at September 30, 2016, an adverse change of one percentage point in the foreign currency exchange rates of Canadian to U.S. dollars would have resulted in an incremental loss of $0.5 million. We recorded foreign exchange gains of $2.2 million for the nine months ended September 30, 2016.

ITEM 4. CONTROLS AND PROCEDURES

As of September 30, 2016, an evaluation of the effectiveness of our “disclosure controls and procedures” (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) was carried out by our management, with the participation of our Chief Executive Officer (CEO) and Chief Financial Officer (CFO). Based upon this evaluation, the CEO and CFO have concluded that as of September 30, 2016, our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission (the “Commission”) rules and forms and (ii) accumulated and communicated to the management of the registrant, including the CEO and CFO, to allow timely decisions regarding required disclosure.

It should be noted that while the CEO and CFO believe that our disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect that our disclosure controls and procedures or internal control over financial reporting will prevent all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

No change in our internal control over financial reporting (as defined in Rules 13a–15(f) and 15d–15(f) under the Exchange Act) occurred during the three months ended September 30, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are involved with various legal matters arising in the ordinary course of business. We make provisions for liabilities when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Such provisions are reviewed at least quarterly and adjusted to reflect the impact of any settlement negotiations, judicial and administrative rulings, advice of legal counsel, and other information and events pertaining to a particular case. Litigation is inherently unpredictable. Although the ultimate resolution of these various matters cannot be determined at this time, we do not believe that such matters, individually or in the aggregate, will have a material adverse effect on our consolidated results of operations, cash flows, or financial condition.

Acuitas Therapeutics Inc.

On August 29, 2016, Arbutus provided Acuitas with notice that Arbutus considered Acuitas to be in material breach of the cross-license agreement. The cross-license agreement provides that it may be terminated upon any material breach by the other party 60 days after receipt of written notice of termination describing the material breach in reasonable detail. On October 25, 2016, Acuitas filed a Notice of Civil Claim in the Supreme Court of British Columbia seeking an order that Arbutus perform its obligations under the Cross License Agreement, for damages ancillary to specific performance, injunctive relief, interest and costs. We dispute Acuitas' position; we will file our response within the time frame prescribed by the Court.

University of British Columbia ("UBC")

Certain early work on lipid nanoparticle delivery systems and related inventions was undertaken at Inex Pharmaceuticals Inc. and assigned to the University of British Columbia (UBC). These inventions are licensed to us by UBC under a license agreement, initially entered in 1998 as amended in 2001, 2006 and 2007. We have granted sublicenses to these inventions to Alnylam. Alnylam has in turn sublicensed these inventions back to us for discovery, development and commercialization of siRNA.

On November 10, 2014, the University of British Columbia filed a demand for arbitration against us, BCICAC File No.: DCA-1623. We received UBC's Statement of Claims on January 16, 2015. In its Statement of Claims, UBC alleges that it is entitled to $3.5 million in allegedly unpaid royalties based on publicly available information, and an unspecified amount based on non-public information. UBC also seeks interest and costs, including legal fees. We continue to dispute UBC's allegation. No dates have been scheduled for this arbitration.

ITEM 1A. RISK FACTORS

There have been no material changes in our risk factors from those disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

In connection with our merger with OnCore Biopharma, Inc., we and Roivant Sciences Ltd., Patrick T. Higgins, Michael J. McElhaugh, Michael J. Sofia and Bryce A. Roberts (the "OnCore Holders"), entered into a registration rights agreement, dated as of January 11, 2015, under which we agreed, among other things, to file by the deadline stated in the registration rights agreement, a shelf registration statement under the Securities Act of 1933 to register the resale of our common shares issued in the merger to the OnCore Holders.

As of November 2, 2015, the parties to the registration rights agreement entered into an Amending Agreement, in connection with which our obligation to file a shelf registration statement was amended to replace the filing deadline contained in the original registration rights agreement with a requirement that we file a shelf registration statement within 30 days following a written request made by Roivant Sciences Ltd., and that we use our commercially reasonable efforts to cause that registration statement to become effective under the Securities Act of 1933 as promptly as practicable and otherwise no later than 120 days following the date that the request is received from Roivant.

ITEM 6. EXHIBITS

See the Exhibit Index hereto.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on November 3, 2016.

TEKMIRA PHARMACEUTICALS CORPORATION

By: /s/ Mark Murray

Mark Murray

President and Chief Executive Officer

EXHIBIT INDEX

Number	Description
10.1*†	Lease Agreement between Arbutus Biopharma, Inc. and ARE-PA Region No. 7, LLC dated August 9, 2016
10.2*†	First Amendment to Lease Agreement between Arbutus Biopharma, Inc. and ARE-PA Region No. 7, LLC dated October 7, 2016
10.3*	Acknowledgment of Commencement Date in connection with Lease Agreement between Arbutus Biopharma, Inc. and ARE-PA Region No. 7, LLC dated August 9, 2016 and as amended on October, 7, 2016
10.4*±	Termination and Severance Agreement between Arbutus Biopharma Corporation and Mark Kowalski, dated September 30, 2016
10.5*±	Termination and Severance Agreement between Arbutus Biopharma Corporation and Michael Abrams, dated September 30, 2016
31.1*	Certification of Chief Executive Officer pursuant to Rule 13a14 or 15d14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the SarbanesOxley Act of 2002
31.2*	Certification of Chief Financial Officer pursuant to Rule 13a14 or 15d14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the SarbanesOxley Act of 2002
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the SarbanesOxley Act of 2002
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the SarbanesOxley Act of 2002
101	Interactive Data Files

* Filed herewith.

† Confidential treatment has been requested for specific portions of this exhibit.

± Indicates a management contract or compensatory plan arrangement

Exhibit 10.1

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [***]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

LEASE AGREEMENT

THIS LEASE AGREEMENT ("**this Lease**") is made as of this 9th day of August, 2016, between **ARE-PA REGION NO. 7, LLC**, a Delaware limited liability company ("**Landlord**"), and **ARBUTUS BIOPHARMA, INC.**, a Delaware corporation ("**Tenant**").

BASIC LEASE PROVISIONS

Address: 701 Veterans Circle, Warminster, Pennsylvania 18974-3531.

Premises: The entirety of the building containing approximately 35,155 rentable square feet, ("**Building**") located at the address above and the real property on which the Building is located, as shown on **Exhibit A** together with all improvements thereon and appurtenances thereto as described on **Exhibit B**.

Base Rent: $49,803, per month**Rentable Area of Premises**: 35,155 sq. ft.

Security Deposit: $99,606**Tenant's Share of Operating Expenses**: [***]

Rent Adjustment Percentage: [***]**Target Commencement Date**: November 1, 2016

Base Term: Beginning on November 1, 2016 and ending on April 30, 2027, i.e., 126 months after November 1, 2016.

Permitted Use: for the operation of a research and development laboratory, in addition to general office and other related uses, and for and all other incidental uses arising out of the operation of Tenant's business in the Premises, but in all events in compliance with the provisions of Section 7 hereof.

Address for Rent Payment:

ARE-PA Region No. 7, LLC
SunTrust Bank
Lockbox #79840
1000 Stewart Avenue
Glen Burnie, Maryland 21061

Landlord's Notice Address:

385 E. Colorado Blvd., Suite 299
Pasadena, California 91101
Attention: Corporate Secretary

Tenant's Notice Address (before the Commencement Date):

100 - 8900 Glenlyon Parkway
Burnaby, British Columbia
Canada V5J 5J8
Attention: General Counsel

Tenant's Notice Address (from and after the Commencement Date):

701 Veterans Circle
Warminster, Pennsylvania 18974-3531
Attention: General Counsel

The following Exhibits and Addenda are attached hereto and incorporated herein by this reference:

[X] EXHIBIT A - **DRAWING SHOWING PREMISES**
[X] EXHIBIT B - **DESCRIPTION OF PREMISES**
[X] EXHIBIT C - **WORK LETTER**
[X] EXHIBIT D - **COMMENCEMENT DATE**
[X] EXHIBIT E - **RULES AND REGULATIONS**
[X] EXHIBIT F - **TENANT'S PERSONAL PROPERTY**
[X] EXHIBIT G - **GUARANTY OF LEASE**

1. Lease of Premises. Upon and subject to all of the terms and conditions hereof, Landlord hereby leases the Premises to Tenant and Tenant hereby leases the Premises from Landlord. Subject to Force Majeure (as

defined in Section 34), a Taking (as defined in Section 19), the provisions of the preceding sentence, and Section 2 below, Tenant shall have access to and egress from the Building and the Premises, 24 hours a day, 7 days a week.

2. **Delivery; Acceptance of Premises; Commencement Date**. Landlord shall use reasonable efforts to deliver exclusive possession of the Premises to Tenant free and clear of all existing third party tenancies and occupancies on the Target Commencement Date ("**Delivery**" or "**Deliver**"). If Landlord fails to timely Deliver the Premises, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, and this Lease shall not be void or voidable except as provided herein. If Landlord does not Deliver the Premises within 30 days of the Target Commencement Date for any reason other than Force Majeure Delays, this Lease may be terminated by Landlord or Tenant by written notice to the other, and if so terminated by either: (a) the Security Deposit, or any balance thereof (i.e., after deducting therefrom all amounts to which Landlord is entitled under the provisions of this Lease), shall be returned to Tenant (which obligation shall survive termination), and (b) neither Landlord nor Tenant shall have any further rights, duties or obligations under this Lease, except with respect to provisions that expressly survive termination of this Lease. As used herein, "**Force Majeure Delays**" means delays arising by reason of any Force Majeure (as defined in Section 34), but expressly excludes Landlord's inability or refusal to terminate the lease ("**Existing Lease**") of the existing third party tenant of the Premises ("**Existing Tenant**"). If neither Landlord nor Tenant elects to void this Lease within 5 business days of the lapse of such 30 day period, such right to void this Lease shall be waived and this Lease shall remain in full force and effect and the tables in Sections 3(a) and 4(a) shall be correspondingly adjusted by an amendment to this Lease.

The "**Commencement Date**" shall mean November 1, 2016; provided, however, that Tenant shall have the right to deliver an irrevocable written notice to Landlord ("**Early Commencement Date Notice**") at any time before the date that is 45 days before November 1, 2016 (i.e., Friday, September 16, 2016 since the 45th day falls on Saturday, September 17, 2016) requesting that the Commencement Date occur on the date that is 45 days after the date of the Early Commencement Date Notice. On Landlord's receipt of the Early Commencement Date Notice, Landlord shall notify the Existing Tenant of such earlier Commencement Date and cause the Existing Lease to terminate before such earlier Commencement Date. If Tenant timely delivers the Early Commencement Date Notice to Landlord, for all purposes of this Lease the Commencement Date shall be the date that is 45 days after the date of the Early Commencement Date Notice. Upon request of Landlord, Tenant shall execute and deliver a written acknowledgment of the Commencement Date and the expiration date of the Term when such are established in the form of the "Acknowledgement of Commencement Date" attached to this Lease as **Exhibit D**; provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder. The "**Term**" of this Lease shall be the Base Term, as defined above in the Basic Lease Provisions and any Extension Terms that Tenant may elect pursuant to Section 39 hereof.

Except as set forth in the Work Letter and Section 30, if applicable, and Latent Defects (as defined below): (i) Tenant shall accept the Premises in their condition as of the Commencement Date, subject to all applicable Legal Requirements (as defined in Section 7 hereof); (ii) Landlord shall have no obligation for any defects in the Premises; and (iii) Tenant's taking possession of the Premises shall be conclusive evidence that Tenant accepts the Premises and that the Premises were in good condition at the time possession was taken. Any occupancy of the Premises by Tenant before the Commencement Date shall be subject to all of the terms and conditions of this Lease, except that the Base Rent shall nevertheless not commence to accrue until the Commencement Date. Notwithstanding the foregoing provisions of this paragraph, Tenant shall have a period of 180 days after the Commencement Date to reasonably identify in writing any Latent Defects. During such 180 day period, Tenant shall promptly notify Landlord of any Latent Defects as soon as Tenant has knowledge of any such Latent Defect. For purposes of this paragraph, "**Latent Defects**" means those material defects in the Premises that could not have been identified or discovered through a reasonable inspection of the Premises conducted by a qualified technician or inspector. Landlord will promptly repair the identified Latent Defects at Landlord's sole cost without inclusion in Operating Expenses (as defined in Section 5).

Except as set forth in this Lease, Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the Premises, and/or the suitability of the Premises for the conduct of Tenant's business, and Tenant waives any implied warranty that the Premises is suitable for the Permitted Use. This Lease constitutes the complete agreement of Landlord and Tenant with respect to the subject matter hereof and supersedes any and all prior representations, inducements, promises, agreements, understandings and negotiations that are not contained herein. Landlord in executing this

Lease does so in reliance upon Tenant's representations, warranties, acknowledgments and agreements contained herein. Notwithstanding the provisions of this paragraph, Landlord represents and warrants to Tenant that, to Landlord's Knowledge (as defined below) and as of the date hereof, (a) the Premises is in compliance with applicable Legal Requirements, including, but not limited to, those relating to fire/life safety systems, (b) the Premises is in material compliance with the ADA (as defined in Section 7 hereof), and (c) the Premises does not contain asbestos-containing materials or underground storage tanks. For purposes of this paragraph, "**Landlord's Knowledge**" means the current, actual knowledge of Lawrence J. Diamond, Senior Vice President of Alexandria Real Estate Equities, Inc., with no duty to inquire or investigate. Mr. Diamond, who shall have no personal liability whatsoever under this Lease or otherwise, is the individual within Landlord's organization who possesses the most knowledge about the condition of the Premises.

Concurrently with the execution and delivery of this Lease, Tenant shall cause Arbutus Biopharma Corporation ("**Guarantor**") to execute and deliver to Landlord the Guaranty of Lease ("**Guaranty**") in the form attached hereto as a part hereof as **Exhibit G**.

3. **Rent**.

(a) **Base Rent**. The first month's Base Rent and the Security Deposit shall be due and payable on delivery of an executed copy of this Lease to Landlord. Beginning on the Commencement Date (but subject to the Base Rent Abatement described in Section 4(a)), Tenant shall pay to Landlord in advance, without demand, abatement, deduction or set-off (except as may be expressly set forth in this Lease), monthly installments of Base Rent as shown below on or before the first day of each calendar month during the Term hereof, in lawful money of the United States of America, at the office of Landlord for payment of Rent set forth above, or to such other person or at such other place as Landlord may from time to time designate in writing. Payments of Base Rent for any fractional calendar month shall be prorated. The obligation of Tenant to pay Base Rent and other sums to Landlord and the obligations of Landlord under this Lease are independent obligations. Tenant shall have no right at any time to abate, reduce, or set-off any Rent (as defined in Section 5) due hereunder except for any abatement as may be expressly provided in this Lease. Base Rent payable during the Base Term is as follows:

Time Period	Annual Rate Per Rentable Square Foot	Monthly Installment of Base Rent
11.1.16 to 10.31.17	$17.00	$49,803†
11.1.17 to 10.31.18	$[***]	$[***]
11.1.18 to 10.31.19	$[***]	$[***]
11.1.19 to 10.31.20	$[***]	$[***]
11.1.20 to 10.31.21	$[***]	$[***]
11.1.21 to 10.31.22	$[***]	$[***]
11.1.22 to 10.31.23	$[***]	$[***]
11.1.23 to 10.31.24	$[***]	$[***]
11.1.24 to 10.31.25	$[***]	$[***]
11.1.25 to 10.31.26	$[***]	$[***]
11.1.26 to 04.30.27	$22.85	$66,931

† subject to the Base Rent Abatement set forth in Section 4(a) below.

If the Commencement Date does not occur on November 1, 2016 because Tenant delivers the Early Commencement Date Notice to Landlord as provided in Section 2, the dates in the table above shall be revised to reflect the actual Commencement Date that occurs before November 1, 2016. Such revisions shall be reflected in an amendment to this Lease promptly executed and delivered by Landlord and Tenant after request therefor by Landlord (which amendment shall be in form and substance reasonably acceptable to Landlord and Tenant) ("**Commencement Date Amendment**").

(b) **Additional Rent**. In addition to Base Rent, Tenant agrees to pay to Landlord as additional rent ("**Additional Rent**"): (i) Tenant's Share of "Operating Expenses" (as defined in Section 5), and (ii) any and all

other amounts Tenant assumes or agrees to pay under the provisions of this Lease, including, without limitation, any and all other sums that may become due by reason of any default of Tenant or failure to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after any applicable notice and cure period.

4. **Base Rent Adjustments**. If Tenant elects to use the Additional Tenant Improvement Allowance, then Base Rent shall be increased as of the date or dates on which Tenant uses the Additional Tenant Improvement Allowance pursuant to Section 5 of the Work Letter (such increase to be calculated based on the amount of any Additional Tenant Improvement Allowance used by Tenant, which amount shall be amortized over the Base Term based on an interest rate of [***]% per annum; and the resulting amount so amortized shall be added to the monthly installments of Base Rent). Base Rent, as so adjusted, shall thereafter be due as provided herein. Base Rent adjustments for any fractional calendar month shall be prorated. It is expressly agreed that use of the Additional Tenant Improvement Allowance is at Tenant's sole discretion, and Tenant shall not be deemed to have elected to use any of the Additional Tenant Improvement Allowance unless Tenant has provided Landlord with written notice thereof signed by the same individual representative who executes this Lease on behalf of Tenant.

(a) **Base Rent Abatement**. Notwithstanding anything to the contrary contained in this Lease, but provided Tenant is not in Default hereunder, Landlord hereby grants Tenant an abatement of the Base Rent payable during the Base Term pursuant to the following schedule ("**Base Rent Abatement**"):

Time Period	
11.1.16 to 4.30.17	3.1.23 to 4.30.23
2.1.18 to 4.30.18	3.1.24 to 4.30.24
3.1.19 to 4.30.19	3.1.25 to 4.30.25
3.1.20 to 4.30.20	3.1.26 to 4.30.26
3.1.21 to 4.30.21	3.1.27 to 4.30.27
3.1.22 to 4.30.22	

If the Commencement Date does not occur on November 1, 2016 because Tenant delivers the Early Commencement Date Notice to Landlord as provided in Section 2, the dates in the table above shall be revised to reflect the actual Commencement Date that occurs before November 1, 2016. Such revisions shall be reflected in the Commencement Date Amendment.

If Tenant is in Default during a month in which the Base Rent Abatement applies, then the monthly abatement then in effect shall temporarily cease for the period of time that Tenant remains in Default. Once the Default no longer exists, the Base Rent Abatement will thereupon resume, but the total period of abatement shall not be lengthened to accommodate any period of time that the Base Rent Abatement temporarily ceased due to a Default by Tenant.

Tenant shall pay the full amount of Base Rent due in accordance with the provisions of this Lease. The administration rent set forth in Section 5 below shall not be abated and shall be based on the amount of Base Rent that would have been payable but for the Base Rent Abatement.

5. **Operating Expense Payments**. Landlord shall deliver to Tenant a written estimate of Operating Expenses for each calendar year during the Term ("**Annual Estimate**"), which may be revised by Landlord from time to time during such calendar year based on Landlord's reasonable estimate of increases in the Operating Expenses. Beginning on the Commencement Date, Tenant shall pay Landlord on or before the first day of each calendar month during the Term hereof an amount equal to $1/12^{th}$ of Tenant's Share of the Annual Estimate. Payments for any fractional calendar month shall be prorated.

The term "**Operating Expenses**" means the following costs and expenses of any kind or description whatsoever incurred or accrued each calendar year during the Term by Landlord with respect to the Premises (without duplication): (i) Taxes (as defined in Section 9), (ii) insurance premiums for insurance that Landlord is required to maintain under Section 17, and (iii) costs incurred in connection with, or arising out of or related to, Landlord's obligations under Section 13; provided, however, that the cost of any capital repairs and improvements Landlord

may elect to make shall be amortized over the lesser of 7 years and the useful life of such capital items with only the amortized portion included in Operating Expenses each year, and the costs of Landlord's third party property manager in an amount not to exceed [***]% of Base Rent or, if there is no third party property manager, administration rent in the amount of [***]% of Base Rent). Operating Expenses shall not include the following:

(a) the original construction costs of the Premises and renovation prior to the date of this Lease and costs of correcting defects in such original construction or renovation;

(b) capital expenditures for expansion of the Premises;

(c) interest, principal payments of Mortgage (as defined in Section 27) debts of Landlord, financing costs and amortization of funds borrowed by Landlord, whether secured or unsecured and all payments of base rent (but not taxes or operating expenses) under any ground lease or other underlying lease of all or any portion of the Premises;

(d) depreciation of the Premises (except for capital improvements, the cost of which are includable in Operating Expenses);

(e) Taxes to be paid directly by Tenant, whether or not actually paid;

(f) salaries, wages, benefits and other compensation paid to officers and employees of Landlord;

(g) general organizational, administrative and overhead costs relating to maintaining Landlord's existence, either as a corporation, partnership, or other entity, including general corporate, legal and accounting expenses;

(h) costs and expenses, including legal fees, incurred in connection with negotiations or disputes with employees, consultants, management agents, leasing agents, purchasers or mortgagees of the Building;

(i) costs incurred by Landlord due to the violation by Landlord, its employees, agents or contractors of any Legal Requirement (as defined in Section 7) or costs incurred due to any negligence of Landlord, its agents or employees, or any repairs or alterations made by Landlord to comply with Legal Requirements in existence as of the Commencement Date but with which the Premises was not in compliance as of the Commencement Date;

(j) penalties, fines or interest incurred as a result of Landlord's inability or failure to make payment of Taxes and/or to file any tax or informational returns when due, or from Landlord's failure to timely make any payment of Taxes or insurance, or otherwise to timely pay Landlord's bills and obligations before delinquency;

(k) overhead and profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for goods and/or services in or to the Premises to the extent the same exceeds the costs of such goods and/or services rendered by unaffiliated third parties on a competitive basis;

(l) costs of Landlord's charitable or political contributions, or of fine art maintained at the Premises;

(m) costs incurred in the sale or refinancing of the Premises;

(n) net income taxes of Landlord or the owner of any interest in the Premises (except to the extent such net income taxes are in substitution for any Taxes payable hereunder), gross receipts tax, franchise, capital stock, gift, estate or inheritance taxes or any federal, state or local transfer or documentary taxes imposed against the Premises or any portion thereof or interest therein;

(o) the costs of any capital repairs or improvements that were made to the Premises before the Commencement Date;

(p) leasing commissions, legal fees, advertising or promotional expenses, or other costs incurred in preparing space for occupancy or developing the Premises;

(q) bad debt or rent loss reserves; and

(r) any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by third parties.

Within 90 days after the end of each calendar year (or such longer period as may be reasonably required), Landlord shall furnish to Tenant a statement (an "**Annual Statement**") showing in reasonable detail: (a) the total and Tenant's Share of actual Operating Expenses for the previous calendar year, and (b) the total of Tenant's payments in respect of Operating Expenses for such year. If Tenant's Share of actual Operating Expenses for such year exceeds Tenant's payments of Operating Expenses for such year, the excess shall be due and payable by Tenant as Rent within 30 days after delivery of such Annual Statement to Tenant. If Tenant's payments of Operating Expenses for such year exceed Tenant's Share of actual Operating Expenses for such year Landlord shall pay the excess to Tenant within 30 days after delivery of such Annual Statement, except that after the expiration, or earlier termination of the Term or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord.

The Annual Statement shall be final and binding upon Tenant unless Tenant, within 100 days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reason therefor. If, during such 100 day period, Tenant reasonably and in good faith questions or contests the accuracy of Landlord's statement of Tenant's Share of Operating Expenses, Landlord will provide Tenant with access to Landlord's books and records relating to the operation of the Premises and such information as Landlord reasonably determines to be responsive to Tenant's questions ("**Expense Information**"). If after Tenant's review of such Expense 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 selected by Tenant from among the 5 largest in the United States, working pursuant to a fee arrangement other than a contingent fee (at Tenant's sole cost and expense) and approved by Landlord (which approval shall not be unreasonably withheld or delayed), audit and/or review the Expense Information for the year in question ("**Independent Review**"). The results of any such Independent Review shall be binding on Landlord and Tenant. If the Independent Review shows that the payments actually made by Tenant with respect to Operating Expenses for the calendar year in question exceeded Tenant's Share of Operating Expenses for such calendar year, Landlord shall at Landlord's option either (i) credit the excess amount to the next succeeding installments of estimated Operating Expenses or (ii) pay the excess to Tenant within 30 days after delivery of such statement, except that after the expiration or earlier termination of this Lease or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. If the Independent Review shows that Tenant's payments with respect to Operating Expenses for such calendar year were less than Tenant's Share of Operating Expenses for the calendar year, Tenant shall pay the deficiency to Landlord within 30 days after delivery of such statement. If the Independent Review shows that Tenant has overpaid with respect to Operating Expenses by more than [***] then Landlord shall reimburse Tenant for all costs incurred by Tenant for the Independent Review. Operating Expenses for the calendar years in which Tenant's obligation to share therein begins and ends shall be prorated.

"**Tenant's Share**" shall be the percentage set forth in the Basic Lease Provisions as Tenant's Share. Base Rent, Tenant's Share of Operating Expenses and all other amounts payable by Tenant to Landlord hereunder are collectively referred to herein as "**Rent**."

6. **Security Deposit**. Tenant shall deposit with Landlord, upon delivery of an executed copy of this Lease to Landlord, a security deposit ("**Security Deposit**") for the performance of all of Tenant's obligations hereunder in the amount set forth in the Basic Lease Provisions, which Security Deposit shall be in the form of an unconditional and irrevocable letter of credit ("**Letter of Credit**"): (i) in form and substance satisfactory to Landlord, (ii) naming Landlord as beneficiary, (iii) issued by an FDIC-insured financial institution satisfactory to Landlord, (iv) redeemable by presentation of a sight draft in the state of Landlord's choice; and (v) expressly allowing Landlord to draw upon it at any time from time to time by delivering to the issuer a dated statement signed by an authorized officer of Landlord substantially stating one of the following:

(a) "The beneficiary hereby certifies that [insert Tenant] or its successors or assigns under the Lease has defaulted in its obligations under the lease agreement, dated [insert lease date] by

and between [insert Tenant] and [insert Landlord] (as the same may be amended and assigned from time to time, the "**Lease**") and that beneficiary is due the amount requested in this draw request." OR

(b) "The beneficiary hereby certifies that [insert Tenant] or its successors or assigns under the Lease has defaulted in its obligations under the Lease, that beneficiary is barred by applicable law from sending a notice of default and that beneficiary is due the amount requested in this draw request." OR

(c) "The beneficiary is in receipt of [insert bank's name] notice of non-extension of letter of credit no. [insert letter of credit number] ("**Letter of Credit**") and certifies that it is entitled to draw the entire amount of the Letter of Credit." OR

(d) "The beneficiary hereby certifies that beneficiary is due the amount requested in this draw request pursuant to the terms and conditions of the Lease."

If Tenant does not provide Landlord with a substitute Letter of Credit complying with all of the requirements hereof at least 10 days before the stated expiration date of any then current Letter of Credit, Landlord shall have the right to draw the full amount of the current Letter of Credit and hold the funds drawn in cash without obligation for interest thereon as the Security Deposit. The Security Deposit shall be held by Landlord as security for the performance of Tenant's obligations under this Lease. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Upon each occurrence of a Default (as defined in Section 20), Landlord may use all or any part of the Security Deposit to pay delinquent payments due under this Lease, and the cost of any damage, injury, expense or liability caused by such Default, without prejudice to any other remedy provided herein or provided by law. Upon any such use of all or any portion of the Security Deposit, Tenant shall pay Landlord, within 5 days after demand from Landlord, the amount that will restore the Security Deposit to the amount set forth in the Basic Lease Provisions. Tenant hereby waives the provisions of any law, now or hereafter in force, which provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of Rent, to repair damage caused by Tenant or to clean the Premises, it being agreed that Landlord may, in addition, claim those sums reasonably necessary to compensate Landlord for any other loss or damage, foreseeable or unforeseeable, arising out of a Default by Tenant. Upon bankruptcy or other debtor-creditor proceedings involving Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for periods prior to the filing of such proceedings. If Tenant shall fully perform every provision of this Lease to be performed by Tenant, the Security Deposit, or any balance thereof (i.e., after deducting therefrom all amounts to which Landlord is entitled under the provisions of this Lease), shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within 75 days after the expiration or earlier termination of this Lease.

If Landlord transfers its interest in the Premises or this Lease, Landlord shall either (a) transfer any Security Deposit then held by Landlord to a person or entity assuming Landlord's obligations under this Section 6, or (b) return to Tenant any Security Deposit then held by Landlord and remaining after the deductions permitted herein. Upon such transfer to such transferee or the return of the Security Deposit to Tenant, Landlord shall have no further obligation with respect to the Security Deposit, and Tenant's right to the return of the Security Deposit shall apply solely against Landlord's transferee. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Landlord's obligation respecting the Security Deposit is that of a debtor, not a trustee, and no interest shall accrue thereon.

Within 5 days after the date on which Tenant first uses any portion of the Additional Tenant Improvement Allowance (as defined in the Work Letter), the Security Deposit shall be increased so that it equals $[***]. Tenant shall deliver the increased Security Deposit to Landlord by means of an amendment to the Letter of Credit previously issued or a replacement Letter of Credit in the amount of the increased Security Deposit, all of which shall comply with the terms of this Lease.

7. **Use**. The Premises shall be used solely for the Permitted Use set forth in the Basic Lease Provisions, and in compliance with all laws, orders, judgments, ordinances, regulations, codes, directives, permits, licenses,

covenants and restrictions now or hereafter applicable to the Premises, and to the use and occupancy thereof, including, without limitation, the Americans With Disabilities Act, 42 U.S.C. § 12101, et seq. (together with the regulations promulgated pursuant thereto, "**ADA**") (collectively, "**Legal Requirements**" and each, a "**Legal Requirement**"). Tenant shall, upon 5 days' written notice from Landlord, discontinue any use of the Premises that is declared by any Governmental Authority (as defined in Section 9) having jurisdiction to be a violation of a Legal Requirement. Tenant will not use or permit the Premises to be used for any purpose or in any manner that would void Tenant's or Landlord's insurance, materially increase the insurance risk, or cause the disallowance of any sprinkler or other credits. Tenant shall not permit any part of the Premises to be used as a "place of public accommodation", as defined in the ADA or any similar legal requirement; provided, however, that if during the Term Tenant desires to use all or part of the Premises as a place of public accommodation (as so defined), Tenant shall be solely responsible for complying with all applicable Legal Requirements (including, but not limited to, the ADA or any similar legal requirement) at its sole cost and expense in connection with, or arising out of, such use. Tenant shall reimburse Landlord promptly upon demand for any additional premium charged for any such insurance policy by reason of Tenant's failure to comply with the provisions of this Section or otherwise caused by Tenant's use and/or occupancy of the Premises. Tenant will use the Premises in a careful, safe and proper manner and will not commit or permit waste, overload the floor or structure of the Premises, subject the Premises to use that would damage the Premises or obstruct or interfere with the rights of Landlord, including conducting or giving notice of any auction, liquidation, or going out of business sale on the Premises, or using or allowing the Premises to be used for any unlawful purpose. Tenant shall not place any machinery or equipment weighing 500 pounds or more in or upon the Premises without the prior written consent of Landlord, which consent shall not be unreasonably withheld. Except as may be provided under the Work Letter, Tenant shall not, without the prior written consent of Landlord, use the Premises in any manner that will require ventilation, air exchange, heating, gas, steam, electricity or water beyond the existing capacity of the Premises as usually furnished for the Permitted Use.

(a) **Modifications**. Tenant shall, at its expense, make any alterations or modifications to the Premises that are required by Legal Requirements, including the ADA. Notwithstanding any other provision herein to the contrary, Tenant shall be responsible for any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages or judgments, and all reasonable expenses incurred in investigating or resisting the same (including, without limitation, reasonable attorneys' fees, charges and disbursements and costs of suit) (collectively, "**Claims**") arising out of or in connection with Legal Requirements, and Tenant shall indemnify, defend, hold and save Landlord harmless from and against any and all Claims arising out of or in connection with any failure of the Premises to comply with any Legal Requirement.

8. **Holding Over**. If, with Landlord's express written consent, Tenant retains possession of the Premises after the termination of the Term, (i) unless otherwise agreed in such written consent, such possession shall be subject to immediate termination by Landlord at any time, (ii) all of the other terms and provisions of this Lease (including, without limitation, the adjustment of Base Rent pursuant to Section 4 hereof) shall remain in full force and effect (excluding any expansion or renewal option or other similar right or option) during such holdover period, (iii) Tenant shall continue to pay Base Rent in the amount payable upon the date of the expiration or earlier termination of this Lease or such other amount as Landlord may indicate, in Landlord's sole and absolute discretion, in such written consent, and (iv) all other payments shall continue under the terms of this Lease. If Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without the express written consent of Landlord, (A) Tenant shall become a tenant at sufferance upon the terms of this Lease except that the monthly rental shall be equal to [***]% of Rent in effect during the last 30 days of the Term, and (B) Tenant shall be responsible for all damages suffered by Landlord resulting from or occasioned by Tenant's holding over (including consequential damages if Landlord has advised Tenant in advance of any particular consequential damages that Landlord may incur or suffer as a result of Tenant's holding over, including, without limitation, consequential damages that Landlord may incur or suffer by reason of Landlord's inability to lease the Premises or deliver occupancy to a particular tenant). No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease except as otherwise expressly provided, and this Section 8 shall not be construed as consent for Tenant to retain possession of the Premises. Acceptance by Landlord of Rent after the expiration of the Term or earlier termination of this Lease shall not result in a renewal or reinstatement of this Lease.

9. **Taxes**. Landlord shall pay, as part of Operating Expenses, all taxes, levies, fees, assessments and governmental charges of any kind, existing as of the Commencement Date or thereafter enacted (collectively referred to as "**Taxes**"), imposed by any federal, state, regional, municipal, local or other governmental authority or agency,

including, without limitation, quasi-public agencies (collectively, "**Governmental Authority**") during the Term, including, without limitation, all Taxes: (i) imposed on or measured by or based, in whole or in part, on rent payable to Landlord under this Lease and/or from the rental by Landlord of the Premises or any portion thereof, or (ii) based on the square footage, assessed value or other measure or evaluation of any kind of the Premises, or (iii) assessed or imposed by or on the operation or maintenance of any portion of the Premises, including parking, or (iv) assessed or imposed by, or at the direction of, or resulting from Legal Requirements, or interpretations thereof, promulgated by any Governmental Authority, or (v) imposed as a license or other fee, charge, tax, or assessment on Landlord's business or occupation of leasing space in the Premises. If Landlord has the right to pay all or any portion of Taxes in installments without additional expense or premium, then regardless of whether Landlord elects such method of payment, Landlord shall, for the purposes of this Lease, be deemed to have elected the longest period of payment permissible for the purpose of inclusion thereof in Taxes each year. Landlord may contest by appropriate legal proceedings the amount, validity, or application of any Taxes or liens securing Taxes, and Tenant shall pay to Landlord within 30 days after request therefor, as Additional Rent, any costs or expenses (including, but not limited to, reasonable attorneys' fees) incurred in connection with any such contest. Taxes shall not include any net income taxes imposed on Landlord except to the extent such net income taxes are in substitution for any Taxes payable hereunder. If any such Tax is levied or assessed directly against Tenant, then Tenant shall be responsible for and shall pay the same at such times and in such manner as the taxing authority shall require. Tenant shall pay, prior to delinquency, any and all Taxes levied or assessed against any personal property or trade fixtures placed by Tenant in the Premises, whether levied or assessed against Landlord or Tenant. If any Taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property, or if the assessed valuation of the Premises is increased by a value attributable to 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, higher than the base valuation on which Landlord from time-to-time allocates Taxes to the Premises, Landlord shall have the right, but not the obligation, to pay such Taxes. Landlord's determination of any excess assessed valuation shall be binding and conclusive, absent manifest error. The amount of any such payment by Landlord shall constitute Additional Rent due from Tenant to Landlord within 30 days after written demand. Landlord represents to Tenant, as of the date hereof, that (y) Landlord has not applied for any programs that could alter the amount of any future Taxes assessed against the Premises, and (z) Landlord is not currently contesting any Taxes.

(a) **Tax Contest by Tenant**. If Landlord does not contest Taxes after a written request to do so by Tenant, Tenant shall have the right, by written notice to Landlord and by appropriate legal proceedings conducted in good faith and with due diligence, to contest the amount, validity, or application of any Taxes subject to the following requirements: (i) the commencement and continuation of such proceedings shall suspend the collection thereof from Landlord and from the Premises; (ii) neither the Premises nor any part thereof or interest therein would be in any immediate danger of being sold, forfeited, attached, or lost; (iii) Tenant shall give such reasonable security as may be required by Landlord to insure ultimate payment of the same and to prevent any sale or forfeiture of the Premises by reason of such nonpayment; (iv) if such contest be finally resolved against Landlord or Tenant, Tenant shall, as Additional Rent due hereunder, promptly pay the amount required to be paid, together with all interest and penalties accrued thereon; (v) no such contest shall be brought during the last 2 year period of the Base Term or any Extension Term; and (vi) during any such contest no lien for unpaid Taxes shall be placed against all or any part of the Premises. Landlord, at Tenant's expense, shall execute and deliver to Tenant such authorizations and other documents as may be reasonably required in any such contest. The net amount of Taxes recovered as a result of such proceedings, whether commenced or paid for by Landlord or Tenant (i.e., the amount recovered after payment of all reasonable sums incurred to attain such recovery), shall be credited against Tenant's obligation to pay Operating Expenses.

10. **Parking**. Subject to all Legal Requirements, Force Majeure, a Taking (as defined in Section 19 below) and the exercise by Landlord of its rights hereunder, Tenant shall have the sole and exclusive right to park in those areas designated for parking. Landlord shall not be responsible for enforcing Tenant's parking rights against any third parties.

11. **Utilities, Services**.

(a) **General**. Landlord shall provide to the Premises, subject to the terms of this Section 11, water, electricity, heat, light, power, telephone, sewer, natural gas, fire sprinklers, and other utilities (collectively, "**Utilities**"). Tenant shall pay for all Utilities used on the Premises, all maintenance charges for Utilities, and any

storm sewer charges or other similar charges for Utilities imposed by any Governmental Authority or Utility provider, and any taxes, penalties, surcharges or similar charges thereon. The Utilities are separately metered and Landlord shall transfer the Utilities to Tenant's name as of the Commencement Date. Tenant shall pay directly to the Utility provider, prior to delinquency, any separately metered Utilities and services that may be furnished to Tenant or the Premises during the Term. No interruption or failure of Utilities, from any cause whatsoever other than Landlord's willful misconduct, shall result in eviction or constructive eviction of Tenant, termination of this Lease or the abatement of Rent.

(b) **Maintenance Contracts**. Tenant, at its expense and at Landlord's request, shall at all times during the Term maintain with qualified contractors maintenance and repair contracts ("**Maintenance Contracts**") for the rooftop mounted heating, ventilating, and air conditioning ("**HVAC**") units serving the Premises. The Maintenance Contracts shall be in form and content reasonably satisfactory to Landlord. Landlord shall be a third party beneficiary of the Maintenance Contracts and, within 30 days after Landlord's request, Tenant shall deliver a copy of the Maintenance Contracts to Landlord.

(c) **Annual Inspection Report**. Landlord shall have the right, at its sole cost and expense, to conduct an annual inspection of the Premises with a consultant selected by Landlord for the purpose of ensuring that Tenant is complying with its repair and maintenance obligations under this Lease. Tenant shall, at its sole cost and expense, correct or remedy any such noncompliance as soon as reasonably possible (but in all events within 30 days) after being notified in writing by Landlord of any such noncompliance. No such inspection shall release or discharge Tenant from such obligations if such inspection fails to reveal any noncompliance by Tenant with such obligations.

(d) **Generator and Fuel Tank**. Subject to the satisfaction, in Landlord's sole judgment, of all of the conditions set forth in this Section, Tenant, at its sole cost and expense, may install and once installed shall maintain in an exterior location mutually acceptable to Landlord and Tenant for use in connection with Tenant's business in the Premises a generator with a capacity sufficient to meet Tenant's needs ("**Generator**") and an above-ground fuel storage tank ("**Fuel Tank**") with adequate capacity to meet Tenant's needs (which Fuel Tank capacity shall not exceed an amount necessary for 72 hours of continuous, uninterrupted service), which Generator according to Tenant's preliminary estimates will have a rated capacity of 300 kilowatts.

(i) **Testing**. Tenant shall be allowed to test the Generator once a week or as more often as deemed necessary by Tenant. Tenant shall immediately take all necessary actions to prevent the Generator from causing any adverse effects to the air quality of the Building. No promotional or advertising matter or signage shall be attached to, painted, or displayed on the Generator or Fuel Tank.

(ii) **Installation; Maintenance; Removal**. The Generator and Fuel Tank and all related piping, venting, and metering devices shall be installed by a contractor reasonably acceptable to Landlord and thereafter shall be properly maintained by Tenant, all at Tenant's sole expense. Tenant shall be responsible for connecting the Generator to the electrical supply system serving the Premises in accordance with the requirements of Landlord's electrical engineer/contractor. At the expiration or earlier termination of the Term, the Generator and Fuel Tank shall, at the request and election of Landlord, be removed at Tenant's sole cost and expense and the area on which they were located shall be returned to the condition it was in prior to the installation of the Generator and Fuel Tank, reasonable wear and tear excepted. If Landlord does not direct that the Generator and Fuel Tank be so removed, Landlord shall acquire sole ownership of the Generator and Fuel Tank free and clear of all liens and encumbrances so that Landlord has good and marketable title thereto and Tenant shall execute and deliver to Landlord a bill of sale therefor (in the absence of a bill of sale, this Section shall constitute the bill of sale). Tenant shall pay all governmental fees, charges, and taxes and all hook-up and disconnection fees associated with Tenant's use of the Generator and Landlord shall have no liability therefor. All of the provisions of this Lease, including, without limitation, the insurance, maintenance, repair, release, and indemnification provisions set forth in this Lease shall apply and be applicable to Tenant's installation, operation, maintenance, and removal of the Generator and Fuel Tank. Tenant shall, at its sole cost and expense, secure all necessary permits and approvals from all applicable Governmental Authorities for the size, placement, installation, and removal of the Generator and Fuel Tank. If Tenant is unable to obtain the necessary approvals and permits from any Governmental Authorities for the Generator and Fuel Tank, Tenant shall have no remedy, claim, cause of action, or recourse against Landlord, nor shall such failure or inability to obtain any necessary permits or approvals provide Tenant the right to terminate this Lease. Landlord shall cooperate with Tenant in securing all necessary permits and approvals for the Generator and Fuel

Tank; provided, however, that Landlord shall not be obligated to spend any monies in connection with obtaining such permits and approvals and shall not be required to perform any act or otherwise take any action that would impose or create any liabilities on Landlord. Without limiting any other obligations of Tenant set forth in this Lease, Tenant shall, at its sole cost and expense, install, maintain, and repair the Generator and Fuel Tank and keep such equipment in good order and operating condition. The Fuel Tank shall serve as the fuel source for the Generator to be installed by Tenant. Any installation work described in this Section shall comply with the terms and conditions of this Lease.

(iii) **Insurance**. If the presence of the Fuel Tank and all related infrastructure (including, but not limited to, piping, venting, and metering devices) is the sole cause of an increase in Landlord's property or liability insurance premiums for the Building, Landlord shall so inform Tenant in writing and Tenant shall pay to Landlord as Additional Rent within 15 days after demand therefor an amount equal to such increase.

(iv) **Compliance**. Tenant shall, at its sole cost and expense, comply with all Legal Requirements that may now or hereafter be applicable to the area in which the Generator and the Fuel Tank shall be located or to the installation, use, operation, repair, removal, maintenance, and replacement of the Generator and the Fuel Tank. The Legal Requirements include, but are not limited to, Legal Requirements (Ai) requiring that Tenant obtain the necessary permits for the installation, use, operation, repair, removal, maintenance, and replacement of the Generator and the Fuel Tank, (B) prohibiting oil or petroleum pollution, (C) requiring the person discharging or permitting the discharging of oil or petroleum or participating in the discharge or spilling of oil or petroleum to report such discharge or spill to the proper Governmental Authorities, (D) requiring the removal of spilled oil or petroleum, and (E) requiring certain inspections, gauging, and recordkeeping. Tenant shall pay all costs, expenses, claims, fines, penalties, and damages that may in any manner arise out of or be imposed because of the failure of Tenant to comply with this Section. Tenant shall indemnify, defend, and hold harmless Landlord and its officers, members, directors, employees, managers, employees, agents, and contractors from all claims, injuries, damages, costs, expenses, losses, and liabilities (including, but not limited to, attorneys' fees) arising from Tenant's failure to comply with this Section. Each party shall promptly give notice to the other of any notice of violation received by each party. Tenant shall retain all right, title, and interest in and to the Fuel Tank and all related infrastructure (including, but not limited to, piping, venting, and metering devices) during the Term, and Landlord hereby disclaims any right, title, and interest in and to the Fuel Tank and all related infrastructure (including, but not limited to, piping, venting, and metering devices).

12. **Alterations and Tenant's Property**. Any alterations, additions, or improvements made to the Premises by or on behalf of Tenant, including additional locks or bolts of any kind or nature upon any doors or windows in the Premises, but excluding installation, removal or realignment of furniture systems (other than removal of furniture systems owned or paid for by Landlord) not involving any modifications to the structure or connections to any Landlord Elements (as defined in Section 13) (other than by ordinary plugs or jacks) ("**Alterations**") shall be subject to Landlord's prior written consent, which may be given or withheld in Landlord's sole discretion if any such Alteration affects the structure or any Landlord Elements, but which shall otherwise not be unreasonably withheld, conditioned, or delayed. If Landlord approves any Alterations, Landlord may impose reasonable conditions on Tenant in connection with the commencement, performance and completion of such Alterations. Any request for approval shall be in writing, delivered not less than 15 business days in advance of any proposed construction, and accompanied by plans, specifications, bid proposals, work contracts and such other information concerning the nature and cost of the alterations as may be reasonably requested by Landlord, including the identities and mailing addresses of all persons performing work or supplying materials. Landlord's right to review plans and specifications and to monitor construction shall be solely for its own benefit, and Landlord shall have no duty to ensure that such plans and specifications or construction comply with applicable Legal Requirements. Tenant shall cause, at its sole cost and expense, all Alterations to comply with insurance requirements and with Legal Requirements and shall implement at its sole cost and expense any alteration or modification required by Legal Requirements as a result of any Alterations. Tenant shall pay to Landlord, as Additional Rent, on demand an amount equal to the out-of-pocket costs incurred by Landlord in connection with plan review, coordination, scheduling and supervision. Before Tenant begins any Alteration, Landlord may post on and about the Premises notices of non-responsibility pursuant to applicable law. Tenant shall reimburse Landlord for, and indemnify and hold Landlord harmless from, any expense incurred by Landlord by reason of faulty work done by Tenant or its contractors or inadequate cleanup.

For Alterations costing in excess of $[***], Tenant shall furnish security or make other arrangements satisfactory to Landlord to assure payment for the completion of all Alterations work free and clear of liens, and shall provide (and cause each contractor or subcontractor to provide) certificates of insurance (in form and substance satisfactory to Landlord; form ACORD 28 [2006/07] is not satisfactory to Landlord) for workers' compensation and other coverage in amounts and from an insurance company reasonably satisfactory to Landlord and selected by Tenant protecting Landlord against liability for personal injury or property damage during construction. Upon completion of any Alterations, Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and subcontractors who did the work and final lien waivers from all such contractors and subcontractors; and (ii) "as built" plans for any such Alteration.

Other than (i) the items, if any, listed on **Exhibit F** attached hereto, (ii) any items agreed by Landlord in writing to be included on **Exhibit F** in the future, and (iii) any trade fixtures, machinery, equipment and other personal property not paid for by Landlord that may be removed without material damage to the Premises, which damage shall be repaired (including capping or terminating utility hook-ups behind walls) by Tenant during the Term (collectively, "**Tenant's Property**"), all property of any kind paid for by Landlord, all Alterations, real property fixtures, built-in machinery and equipment, built-in casework and cabinets and other similar additions and improvements built into the Premises so as to become an integral part of the Premises such as fume hoods that penetrate the roof or plenum area, built-in cold rooms, built-in warm rooms, walk-in cold rooms, walk-in warm rooms, deionized water systems, glass washing equipment, autoclaves, chillers, built-in plumbing, electrical and mechanical equipment and systems, and any power generator and transfer switch (collectively, "**Installations**") shall be and shall remain the property of Landlord during the Term and following the expiration or earlier termination of the Term, shall not be removed by Tenant at any time during the Term and shall remain upon and be surrendered with the Premises as a part thereof in accordance with Section 28 following the expiration or earlier termination of this Lease; provided, however, that Landlord shall, at the time its approval of such Installation is requested, notify Tenant if it has elected to cause Tenant to remove such Installation upon the expiration or earlier termination of this Lease. If Landlord so elects, Tenant shall remove such Installation upon the expiration or earlier termination of this Lease and restore any damage caused by or occasioned as a result of such removal, including, when removing any of Tenant's Property that was plumbed, wired or otherwise connected to any of the Landlord Elements, capping off all such connections behind the walls of the Premises and repairing any holes. During any such restoration period, Tenant shall pay Rent to Landlord as provided herein as if said space were otherwise occupied by Tenant. All provisions of this Lease to the contrary notwithstanding, Tenant shall surrender the Tenant Improvements (as defined in the Work Letter) with the Premises in accordance with Section 28 and shall have no obligation whatsoever to remove or pay for the removal of the same at the expiration or earlier termination of this Lease.

13. **Landlord's Repairs**. Landlord shall have the right, but not the obligation, to repair losses and damages caused by Tenant or any Tenant Party (as defined below) to the extent not covered by insurance, at Tenant's sole cost and expense following Tenant's Default in the repair, maintenance, or replacement thereof (and any such cost and expense incurred by Landlord shall form a part of the Operating Expenses). Landlord shall, at its cost but subject to reimbursement to the extent the same are permitted to be included in Operating Expenses, keep the following elements of the Premises in good order, condition, and repair throughout the Term: (a) slab, (b) foundation, (c) roof structure (including roof membrane), (d) exterior façade, walls, doors, and windows of the Building, and (e) Utilities to the point of entrance to the Building (collectively, "**Landlord Elements**").

(a) **Roof Membrane**. With respect to the roof membrane, Landlord shall perform, or cause to be performed, as part of the Operating Expenses, maintenance and repair on a semi-annual basis. If Landlord determines that the roof membrane needs to be replaced ("**Roof Membrane Replacement**"), Landlord shall replace the roof membrane at Landlord's actual out-of-pocket cost subject to the provisions of this paragraph. The cost of the Roof Membrane Replacement shall be fully amortized in accordance with the Formula (as defined below) and reimbursed to Landlord as Additional Rent over the remainder of the Base Term in accordance with the terms of this paragraph. For purposes of this paragraph, "**Formula**" means that number, the numerator of which shall be the number of months of the Base Term (and, if Tenant has timely exercised an Extension Right, the applicable Extension Term) remaining after the date on which the Roof Membrane Replacement is installed, and the denominator of which shall be the amortization period (in months) equal to the useful life of the Roof Membrane Replacement (which, for purposes of this Lease, shall be deemed to be 15 years), such fraction multiplied by the actual out-of-pocket cost of the Roof Membrane Replacement. Landlord shall pay for the Roof Membrane Replacement and during the remainder of the Base Term (and, if Tenant has timely exercised an Extension Right, the applicable Extension Term),

Tenant shall reimburse Landlord as Additional Rent for Tenant's amortized share thereof (determined as set forth above) in equal monthly installments in the same manner as the payment by Tenant to Landlord of monthly installments of Base Rent.

(b) **Utility Stoppage**. Landlord reserves the right to stop service of Utilities when necessary (i) by reason of accident or emergency, or (ii) for planned repairs, alterations or improvements, which are, in the judgment of Landlord, necessary to be made, until such repairs, alterations or improvements shall have been completed. Landlord shall have no responsibility or liability for failure to supply Utilities during any such period of interruption; provided, however, that Landlord shall, except in case of emergency, make a commercially reasonable effort to give Tenant 48 hours advance notice (including the estimated duration of such stoppage) of any planned stoppage of Utilities for such repairs, alterations or improvements (which stoppage shall not be any longer than is reasonably necessary under the circumstances). Landlord's right to perform work in the Premises pursuant to this Section 13 shall be performed in accordance with the access restrictions set forth in Section 32 below. Tenant shall promptly give Landlord written notice of any repair required by Landlord pursuant to this Section. Tenant waives its rights under any state or local law to terminate this Lease or to make such repairs at Landlord's expense and agrees that the parties' respective rights with respect to such matters shall be solely as set forth herein. Repairs required as the result of fire, earthquake, flood, vandalism, war, or similar cause of damage or destruction shall be controlled by Section 18.

(c) **Service Interruption**. Notwithstanding anything to the contrary set forth herein, if (i) a stoppage of an Essential Service (as defined below) to the Premises shall occur and such stoppage is due solely to the negligent acts or omissions of Landlord and not due in any part to any act or omission on the part of Tenant or any Tenant Party or any matter beyond Landlord's reasonable control (any such stoppage of an Essential Service being hereinafter referred to as a "**Service Interruption**"), and (ii) such Service Interruption continues for more than 5 consecutive business days after Landlord shall have received written notice thereof from Tenant, and (iii) as a result of such Service Interruption, the conduct of Tenant's normal operations in the Premises are materially and adversely affected, then, to the extent that such Service Interruption is covered by rental interruption insurance carried by Landlord pursuant to this Lease, there shall be an abatement of 1 day's Base Rent for each day during which such Service Interruption continues after such 5 business day period; provided, however, that if any part of the Premises is reasonably useable for Tenant's normal business operations or if Tenant conducts all or any part of its operations in any portion of the Premises notwithstanding the Service Interruption, then the amount of each daily abatement of Base Rent shall only be proportionate to the nature and extent of the interruption of Tenant's normal operations or ability to use the Premises. The rights granted to Tenant under this paragraph shall be Tenant's sole and exclusive remedy resulting from a failure of Landlord to provide an Essential Service, and Landlord shall not otherwise be liable for any loss or damage suffered or sustained by Tenant resulting from any failure or cessation of an Essential Service. For purposes hereof, the term "**Essential Services**" shall mean the following services: water, sewer, and electricity, but in each case only to the extent that Landlord has an obligation to provide same to Tenant under this Lease. The provisions of this paragraph shall only apply as long as Arbutus Biopharma, Inc. is the tenant occupying the Premises under this Lease and shall not apply to any assignee or sublessee.

14. **Tenant's Repairs**. Except for the Landlord Elements, Tenant shall, at its sole cost and expense, repair, replace, and maintain in good condition (reasonable wear and tear excluded) all portions of the Premises, including, without limitation, sidewalks, walkways, parking and other areas of the Premises (including landscaping and snow and ice removal), HVAC, plumbing, fire sprinklers, and all other Building systems and Utilities (from the point of entrance to and within the Building) serving the Premises, entries, doors, ceilings, interior windows, interior walls, and the interior side of demising walls. Such repair and replacement may include capital expenditures and repairs whose benefit may extend beyond the Term, and shall include uninsured losses and damages caused by Tenant, or by any of Tenant's agents, servants, employees, invitees and contractors (collectively, "**Tenant Parties**"). Should Tenant fail to make any such repair or replacement or fail to maintain the Premises, Landlord shall give Tenant notice of such failure. If Tenant fails to commence cure of such failure within 20 days of Landlord's notice (plus such additional time as is reasonable under the circumstances if such commencement of cure, by its nature, cannot reasonably occur within such 20 day period as long as such additional time period does not subject Landlord or the Premises or any interest therein to damage, injury, liability, or loss and Tenant notifies Landlord that such additional time will be required) and thereafter diligently prosecute such cure to completion, Landlord may perform such work and shall be reimbursed by Tenant within 30 days after demand therefor; provided, however, that if such failure by Tenant creates or could create an emergency, Landlord may immediately commence cure of such failure

and shall thereafter be entitled to recover the costs of such cure from Tenant. Subject to Sections 17 and 18, Tenant shall bear the full uninsured cost of any repair or replacement to any part of the Premises that results from damage caused by Tenant or any Tenant Party.

15. **Mechanic's Liens**. Tenant shall discharge, by bond or otherwise, any mechanic's lien filed against the Premises for work claimed to have been done for, or materials claimed to have been furnished to, Tenant within 20 days after notice of the filing thereof, at Tenant's sole cost and shall otherwise keep the Premises free from any liens arising out of work performed, materials furnished or obligations incurred by Tenant. Should Tenant fail to discharge any lien described herein, Landlord shall have the right, but not the obligation, to pay such claim or post a bond or otherwise provide security to eliminate the lien as a claim against title to the Premises and the cost thereof shall be immediately due from Tenant as Additional Rent. If Tenant shall lease or finance 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 filed as a matter of public record by any lessor or creditor of Tenant will 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 be furnished on the statement without qualifying language as to applicability of the lien only to removable personal property, located in an identified suite held by Tenant.

16. **Indemnification**.

(a) **By Tenant**. Tenant hereby indemnifies and agrees to defend, save and hold Landlord harmless from and against any and all Claims for injury or death to persons or damage to property occurring within or about the Premises, arising directly or indirectly out of use or occupancy of the Premises or a breach or default by Tenant in the performance of any of its obligations hereunder, except to the extent caused solely by the willful misconduct or gross negligence of Landlord. Landlord shall not be liable to Tenant for, and Tenant assumes all risk of damage to, personal property (including, without limitation, loss of records kept within the Premises). Tenant further waives any and all Claims for injury to Tenant's business or loss of income relating to any such damage or destruction of personal property (including, without limitation, any loss of records). Landlord shall not be liable for any damages arising from any act, omission or neglect of Tenant or any Tenant Party.

(b) **By Landlord**. Landlord hereby indemnifies and agrees to defend, save, and hold Tenant harmless from and against any and all Claims for injury or death to persons or damage to property occurring within or about the Premises caused by Landlord's willful misconduct or gross negligence, except to the extent caused by the willful misconduct or negligence of Tenant or any Tenant Party.

17. **Insurance**. Landlord shall maintain all risk (or "special form") property and, if applicable, sprinkler damage insurance covering the full replacement cost of the Premises or such lesser coverage amount as Landlord may elect provided such coverage amount is not less than [***]% of such full replacement cost. Landlord shall further procure and maintain commercial general liability insurance with a minimum limit of not less than $[***] per occurrence and $[***] in the aggregate for bodily injury and property damage with respect to the Premises. Landlord may, but is not obligated to, maintain such other insurance and additional coverages as it may deem necessary, including, but not limited to, flood, environmental hazard and earthquake, loss or failure of building equipment, errors and omissions, rental loss during the period of repair or rebuilding, workers' compensation insurance and fidelity bonds for employees employed to perform services and 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 the Premises. All such insurance shall be included as part of the Operating Expenses. The Premises may be included in a blanket policy (in which case the cost of such insurance allocable to the Premises will be determined by Landlord based upon the insurer's cost calculations).

Tenant, at its sole cost and expense, shall maintain during the Term: "special form" property insurance with business interruption and extra expense coverage, covering the full replacement cost of all property and improvements installed or placed in the Premises by Tenant at Tenant's expense; workers' compensation insurance with no less than the minimum limits required by law; employer's liability insurance with such limits as required by law; and commercial general liability insurance, with a minimum limit of not less than $[***] per occurrence for bodily injury and property damage with respect to the Premises (such minimum limit may be achieved through any combination of general liability insurance and umbrella liability policies obtained by Tenant). The commercial general liability insurance policy shall name Landlord and Alexandria Real Estate Equities, Inc., and its and their

respective members, officers, directors, employees, managers, and agents (collectively, "**Landlord Parties**"), as additional insureds; insure on an occurrence and not a claims-made basis; be issued by insurance companies that have a rating of not less than policyholder rating of A and financial category rating of at least Class X in "Best's Insurance Guide"; shall not be cancelable for nonpayment of premium unless 30 days prior written notice shall have been given to Landlord from the insurer; contain a hostile fire endorsement and a contractual liability endorsement; and provide primary coverage to Landlord (any policy issued to Landlord providing duplicate or similar coverage shall be deemed excess over Tenant's policies). Copies of such policies (if requested by Landlord), or certificates of insurance (in form and substance satisfactory to Landlord; form ACORD 28 [2006/07] is not satisfactory to Landlord) showing the limits of coverage required hereunder and showing Landlord as an additional insured, along with reasonable evidence of the payment of premiums for the applicable period, shall be delivered to Landlord by Tenant upon Tenant's execution and delivery of this Lease and upon each renewal of said insurance. Any insurance maintained by Tenant may have deductibles in the amounts generally maintained by Tenant for a majority of its locations. Tenant shall have the right, at its election and on written notice to Landlord, to self-insure for loss of Tenant's personal property as long as Tenant maintains a commercially reasonable net worth to support such self-insurance. Tenant's policy may be a "blanket policy" with an aggregate per location endorsement that specifically provides that the amount of insurance shall not be prejudiced by other losses covered by the policy. Tenant shall, at least 5 days prior to the expiration of such policies, furnish Landlord with renewal certificates.

In each instance where insurance is to name Landlord as an additional insured, Tenant shall upon written request of Landlord also designate and furnish certificates so evidencing Landlord as additional insured to: (i) any lender of Landlord holding a security interest in the Premises or any portion thereof, (ii) the landlord under any lease wherein Landlord is tenant of the real property on which the Premises is located, if the interest of Landlord is or shall become that of a tenant under a ground or other underlying lease rather than that of a fee owner, and/or (iii) any management company retained by Landlord to manage the Premises.

The property insurance obtained by Landlord and Tenant shall include a waiver of subrogation by the insurers and all rights based upon an assignment from its insured, against Landlord or Tenant, and their respective officers, directors, employees, managers, agents, invitees and contractors ("**Related Parties**"), in connection with any loss or damage thereby insured against. Neither party nor its respective Related Parties shall be liable to the other for loss or damage caused by any risk insured against under property insurance required to be maintained hereunder, and each party waives any claims against the other party, and its respective Related Parties, for such loss or damage. The failure of a party to insure its property shall not void this waiver. Landlord and its respective Related Parties shall not be liable for, and Tenant hereby waives all claims against such parties for, business interruption and losses occasioned thereby sustained by Tenant or any person claiming through Tenant resulting from any accident or occurrence in or upon the Premises from any cause whatsoever. If the foregoing waivers shall contravene any law with respect to exculpatory agreements, the liability of Landlord or Tenant shall be deemed not released but shall be secondary to the other's insurer.

Not more frequently than once every 5 years during the Term, Landlord may require insurance policy limits to be raised to bring coverage limits to levels then being generally required of tenants by prudent commercial landlords of comparable single-tenant buildings within a 15 mile radius of the Premises.

18. **Restoration**. If, at any time during the Term, the Premises is damaged or destroyed by a fire or other insured casualty, Landlord shall notify Tenant within 60 days after discovery of such damage as to the amount of time Landlord reasonably estimates it will take to restore the Premises or the Premises ("**Restoration Period**"). If the Restoration Period is estimated to exceed [***] ("**Maximum Restoration Period**"), Landlord may, in such notice, elect to terminate this Lease as of the date that is 75 days after the date of discovery of such damage or destruction; provided, however, that notwithstanding Landlord's election to restore, Tenant may elect to terminate this Lease by written notice to Landlord delivered within [***] calendar days of receipt of a notice from Landlord estimating a Restoration Period for the Premises longer than the Maximum Restoration Period. Unless either Landlord or Tenant so elects to terminate this Lease, Landlord shall, subject to receipt of sufficient insurance proceeds (with any deductible to be treated as a current Operating Expense), promptly restore the Premises (excluding the improvements installed by Tenant or by Landlord and paid for by Tenant), subject to delays ("**Restoration Delays**") arising from the collection of insurance proceeds, from Force Majeure events or as needed to obtain any license, clearance or other authorization of any kind required to enter into and restore the Premises issued by any Governmental Authority having jurisdiction over the use, storage, handling, treatment, generation, release, disposal,

removal or remediation of Hazardous Materials (as defined in Section 30) in, on or about the Premises (collectively referred to herein as "**Hazardous Materials Clearances**"); provided, however, that if repair or restoration of the Premises is not substantially complete as of the end of the Maximum Restoration Period or, if longer, the Restoration Period due to Restoration Delays, then Landlord may, in its sole and absolute discretion, elect not to proceed with such repair and restoration, or Tenant may by written notice to Landlord delivered within 14 calendar days of the expiration of the Maximum Restoration Period or, if longer, the Restoration Period, elect to terminate this Lease in which event Landlord shall be relieved of its obligation to make such repairs or restoration and this Lease shall terminate as of the date that is 75 days after the later of: (i) discovery of such damage or destruction, or (ii) the date all required Hazardous Materials Clearances are obtained, but Landlord shall retain any Rent paid and the right to any Rent payable by Tenant prior to such election by Landlord or Tenant.

Tenant, at its expense, shall promptly perform, subject to delays arising from the collection of insurance proceeds, from Force Majeure (as defined in Section 34) events or to obtain Hazardous Material Clearances, all repairs or restoration not required to be done by Landlord and shall promptly re-enter the Premises and commence doing business in accordance with this Lease. Notwithstanding the foregoing, either Landlord or Tenant may terminate this Lease if the Premises is damaged during the last year of the Term and Landlord reasonably estimates that it will take more than 4 months to repair such damage, or if insurance proceeds are not available for such restoration. Rent shall be abated from the date all required Hazardous Material Clearances are obtained until the Premises is repaired and restored, in the proportion that the area of the Premises, if any, that is not usable by Tenant bears to the total area of the Premises. Such abatement shall be the sole remedy of Tenant, and except as provided in this Section 18, Tenant waives any right to terminate this Lease by reason of damage or casualty loss.

The provisions of this Lease, including this Section 18, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, and any statute or regulation that is now or may hereafter be in effect shall have no application to this Lease or any damage or destruction to all or any part of the Premises, the parties hereto expressly agreeing that this Section 18 sets forth their entire understanding and agreement with respect to such matters.

19. **Condemnation**. If the whole or any material part of the Premises is taken for any public or quasi-public use under governmental law, ordinance, or regulation, or by right of eminent domain, or by private purchase in lieu thereof (a "**Taking**" or "**Taken**"), and the Taking would either prevent or materially interfere with Tenant's use of the Premises or materially interfere with or impair Landlord's ownership or operation of the Premises, then upon written notice by either party to the other, this Lease shall terminate and Rent shall be apportioned as of said date. If part of the Premises shall be Taken, and this Lease is not terminated as provided above, Landlord shall promptly restore the Premises as nearly as is commercially reasonable under the circumstances to their condition prior to such partial Taking and the rentable square footage of the Premises, Tenant's Share of Operating Expenses and the Rent payable hereunder during the unexpired Term shall be reduced in proportion to the rentable area of the Premises so Taken. Upon any such Taking, Landlord shall be entitled to receive the entire price or award from any such Taking without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award. Tenant shall have the right, to the extent that same shall not diminish Landlord's award, to make a separate claim against the condemning authority (but not Landlord) for such compensation as may be separately awarded or recoverable by Tenant for moving expenses and damage to Tenant's improvements and trade fixtures, if a separate award for such items is made to Tenant. Tenant hereby waives any and all rights it might otherwise have pursuant to any provision of state law to terminate this Lease upon a partial Taking of the Premises.

20. **Events of Default**. Each of the following events shall be a default ("**Default**") by Tenant under this Lease:

(a) **Payment Defaults**. Tenant shall fail to pay any installment of Rent or any other payment hereunder when due; provided, however, that Landlord will give Tenant notice and an opportunity to cure any failure to pay Rent within 3 days of any such notice not more than 3 times in any 12 month period and Tenant agrees that such notice shall be in lieu of and not in addition to, or shall be deemed to be, any notice required by law.

(b) **Insurance**. Any insurance required to be maintained by Tenant pursuant to this Lease shall be canceled or terminated or shall expire or shall be reduced or materially changed, or Landlord shall receive a notice

of nonrenewal of any such insurance and Tenant shall fail to obtain replacement insurance at least 20 days before the expiration of the current coverage.

(c) **Abandonment**. Tenant shall abandon the Premises without (i) the release of the Premises of all Hazardous Materials Clearances and free of any residual impact from the Tenant HazMat Operations, and (ii) complying with the provisions of Section 28.

(d) **Improper Transfer**. Tenant shall assign, sublease or otherwise transfer or attempt to transfer all or any portion of Tenant's interest in this Lease or the Premises except as expressly permitted herein, or Tenant's interest in this Lease shall be attached, executed upon, or otherwise judicially seized and such action is not released within 90 days of the action.

(e) **Liens**. Tenant shall fail to discharge or otherwise obtain the release of any lien placed upon the Premises in violation of this Lease within 20 days after Tenant's receipt of notice that any such lien is filed against the Premises.

(f) **Insolvency Events**. To the extent any of the following is not in conflict with any Federal bankruptcy laws, Tenant or any guarantor or surety of Tenant's obligations hereunder shall: (A) make a general assignment for the benefit of creditors; (B) commence any case, proceeding or other action seeking to have an order for relief entered on its behalf as a debtor or to adjudicate it a bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, liquidation, dissolution or composition of it or its debts or seeking appointment of a receiver, trustee, custodian or other similar official for it or for all or of any substantial part of its property (collectively a "**Proceeding for Relief**"); (C) become the subject of any Proceeding for Relief that is not dismissed within 90 days of its filing or entry; or (D) die or suffer a legal disability (if Tenant, guarantor, or surety is an individual) or be dissolved or otherwise fail to maintain its legal existence (if Tenant, guarantor or surety is a corporation, partnership or other entity).

(g) **Estoppel Certificate or Subordination Agreement.** Tenant fails to execute any document required from Tenant under Sections 23 or 27 within 5 days after a second notice requesting such document.

(h) **Other Defaults**. Tenant shall fail to comply with any provision of this Lease other than those specifically referred to in this Section 20, and, except as otherwise expressly provided herein (including the following paragraph), such failure shall continue for a period of 15 days after written notice thereof from Landlord to Tenant.

Any notice given under Section 20(h) hereof shall: (i) specify the alleged default, (ii) demand that Tenant cure such default, (iii) be in lieu of, and not in addition to, or shall be deemed to be, any notice required under any provision of applicable law, and (iv) not be deemed a forfeiture or a termination of this Lease unless Landlord elects otherwise in such notice; provided that if the nature of Tenant's default pursuant to Section 20(h) is such that it cannot be cured by the payment of money and reasonably requires more than 15 days to cure, then Tenant shall not be deemed to be in default if Tenant commences such cure within said 15 day period and thereafter diligently prosecutes the same to completion; provided, however, that such cure shall be completed no later than 60 days from the date of Landlord's notice unless (i) Tenant notifies Landlord before the end of such 60 day period that Tenant needs additional time to complete such cure (which notice shall describe in reasonable detail the curative action that Tenant plans to continue or undertake and the estimate timeline for doing so) and such additional time does not, and will not, subject Landlord or the Premises or any interest therein to damage, injury, liability, or loss, and (b) Tenant is then the sole tenant in the Building. If Tenant satisfies the conditions set forth in clauses (i) and (ii), then Tenant shall have such additional time (not to exceed an aggregate of [***] days after the date of Landlord's notice) to cure the default as long as Tenant continues diligently to prosecute the cure to completion. For purposes of this paragraph, "**commences such cure**" shall mean that Tenant has undertaken some identifiable form of affirmative action to implement or effectuate the cure.

21. **Landlord's Remedies**.

(a) **Interest**. Upon a Default by Tenant hereunder, Landlord may, without waiving or releasing any obligation of Tenant hereunder, make such payment or perform such act. All sums so paid or incurred by Landlord, together with interest thereon, from the date such sums were paid or incurred, at the annual rate equal to [***]% per annum or the highest rate permitted by law ("**Default Rate**"), whichever is less, shall be payable to Landlord

on demand as Additional Rent. Nothing herein shall be construed to create or impose a duty on Landlord to mitigate any damages resulting from Tenant's Default hereunder.

(b) **Late Payment Rent**. Late payment by Tenant to Landlord of Rent and other sums due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult and impracticable to ascertain. Such costs include, but are not limited to, processing and accounting charges and late charges that may be imposed on Landlord under any Mortgage covering the Premises. Therefore, if any installment of Rent due from Tenant is not received by Landlord within 5 days after the date such payment is due, Tenant shall pay to Landlord an additional sum of [***]% of the overdue Rent as a late charge. The parties agree that this late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. In addition to the late charge, Rent not paid when due shall bear interest at the Default Rate from the 5th day after the date due until paid. Notwithstanding the foregoing provisions of this paragraph, (i) with respect to the first occurrence of a late payment by Tenant of Rent during each calendar year of the Term, Tenant shall not be required to pay such late charge and interest as long as Tenant pays such amount of Rent within 5 days after written notice thereof, (ii) with respect to a second occurrence of a late payment by Tenant of Rent during each calendar year of the Term, Tenant shall pay the late charge and interest at the Default Rate from the 5th day after the date due until paid, and (iii) with respect to the third and subsequent occurrences of a late payment by Tenant of Rent during each calendar year of the Term, Tenant shall pay a late charge in an amount equal to [***]% of the overdue Rent and interest at the *lesser* of the Default Rate plus an additional [***]% per annum or the highest rate permitted by law from the 5th day after the date due until paid.

(c) **Re-Entry**. Upon a Default by Tenant hereunder, Landlord shall have the right, immediately or at any time thereafter, without further notice to Tenant (unless otherwise provided herein), to enter the Premises, without terminating this Lease or being guilty of trespass, and do any and all acts as Landlord may deem necessary, proper, or convenient to cure such default, for the account and at the expense of Tenant, any notice to quit or notice of Landlord's intention to re-enter being hereby expressly waived, and Tenant agrees to pay to Landlord as Additional Rent all damage and/or expense incurred by Landlord in so doing, including interest at the Default Rate, from the due date until the date payment is received by Landlord.

(d) **Termination**. Upon a Default by Tenant hereunder, Landlord shall have the right to terminate this Lease and Tenant's right to possession of the Premises and, in accordance with legal process, take possession of the Premises and remove Tenant, any occupant and any property therefrom, without being guilty of trespass and without relinquishing any rights of Landlord against Tenant, any notice to quit, or notice of Landlord's intention to re-enter being hereby expressly waived. Landlord shall be entitled to recover damages from Tenant for all amounts covenanted to be paid during the remainder of the Term (except for the period of any holdover by Tenant, in which case the monthly rental rate stated at Section 8 herein shall apply), which may be accelerated by Landlord at its option (provided that such accelerated rent is discounted to present value using the discount rate then in effect at the Federal Reserve Bank closest to the Premises), together with (i) all expenses of any proceedings (including, but not limited to, legal expenses and attorneys' fees) that may be necessary for Landlord to recover possession of the Premises, (ii) the expenses of the re-renting of the Premises (including, but not limited to, any commissions paid to any real estate agent, advertising expense and the costs of such alterations, repairs, replacements or modifications that Landlord, in its sole judgment, considers advisable and necessary for the purpose of re-renting), and (iii) interest computed at the Default Rate from the due date until paid; provided, however, that there shall be credited against the amount of such damages all amounts received by Landlord from such re-renting of the Premises, with any overage being refunded to Tenant. Landlord shall in no event be liable in any way whatsoever for failure to re-rent the Premises or, if the Premises is re-rented, for failure to collect the rent thereof under such re-renting and Tenant expressly waives any duty of the Landlord to mitigate damages. No act or thing done by Landlord shall be deemed to be an acceptance of a surrender of the Premises, unless Landlord shall execute a written agreement of surrender with Tenant. Tenant's liability hereunder shall not be terminated by the execution of a new lease of the Premises by Landlord, unless that new lease expressly so states. If Landlord does not exercise its option to accelerate the payment of amounts owed as provided hereinabove, then Tenant agrees to pay to Landlord, upon demand, the amount of damages herein provided after the amount of such damages for any month shall have been ascertained; provided, however, that any expenses incurred by Landlord shall be deemed to be a part of the damages for the month in which they were incurred. Separate actions may be maintained each month or at other times by Landlord against Tenant to recover the damages then due, without waiting until the end of the Term of this Lease to determine the aggregate amount of such damages. Tenant hereby expressly waives any and all rights of redemption granted by

or under any present or future laws in the event of Tenant being evicted or being dispossessed for any cause, or in the event of Landlord obtaining possession of the Premises by reason of the violation by Tenant of any of the covenants and conditions of this Lease. Tenant agrees and acknowledges that Landlord shall have no obligation whatsoever to mitigate any damages resulting from a Default by Tenant under this Lease, regardless of any contrary Legal Requirement in effect on the Commencement Date or at the time of Tenant's Default.

(e) **Lien for Rent**. Upon any default by Tenant in the payment of Rent or other amounts owed hereunder, Landlord shall have a lien upon the property of Tenant in the Premises for the amount of such unpaid amounts. In such event, Tenant shall not remove any of Tenant's property from the Premises except with the prior written consent of Landlord, and Landlord shall have the right and privilege, at its option, to take possession of all Tenant's property in the Premises, to store the same on the Premises, or to remove it and store it in such place as may be selected by Landlord, at Tenant's risk and expense. If Tenant fails to redeem the personal property so seized, by payment of whatever sum may be due Landlord hereunder (including all storage costs), Landlord shall have the right, after 20 days written notice to Tenant of its intention to do so, to sell such personal property so seized at public or private sale and upon such terms and conditions as may appear advantageous to Landlord, and after the payment of all proper charges incident to such sale, apply the proceeds thereof to the payment of any balance due to Landlord on account of rent or other obligations of Tenant pursuant to this Lease. In the event there shall then remain in the hands of Landlord any balance realized from the sale of said personal property, the same shall be paid over to Tenant. The exercise of the foregoing remedy by Landlord shall not relieve or discharge Tenant from any deficiency owed to Landlord that Landlord has the right to enforce pursuant to any of the provisions of this Lease. Tenant shall also be liable for all expenses incident to the foregoing process, including any auctioneer or attorney's fees or commissions. At Tenant's request, Landlord shall subordinate its lien rights as set forth in this paragraph to the lien, operation, and effect of any bona fide third party equipment financing pursuant to a subordination agreement in form and substance reasonably acceptable to Landlord. Such subordination shall be limited to specific items of equipment and shall not be in the form of a blanket lien subordination.

(f) **Waiver**. If proceedings shall be commenced by Landlord to recover possession, either at the end of the Term or upon occurrence of any Default by Tenant hereunder, Tenant expressly waives all right to notice in excess of 5 days required by the Pennsylvania Landlord and Tenant Act of 1951 and all supplements and amendments thereto that have been or may hereafter be passed ("**Landlord and Tenant Act**"), and agrees that in either or any such case, 5 days' notice shall be sufficient. As a result, Tenant shall receive 5 days' notice to quit. Without limitation of or by the foregoing, Tenant hereby waives any and all demand, notices of intention and notices of action or proceedings that may be required by law to be given or taken prior to any entry or re-entry by summary proceedings, ejectment or otherwise, by Landlord, except as hereinbefore expressly provided with respect to the 5 days' notice.

(g) **Affidavit Required**. In any action of ejectment or for Rent in arrears, Landlord shall first cause to be filed in such action an affidavit made by it or someone acting for it setting forth the facts necessary to authorize the entry of judgment of which facts such affidavit shall be conclusive evidence; and if a true copy of this Lease is filed in such action, it shall not be necessary to file the original as a warrant of attorney, any rule of court, custom, or practice to the contrary notwithstanding.

(h) **Expenses**. Tenant shall pay, as Additional Rent and immediately upon written demand from Landlord, all costs and expenses incurred by Landlord, including, but not limited to, attorneys' fees, expert witness fees, paralegal fees, other litigation expenses (such as expenses for photocopying, electronic legal research, and deposition transcripts), and court costs in connection with or arising out of any Default by Tenant under this Lease, including, but not limited to, any action or proceeding brought by Landlord to enforce any obligation of Tenant under this Lease or the right of Landlord in or to the Premises. Such expenses are recoverable at all levels, including appeals and post-judgment actions or proceedings. The giving of a notice of Default by Landlord shall constitute part of an action or proceeding under this Lease, entitling Landlord to reimbursement of such fees and expenses, even if an action or proceeding is not commenced in a court of law and regardless of whether the Default is cured.

(i) **Suspension of Funding**. Upon a Default by Tenant hereunder and during the continuance thereof, Landlord shall have the right to suspend funding of any TI Allowance (as defined in the Work Letter).

(j) **Other Remedies**. Upon a Default by Tenant hereunder and in addition to any other remedy available to Landlord under this Lease or otherwise, Landlord shall be entitled to recover damages from Tenant the

amount of the Base Rent Abatement. In addition to the remedies set forth in this Section 21, Landlord, at its option, without further notice or demand to Tenant, shall have all other rights and remedies provided at law or in equity.

(k) **Default Rental Calculation**. Notwithstanding any contrary provision contained in this Lease, any election by Landlord to accelerate the Rent hereunder after a Default by Tenant shall be limited as follows: for purposes of acceleration, the remaining Base Rent that would have been payable under this Lease as set forth in Section 3(a) above shall instead be computed as if the Base Rent has been calculated at the rate of $[***] per rentable square foot of the Premises for the first year of the Base Term, with [***]% annual increases thereafter.

22. **Assignment and Subletting**.

(a) **General Prohibition**. Without Landlord's prior written consent subject to and on the conditions described in this Section 22, Tenant shall not, directly or indirectly, voluntarily or by operation of law, assign this Lease or sublease the Premises or any part thereof or mortgage, pledge, or hypothecate its leasehold interest or grant any concession or license within the Premises, and any attempt to do any of the foregoing shall be void and of no effect. If Tenant is a corporation, partnership or limited liability company, the shares or other ownership interests thereof that are not actively traded upon a stock exchange or in the over-the-counter market, a transfer or series of transfers whereby [***]% or more of the issued and outstanding shares or other ownership interests of such corporation are, or voting control is, transferred (but excepting transfers upon deaths of individual owners) from a person or persons or entity or entities that were owners thereof at time of execution of this Lease to persons or entities who were not owners of shares or other ownership interests of the corporation, partnership or limited liability company at time of execution of this Lease, shall be deemed an assignment of this Lease requiring the consent of Landlord as provided in this Section 22. Notwithstanding the foregoing, any public offering of shares or other ownership interest in Tenant shall not be deemed an assignment.

(b) **Permitted Transfers**. If Tenant desires to assign, sublease, hypothecate or otherwise transfer this Lease or sublet the Premises, then at least 15 business days, but not more than 45 business days, before the date Tenant desires the assignment or sublease to be effective ("**Assignment Date**"), Tenant shall give Landlord a notice ("**Assignment Notice**") containing such information about the proposed assignee or sublessee, including the proposed use of the Premises and any Hazardous Materials proposed to be used, stored handled, treated, generated in or released or disposed of from the Premises, the Assignment Date, any relationship between Tenant and the proposed assignee or sublessee, and all material terms and conditions of the proposed assignment or sublease, including a copy of any proposed assignment or sublease in its final form, and such other information as Landlord may deem reasonably necessary or appropriate to its consideration whether to grant its consent. Landlord may, by giving written notice to Tenant within 15 business days after receipt of the Assignment Notice: (i) grant such consent, (ii) refuse such consent, in its reasonable discretion (provided that Landlord shall further have the right to review and approve or disapprove the proposed form of sublease prior to the effective date of any such subletting), or (iii) terminate this Lease with respect to the space described in the Assignment Notice as of the Assignment Date (an "**Assignment Termination**"). If Landlord delivers notice of its election to exercise an Assignment Termination, Tenant shall have the right to withdraw such Assignment Notice by written notice to Landlord of such election within 15 business days after Landlord's notice electing to exercise the Assignment Termination. If Tenant withdraws such Assignment Notice, this Lease shall continue in full force and effect. If Tenant does not withdraw such Assignment Notice, this Lease, and the term and estate herein granted, shall terminate as of the Assignment Date with respect to the space described in such Assignment Notice. No failure of Landlord to exercise any such option to terminate this Lease, or to deliver a timely notice in response to the Assignment Notice, shall be deemed to be Landlord's consent to the proposed assignment, sublease or other transfer. Tenant shall pay to Landlord a fee equal to $[***] in connection with its consideration of any Assignment Notice and/or its preparation or review of any consent documents. Notwithstanding the foregoing, (1) Landlord's consent to an assignment of this Lease or a subletting of any portion of the Premises to any entity controlling, controlled by or under common control with Tenant shall not be required, provided that Landlord shall have the right to approve the form of any such sublease or assignment, and (2) Tenant shall have the right to assign this Lease, upon 30 days prior written notice to Landlord but without obtaining Landlord's prior written consent, to a corporation or other entity that is a successor-in-interest to Tenant, by way of merger, consolidation, or corporate reorganization, or by the purchase of all or substantially all of the assets or the ownership interests of Tenant provided that (A) such merger or consolidation, or such acquisition or assumption, as the case may be, is for a good business purpose and not principally for the purpose of transferring this Lease, and (B) the net worth (as determined in accordance with generally accepted accounting

principles ("**GAAP**")) of the assignee is not less than the net worth (as determined in accordance with GAAP) of Guarantor as of the Commencement Date, and (iii) such assignee shall agree in writing to assume all of the terms, covenants and conditions of this Lease arising after the effective date of the assignment (the transfers described in clauses (1) and (2) each constitute a "**Permitted Assignment**"). The Assignment Termination shall not apply to a Permitted Assignment.

(c) **Additional Conditions**. As a condition to any such assignment or subletting, whether or not Landlord's consent is required, Landlord may require:

(i) that any assignee or subtenant agree, in writing at the time of such assignment or subletting, that if Landlord gives such party notice that Tenant is in Default under this Lease, such party shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments will be received by Landlord without any liability except to credit such payment against those due under this Lease, and any such third party shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason; provided, however, in no event shall Landlord or its successors or assigns be obligated to accept such attornment; and

(ii) A list of Hazardous Materials, certified by the proposed assignee or sublessee to be true and correct, which the proposed assignee or sublessee intends to use, store, handle, treat, generate in or release or dispose of from the Premises, together with copies of all documents relating to such use, storage, handling, treatment, generation, release or disposal of Hazardous Materials by the proposed assignee or subtenant in the Premises, prior to the proposed assignment or subletting, including, without limitation: permits; approvals; reports and correspondence; storage and management plans; plans relating to the installation of any storage tanks to be installed in or under the Premises (provided, said installation of tanks shall only be permitted after Landlord has given its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); and all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Premises for the closure of any such tanks. Neither Tenant nor any such proposed assignee or subtenant is required, however, to provide Landlord with any portion(s) of the such documents containing information of a proprietary nature that, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities.

(d) **No Release of Tenant, Sharing of Excess Rents**. Notwithstanding any assignment or subletting, Tenant and any guarantor or surety of Tenant's obligations under this Lease shall at all times remain fully and primarily responsible and liable for the payment of Rent and for compliance with all of Tenant's other obligations under this Lease. If the Rent due and payable by a sublessee or assignee other than pursuant to a Permitted Assignment (or a combination of the rental payable under such sublease or assignment plus any bonus or other consideration therefor or incident thereto in any form) exceeds the sum of the rental payable under this Lease (excluding however, any Rent payable under this Section) and actual and reasonable brokerage fees, legal costs and any design or construction fees directly related to and required pursuant to the terms of any such sublease) ("**Excess Rent**"), then Tenant shall be bound and obligated to pay Landlord as Additional Rent hereunder [***]%of such Excess Rent within 10 days following receipt thereof by Tenant. Excess Rent shall in no event include amounts received by Tenant for the sale of its stock, assets, business, furniture, personal property, or the going concern of its business. If Tenant shall sublet the Premises or any part 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 Landlord as assignee may collect such rent and apply it toward Tenant's obligations under this Lease; except that, until the occurrence of a Default, Tenant shall have the right to collect such rent.

(e) **No Waiver**. The consent by Landlord to an assignment or subletting shall not relieve Tenant or any assignees of this Lease or any sublessees of the Premises from obtaining the consent of Landlord to any further assignment or subletting nor shall it release Tenant or any assignee or sublessee of Tenant from full and primary liability under this Lease. The acceptance of Rent hereunder, or the acceptance of performance of any other term, covenant, or condition thereof, from any other person or entity shall not be deemed to be a waiver of any of the provisions of this Lease or a consent to any subletting, assignment or other transfer of the Premises.

(f) **Prior Conduct of Proposed Transferee.** Notwithstanding any other provision of this Section 22, if (i) the proposed assignee or sublessee of Tenant has been required by any prior landlord, lender or Governmental

Authority to take remedial action in connection with Hazardous Materials contaminating a property, where the contamination resulted from such party's action or use of the property in question, (ii) the proposed assignee or sublessee is subject to an enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority), or (iii) because of the existence of a pre-existing environmental condition in the vicinity of or underlying the Premises, the risk that Landlord would be targeted as a responsible party in connection with the remediation of such pre-existing environmental condition would be materially increased or exacerbated by the proposed use of Hazardous Materials by such proposed assignee or sublessee, Landlord shall have the absolute right to refuse to consent to any assignment or subletting to any such party.

23. **Estoppel Certificate**. Tenant shall, within 15 business days of written notice from Landlord, execute, acknowledge and deliver a statement in writing in any form reasonably requested by a proposed lender or purchaser, (i) 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 the rental and other charges are paid in advance, if any, (ii) acknowledging that there are not any uncured defaults on the part of Landlord hereunder, or specifying such defaults if any are claimed, and (iii) setting forth such further information with respect to the status of this Lease or the Premises as may be requested thereon. Any such statement may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the real property of which the Premises is a part. Tenant's failure to deliver such statement within such time (which failure continues for an additional period of 5 calendar days after receipt of a second notice from Landlord) shall, at the option of Landlord, be conclusive upon Tenant that this 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.

24. **Quiet Enjoyment**. So long as Tenant shall perform all of the covenants and agreements herein required to be performed by Tenant, Tenant shall, subject to the terms of this Lease, at all times during the Term, have peaceful and quiet enjoyment of the Premises against any person claiming by, through or under Landlord, or alleging title superior to Landlord.

25. **Prorations**. All prorations required or permitted to be made hereunder shall be made on the basis of a 360 day year and 30 day months.

26. **Rules and Regulations**. Tenant shall, at all times during the Term and any extension thereof, comply with all reasonable rules and regulations at any time or from time to time established by Landlord covering use of the Premises. The current rules and regulations are attached hereto as **Exhibit E**. If there is any conflict between said rules and regulations and other provisions of this Lease, the terms and provisions of this Lease shall control. Landlord shall not enforce such rules and regulations in a discriminatory manner.

27. **Subordination**. This Lease and Tenant's interest and rights hereunder are hereby made and shall be subject and subordinate at all times to the lien of any Mortgage now existing or hereafter created on or against the Premises, and all amendments, restatements, renewals, modifications, consolidations, refinancing, assignments and extensions thereof, without the necessity of any further instrument or act on the part of Tenant; provided, however that so long as there is no Default hereunder, Tenant's right to possession of the Premises shall not be disturbed by the Holder of any such Mortgage. Tenant agrees, at the election of the Holder of any such Mortgage, to attorn to any such Holder. Tenant agrees upon demand to execute, acknowledge and deliver such instruments, confirming such subordination, and such instruments of attornment as shall be reasonably requested by any such Holder, provided any such instruments contain appropriate non-disturbance provisions assuring Tenant's quiet enjoyment of the Premises as set forth in Section 24 hereof. Notwithstanding the foregoing, any such Holder may at any time subordinate its Mortgage to this Lease, without Tenant's consent, by notice in writing to Tenant, and thereupon this Lease shall be deemed prior to such Mortgage without regard to their respective dates of execution, delivery or recording and in that event such Holder shall have the same rights with respect to this Lease as though this Lease had been executed prior to the execution, delivery and recording of such Mortgage and had been assigned to such Holder. The term "**Mortgage**" whenever used in this Lease shall be deemed to include deeds of trust, security assignments and any other encumbrances, and any reference to the "**Holder**" of a Mortgage shall be deemed to include the beneficiary under a deed of trust.

28. **Surrender**. Upon the expiration of the Term or earlier termination of Tenant's right of possession, Tenant shall surrender the Premises and the Tenant Improvements to Landlord in good order and condition, subject to any Alterations or Installations permitted by Landlord to remain in the Premises pursuant to Section 12, free of Hazardous Materials brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, the Premises by any person other than a Landlord Party (collectively, "**Tenant HazMat Operations**") and released of all Hazardous Materials Clearances, broom clean, ordinary wear and tear and casualty loss and condemnation covered by Sections 18 and 19 excepted. All provisions in this Lease to the contrary notwithstanding, Tenant shall have no obligation to remove or pay for the removal of any Tenant Improvements installed pursuant to, and in accordance with, the Work Letter. At least 3 months prior to the surrender of the Premises, Tenant shall deliver to Landlord a narrative description of the actions proposed (or required by any Governmental Authority) to be taken by Tenant in order to surrender the Premises (including any Installations permitted by Landlord to remain in the Premises) at the expiration or earlier termination of the Term, free from any residual impact from the Tenant HazMat Operations and otherwise released for unrestricted use and occupancy ("**Surrender Plan**"). Such Surrender Plan shall be accompanied by a current listing of (i) all Hazardous Materials licenses and permits held by or on behalf of any Tenant Party with respect to the Premises, and (ii) all Hazardous Materials used, stored, handled, treated, generated, released or disposed of from the Premises, and shall be subject to the review and approval of Landlord's environmental consultant. In connection with the review and approval of the Surrender Plan, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning Tenant HazMat Operations as Landlord shall request. On or before such surrender, Tenant shall deliver to Landlord evidence that the approved Surrender Plan shall have been satisfactorily completed and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below, to cause Landlord's environmental consultant to inspect the Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the Premises is, as of the effective date of such surrender or early termination of this Lease, free from any residual impact from Tenant HazMat Operations. Tenant shall reimburse Landlord, as Additional Rent, for the actual out-of-pocket expense incurred by Landlord for Landlord's environmental consultant to review and approve the Surrender Plan and to visit the Premises and verify satisfactory completion of the same, which cost shall not exceed $[***]. Landlord shall have the unrestricted right to deliver such Surrender Plan and any report by Landlord's environmental consultant with respect to the surrender of the Premises to third parties but only on an "as needed" basis.

If Tenant shall fail to prepare or submit a Surrender Plan approved by Landlord, or if Tenant shall fail to complete the approved Surrender Plan, or if such Surrender Plan, whether or not approved by Landlord, shall fail to adequately address any residual effect of Tenant HazMat Operations in, on or about the Premises, Landlord shall have the right to take such actions as Landlord may deem reasonable or appropriate to assure that the Premises is surrendered free from any residual impact from Tenant HazMat Operations, the cost of which actions shall be reimbursed by Tenant as Additional Rent, without regard to the limitation set forth in the first paragraph of this Section 28.

Tenant shall immediately return to Landlord all keys and/or access cards to parking, restrooms or all or any portion of the Premises furnished to or otherwise procured by Tenant. If any such access card or key is lost, Tenant shall pay to Landlord, at Landlord's election, either the cost of replacing such lost access card or key or the cost of reprogramming the access security system in which such access card was used or changing the lock or locks opened by such lost key. Any Tenant's Property, Alterations and property not so removed by Tenant as required herein shall be deemed abandoned and may be stored, removed, and disposed of by Landlord at Tenant's expense, and Tenant waives all claims against Landlord for any damages resulting from Landlord's retention and/or disposition of such property. All obligations of Tenant hereunder not fully performed as of the termination of the Term, including the obligations of Tenant under Section 30 hereof, shall survive the expiration or earlier termination of the Term, including, without limitation, indemnity obligations, payment obligations with respect to Rent and obligations concerning the condition and repair of the Premises.

29. **Waiver of Jury Trial**. TENANT AND LANDLORD WAIVE ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE, BETWEEN LANDLORD AND TENANT ARISING OUT OF THIS LEASE OR ANY OTHER INSTRUMENT, DOCUMENT, OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED HERETO.

30. **Environmental Requirements**.

(a) **Prohibition/Compliance/Indemnity**. Tenant shall not cause or permit any Hazardous Materials (as hereinafter defined) to be brought upon, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises in violation of applicable Environmental Requirements (as hereinafter defined) by Tenant or any Tenant Party. If Tenant breaches the obligation stated in the preceding sentence, or if the presence of Hazardous Materials in the Premises during the Term or any holding over results in contamination of the Premises or any adjacent property or if contamination of the Premises or any adjacent property by Hazardous Materials brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from, the Premises by anyone other than Landlord and Landlord's employees, agents and contractors otherwise occurs during the Term or any holding over, Tenant hereby indemnifies and shall defend and hold Landlord, its officers, directors, employees, agents and contractors harmless from any and all actions (including, without limitation, remedial or enforcement actions of any kind, administrative or judicial proceedings, and orders or judgments arising out of or resulting therefrom), costs, claims, damages (including, without limitation, punitive damages and damages based upon diminution in value of the Premises, or the loss of, or restriction on, use of the Premises), expenses (including, without limitation, attorneys', consultants' and experts' fees, court costs and amounts paid in settlement of any claims or actions), fines, forfeitures or other civil, administrative or criminal penalties, injunctive or other relief (whether or not based upon personal injury, property damage, or contamination of, or adverse effects upon, the environment, water tables or natural resources), liabilities or losses (collectively, "**Environmental Claims**") that arise during or after the Term as a result of such contamination; provided, however, that Tenant shall have no indemnification, remediation, or other obligation or responsibility under this Section 30 for any contamination or Environmental Claim if Tenant proves by a preponderance of the evidence that (i) such contamination or Environmental Claim arises from any Hazardous Materials brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from the Premises by Landlord, its employees or contractors, or another tenant unrelated or unaffiliated with Tenant or (ii) such contamination existed in the Premises as of the Commencement Date and was not brought into, kept, used, stored, handled, treated, generated in or about, or released or disposed of from the Premises by Tenant or any Tenant Party, in which case Landlord shall at no expense to Tenant remediate such contamination if and as required by the Environmental Requirements. If Tenant encounters or discovers any such contamination described in clause (ii) during the performance of the construction of Tenant's Improvements, Tenant shall immediately notify Landlord and shall not take any action to exacerbate or aggravate such contamination. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, treatment, remedial, removal, or restoration work required by any federal, state or local Governmental Authority because of Hazardous Materials present in the air, soil or ground water above, on, or under the Premises. Without limiting the foregoing, if the presence of any Hazardous Materials on the Premises or any adjacent property caused or permitted by Tenant or any Tenant Party results in any contamination of the Premises or any adjacent property, Tenant shall promptly take all actions at its sole expense and in accordance with applicable Environmental Requirements as are necessary to return the Premises or any adjacent property to the condition existing prior to the time of such contamination, provided that Landlord's approval of such action shall first be obtained, which approval shall not unreasonably be withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Premises.

(b) **Business**. Landlord acknowledges that it is not the intent of this Section 30 to prohibit Tenant from using the Premises for the Permitted Use. Tenant may operate its business according to prudent industry practices so long as the use or presence of Hazardous Materials is strictly and properly monitored according to all then applicable Environmental Requirements. As a material inducement to Landlord to allow Tenant to use Hazardous Materials in connection with its business, Tenant agrees to deliver to Landlord prior to the Commencement Date a list identifying each type of Hazardous Materials to be brought upon, kept, used, stored, handled, treated, generated on, or released or disposed of from, the Premises (as evidenced by delivering Tenant's Hazardous Materials Safety Data Sheets) and setting forth any and all governmental approvals or permits required in connection with the presence, use, storage, handling, treatment, generation, release or disposal of such Hazardous Materials on or from the Premises ("**Hazardous Materials List**"). Tenant shall deliver to Landlord an updated Hazardous Materials List at least once a year and shall also deliver an updated list before any new Hazardous Material is brought onto, kept, used, stored, handled, treated, generated on, or released or disposed of from, the Premises. Tenant shall deliver to Landlord true and correct copies of the following documents ("**Haz Mat Documents**") relating to the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials prior to the Commencement Date, or if unavailable at that time, concurrent with the receipt from or submission to a Governmental Authority: permits;

approvals; reports and correspondence; storage and management plans, notice of violations of any Legal Requirements; plans relating to the installation of any storage tanks to be installed in or under the Premises (provided, said installation of tanks shall only be permitted after Landlord has given Tenant its written consent to do so, which consent may be withheld in Landlord's sole and absolute discretion); all closure plans or any other documents required by any and all federal, state and local Governmental Authorities for any storage tanks installed in, on or under the Premises for the closure of any such tanks; and a Surrender Plan (to the extent surrender in accordance with Section 28 cannot be accomplished in 3 months). Tenant is not required, however, to provide Landlord with any portion(s) of the Haz Mat Documents containing information of a proprietary nature that, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities. It is not the intent of this Section to provide Landlord with information that could be detrimental to Tenant's business should such information become possessed by Tenant's competitors.

(c) **Tenant Representation and Warranty**. To Tenant's knowledge, Tenant hereby represents and warrants to Landlord that (i) Tenant has not been required by any prior landlord, lender, or Governmental Authority at any time to take remedial action in connection with Hazardous Materials contaminating a property, which contamination was permitted by Tenant or resulted from Tenant's action or use of the property in question, and (ii) Tenant is not subject to any enforcement order issued by any Governmental Authority in connection with the use, storage, handling, treatment, generation, release or disposal of Hazardous Materials (including, without limitation, any order related to the failure to make a required reporting to any Governmental Authority). If Landlord determines that this representation and warranty was not true as of the date of this Lease, Landlord shall have the right to terminate this Lease in Landlord's sole and absolute discretion. For purposes of this paragraph, "**Tenant's knowledge**" means the current, actual knowledge of Elizabeth Howard, General Counsel of Tenant, with no duty to inquire or investigate. Ms. Howard, who shall have no personal liability whatsoever under this Lease or otherwise, is the individual within Tenant's organization who possesses the most knowledge about Tenant's representation and warranty in this paragraph.

(d) **Testing**. Landlord shall have access to the Premises to visually inspect or make other non-intrusive inspections of the Premises. If Landlord, acting reasonably and in good faith, determines that the Premises may have become contaminated by Hazardous Materials in violation of applicable Environmental Requirements, then Landlord shall have the right to perform tests of the Premises to determine Tenant's compliance with Environmental Requirements (as defined below), its obligations under this Section 30, or the environmental condition of the Premises. In connection with such testing, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such non-proprietary information concerning the use of Hazardous Materials in or about the Premises by Tenant or any Tenant Party. Access shall be granted to Landlord upon Landlord's prior notice to Tenant and at such times so as to minimize, so far as may be reasonable under the circumstances, any disturbance to Tenant's operations. Such inspections and tests shall be conducted at Landlord's expense, unless such inspections or tests are conducted pursuant to Section 21 hereof or reveal that Tenant has not complied with any Environmental Requirement, in which case Tenant shall reimburse Landlord for the reasonable cost of such inspection and tests. Tenant shall, at its sole cost and expense, promptly and satisfactorily remediate any environmental conditions identified by such testing in accordance with all Environmental Requirements. Landlord's receipt of or satisfaction with any environmental assessment in no way waives any rights that Landlord may have against Tenant.

(e) **Underground Tanks**. Under no circumstances whatsoever will Tenant have the right to install any underground storage tank on or about the Premises. If underground or other storage tanks storing Hazardous Materials located on the Premises before the Commencement Date are used by Tenant, Tenant shall install, use, monitor, operate, maintain, upgrade and manage such storage tanks, maintain appropriate records, obtain and maintain appropriate insurance, implement reporting procedures, properly close any underground storage tanks if required by applicable Legal Requirements, and take or cause to be taken all other actions necessary or required under applicable state and federal Legal Requirements, as such now exists or may hereafter be adopted or amended in connection with the installation, use, maintenance, management, operation, upgrading and closure of such storage tanks.

(f) **Control Areas**. Tenant shall ensure that its Hazardous Materials inventory is stored within any control area or zone (located within the Premises), as designated from time to time by the applicable building code or other Legal Requirement, for Hazardous Materials use or storage.

(g) **Tenant's Obligations**. Tenant's obligations under this Section 30 shall survive the expiration or earlier termination of this Lease for the applicable statute of limitations period under federal, state, or local Legal Requirement. During any period of time after the expiration or earlier termination of this Lease required by Tenant or Landlord to complete the removal from the Premises of any Hazardous Materials for which Tenant is liable hereunder (including, without limitation, the release and termination of any licenses or permits restricting the use of the Premises and the completion of the approved Surrender Plan), Tenant shall continue to pay the full Rent in accordance with this Lease for any portion of the Premises not relet by Landlord in Landlord's sole discretion, which Rent shall be prorated daily.

(h) **Definitions**. As used herein, (i) the term "**Environmental Requirements**" means all applicable present and future statutes, regulations, ordinances, rules, codes, judgments, orders or other similar enactments of any Governmental Authority regulating or relating to health, safety, or environmental conditions on, under, or about the Premises, or the environment, including without limitation, the following: the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; and all state and local counterparts thereto, and any regulations or policies promulgated or issued thereunder, and (ii) the term "**Hazardous Materials**" means and includes any substance, material, waste, pollutant, or contaminant listed or defined as hazardous or toxic, or regulated by reason of its impact or potential impact on humans, animals and/or the environment under any Environmental Requirements, asbestos and petroleum, including crude oil or any fraction thereof, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). As defined in Environmental Requirements, Tenant is and shall be deemed to be the "**operator**" of Tenant's "**facility**" and the "**owner**" of all Hazardous Materials brought on the Premises by Tenant or any Tenant Party, and the wastes, by-products, or residues generated, resulting, or produced therefrom.

(i) **Ramboll Environ Report**. Tenant acknowledges receipt of that certain exit audit relating to the Premises entitled "701 Veterans Circle-Email Summary" dated June 1, 2016 and prepared by Christopher Bowles, Senior Associate, Ramboll Environ, Suite 300, 4350 North Fairfax Drive, Arlington, Virginia 22203.

31. **Tenant's Remedies/Limitation of Liability**. Landlord shall not be in default hereunder unless Landlord fails to perform any of its obligations hereunder within 30 days after written notice from Tenant specifying such failure (unless such performance will, due to the nature of the obligation, require a period of time in excess of 30 days, then after such period of time as is reasonably necessary). Upon any default by Landlord, Tenant shall give notice by registered or certified mail or overnight carrier to any Holder of a Mortgage covering the Premises and to any landlord of any lease of property in or on which the Premises is located and Tenant shall offer such Holder and/or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Premises by power of sale or a judicial action if such should prove necessary to effect a cure; provided Landlord shall have furnished to Tenant in writing the names and addresses of all such persons who are to receive such notices. All obligations of Landlord hereunder shall be construed as covenants, not conditions; and, except as may be otherwise expressly provided in this Lease, Tenant may not terminate this Lease for breach of Landlord's obligations hereunder.

Notwithstanding the foregoing, if any claimed Landlord default hereunder will materially and adversely affect Tenant's ability to conduct its business in the Premises (a "**Material Landlord Default**"), Tenant shall, as soon as reasonably possible, give Landlord written notice of such claim and telephonic notice to Tenant's principal contact with Landlord. Landlord shall then have 5 business days to commence cure of such claimed Material Landlord Default and shall diligently prosecute such cure to completion. If such claimed Material Landlord Default is not a default by Landlord hereunder, Landlord shall be entitled to recover from Tenant, as Additional Rent, any costs incurred by Landlord in connection with such cure in excess of the costs, if any, that Landlord would otherwise have been liable to pay hereunder. If Landlord fails to commence cure of any claimed Material Landlord Default as provided above, Tenant may commence and prosecute such cure to completion, and shall be entitled to recover the costs of such cure (but not any consequential or other damages) from Landlord, to the extent of Landlord's obligation to cure such claimed Material Landlord Default hereunder, subject to the limitations set forth in the immediately preceding sentence of this paragraph and the other provisions of this Lease.

All obligations of Landlord under this Lease will be binding upon Landlord only with respect to obligations accruing during the period of its ownership of the Premises and not thereafter. The term "**Landlord**" in this Lease shall mean only the owner for the time being of the Premises. Upon the transfer by such owner of its interest in the Premises, such owner shall thereupon be released and discharged from all obligations of Landlord thereafter accruing,

but such obligations shall be binding during the Term upon each new owner for the duration of such owner's ownership.

32. **Inspection and Access**. Landlord acknowledges Tenant's obligation to: (i) comply with governmental regulations for the security of biohazardous materials used in a research laboratory; (ii) comply with regulations and guidelines related to Tenant's Permitted Use; (iii) safeguard confidential information (including patient medical records), trade secrets, products, and processes; and (iv) maintain environmental safety standards. Accordingly, Landlord and its agents, representatives, and contractors may enter the Premises at any reasonable time to inspect the Premises and to make such repairs as may be required or permitted pursuant to this Lease and for any other business purpose; provided, however, that in all events Landlord and its representatives shall enter the Building only in compliance with all applicable Legal Requirements (including, but not limited to, clauses (i) through (iv) above, the Health Insurance Portability and Accountability Act of 1996 and any implementing regulations), during business hours with an escort of Tenant present at all times, and on not less than 48 hours advance written notice, for the purpose of effecting any such repairs, inspecting the Premises, showing the Premises to prospective purchasers and, during the last year of the Term, to prospective tenants or for any other business purpose. No such escort, however, shall be required in the following situations: (a) in the case of emergencies, in which case only such notice as is reasonable under the circumstances shall be required (but notice shall in all events be given, even if after the fact) and such entry may be at any time, without waiting for Tenant's escort to first arrive, and (b) if, after providing such 48 hours advance written notice, such escort is not available. Landlord may erect a suitable sign on the Premises stating the Premises is available to let during the last year of the Term or that the Premises is available for sale. During any such entry, Landlord and its agents, representatives, and contractors shall use commercially reasonable efforts to minimize interference with Tenant's business operations. Landlord's access to the Premises under this Section shall be in accordance with reasonable operating procedures and policies adopted by Tenant in connection with Tenant's business operations and the Permitted Use, but only to the extent such policies and procedures are not inconsistent with the terms and conditions of this Lease and do not interfere with Landlord's rights under this Lease. Tenant shall provide Landlord with a copy of any such procedures and policies. Such policies and procedures may include a prohibition against any prospective tenant taking photographs or making videos of the interior of the Building. Landlord may grant easements, make public dedications, and create restrictions on or about the Premises, provided that no such easement, dedication, designation or restriction materially, adversely affects Tenant's use or occupancy of the Premises for the Permitted Use. At Landlord's request, Tenant shall execute such instruments as may be reasonably necessary for such easements, dedications or restrictions. Tenant shall at all times, except in the case of emergencies, have the right to escort Landlord or its agents, representatives, contractors or guests while the same are in the Premises, provided such escort does not materially and adversely affect Landlord's access rights hereunder.

33. **Security**. Tenant acknowledges and agrees that security devices and services, if any, while intended to deter crime may not in given instances prevent theft or other criminal acts and that Landlord is not providing any security services with respect to the Premises. Tenant agrees that Landlord shall not be liable to Tenant for, and Tenant waives any claim against Landlord with respect to, any loss by theft or any other damage suffered or incurred by Tenant in connection with any unauthorized entry into the Premises or any other breach of security with respect to the Premises. Tenant shall be solely responsible for the personal safety of Tenant's officers, employees, agents, contractors, guests and invitees while any such person is in, on or about the Premises. Tenant shall at Tenant's cost obtain insurance coverage to the extent Tenant desires protection against such criminal acts.

34. **Force Majeure**. Neither Landlord nor Tenant shall be responsible or liable to the other for delays in the performance of its obligations hereunder when caused by, related to, or arising out of acts of God, strikes, lockouts, or other labor disputes, embargoes, quarantines, weather, national, regional, or local disasters, calamities, or catastrophes, inability to obtain labor or materials (or reasonable substitutes therefor) at reasonable costs or failure of, or inability to obtain, utilities necessary for performance, governmental restrictions, orders, limitations, regulations, or controls, national emergencies, delay in issuance or revocation of permits, enemy or hostile governmental action, terrorism, insurrection, riots, civil disturbance or commotion, fire or other casualty, and other causes or events beyond the reasonable control of the party charged with performance under this Lease ("**Force Majeure**"); provided, however, that in no event shall lack of funds excuse either party's performance hereunder or constitute an event of Force Majeure, nor shall the provisions of this Section serve to extend the period of time by which any payment of money is due from either party to the other, or excuse Tenant from performing any monetary obligation under this Lease.

35. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with this transaction and that no Broker brought about this transaction, other than Cushman & Wakefield of Pennsylvania, Inc. ("**Tenant's Broker**") and Jones Lang LaSalle Brokerage, Inc. ("**Landlord's Broker**"). Tenant's Broker shall be paid by Landlord pursuant to a separate agreement between Landlord and Tenant's Broker. Landlord's Broker shall be paid by Landlord pursuant to a separate agreement between Landlord and Landlord's Broker. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Tenant's Broker and Landlord's Broker, claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction. Landlord agrees to indemnify and hold harmless Tenant from all claims by Landlord's Broker and Tenant's Broker for commissions arising out of this Lease.

36. **Limitation on Landlord's Liability.** NOTWITHSTANDING ANYTHING SET FORTH HEREIN OR IN ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT TO THE CONTRARY: (A) LANDLORD SHALL NOT BE LIABLE TO TENANT OR ANY OTHER PERSON FOR (AND TENANT AND EACH SUCH OTHER PERSON ASSUME ALL RISK OF) LOSS, DAMAGE OR INJURY, WHETHER ACTUAL OR CONSEQUENTIAL TO: TENANT'S PERSONAL PROPERTY OF EVERY KIND AND DESCRIPTION, INCLUDING, WITHOUT LIMITATION TRADE FIXTURES, EQUIPMENT, INVENTORY, SCIENTIFIC RESEARCH, SCIENTIFIC EXPERIMENTS, LABORATORY ANIMALS, PRODUCT, SPECIMENS, SAMPLES, AND/OR SCIENTIFIC, BUSINESS, ACCOUNTING AND OTHER RECORDS OF EVERY KIND AND DESCRIPTION KEPT AT THE PREMISES AND ANY AND ALL INCOME DERIVED OR DERIVABLE THEREFROM; (B) THERE SHALL BE NO PERSONAL RECOURSE TO LANDLORD FOR ANY ACT OR OCCURRENCE IN, ON OR ABOUT THE PREMISES OR ARISING IN ANY WAY UNDER THIS LEASE OR ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT WITH RESPECT TO THE SUBJECT MATTER HEREOF AND ANY LIABILITY OF LANDLORD HEREUNDER SHALL BE STRICTLY LIMITED SOLELY TO LANDLORD'S INTEREST IN THE PREMISES OR ANY PROCEEDS FROM SALE OR CONDEMNATION THEREOF AND ANY INSURANCE PROCEEDS PAYABLE IN RESPECT OF LANDLORD'S INTEREST IN THE PREMISES OR IN CONNECTION WITH ANY SUCH LOSS; AND (C) IN NO EVENT SHALL ANY PERSONAL LIABILITY BE ASSERTED AGAINST ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS. UNDER NO CIRCUMSTANCES SHALL LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS BE LIABLE FOR INJURY TO TENANT'S BUSINESS OR FOR ANY LOSS OF INCOME OR PROFIT THEREFROM.

37. **Severability**. If any clause or provision of this Lease is illegal, invalid or unenforceable under present or future laws, then and in that event, it is the intention of the parties hereto that the remainder of this Lease shall not be affected thereby. It is also the intention of the parties to this Lease that in lieu of each clause or provision of this Lease that is illegal, invalid or unenforceable, there be added, as a part of this Lease, a clause or provision as similar in effect to such illegal, invalid or unenforceable clause or provision as shall be legal, valid and enforceable. This Lease, including the exhibits attached hereto, constitutes the entire agreement between Landlord and Tenant pertaining to the subject matter hereof and supersedes all prior agreements, understandings, letters of intent, negotiations, and discussions, whether oral or written, of the parties, and there are no warranties, representations, or other agreements, express or implied, made to either party by the other party in connection with the subject matter hereof except as specifically set forth herein or in the documents delivered pursuant hereto.

38. **Signs; Exterior Appearance**. Tenant shall not, without the prior written consent of Landlord, which may be granted or withheld in Landlord's sole discretion, coat or otherwise sunscreen the interior or exterior of any windows. Tenant shall have the right, at its sole cost and expense, to (a) install all signage and door lettering within the interior of the Building as Tenant so elects, and (b) install signage with its corporate name and logo on the exterior of the Building in locations of its choice, and directional signage for parking, delivery access, and driveways, subject to Landlord's approval thereof (which approval shall not be unreasonably withheld) and Tenant's compliance with all applicable Legal Requirements. On the expiration or earlier termination of the Term, Tenant shall remove such exterior signage as directed by Landlord at Tenant's sole cost and expense, in a good and workmanlike manner, and in compliance with all applicable Legal Requirements

39. **Right to Extend Term**. Tenant shall have the right to extend the Term of this Lease upon the following terms and conditions:

(a) **Extension Rights**. Tenant shall have [***] consecutive rights (each, an "**Extension Right**") to extend the term of this Lease for [***] years each (each, an "**Extension Term**") on the same terms and conditions as this Lease (other than Base Rent) by giving Landlord written notice of its election to exercise each Extension Right at least [***] months prior, and no earlier than [***] months prior, to the expiration of the Base Term of this Lease or the expiration of any prior Extension Term.

(b) **Base Rent**. Base Rent for the first Extension Term shall be computed at the rate of $[***] per rentable square foot for each year of the first Extension Term. Base Rent shall be adjusted on the commencement date of the second Extension Term and on each anniversary of the commencement of the second Extension Term by multiplying the Base Rent payable immediately before such adjustment by the Rent Adjustment Percentage and adding the resulting amount to the Base Rent payable immediately before such adjustment. No Base Rent Abatement shall apply during any Extension Term.

(c) **Rights Personal**. Extension Rights are personal to Tenant and are not otherwise assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in this Lease, except that they may be assigned in connection with any Permitted Assignment of this Lease.

(d) **Exceptions**. Notwithstanding anything set forth above to the contrary, Extension Rights shall not be in effect and Tenant may not exercise any of the Extension Rights: (i) during any period of time that Tenant is in Default under any provision of this Lease; or (ii) if Tenant has been in Default under any provision of this Lease 3 or more times, regardless of whether the Defaults are cured, during the 12 month period immediately prior to the date that Tenant intends to exercise an Extension Right, regardless of whether the Defaults are cured.

(e) **No Extensions**. The period of time within which any Extension Rights may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Extension Rights.

(f) **Termination**. The Extension Rights shall terminate and be of no further force or effect even after Tenant's due and timely exercise of an Extension Right, if, after such exercise, but prior to the commencement date of an Extension Term, (i) Tenant fails to timely cure any default by Tenant under this Lease; or (ii) Tenant has Defaulted 3 or more times during the period from the date of the exercise of an Extension Right to the date of the commencement of the Extension Term, regardless of whether such Defaults are cured.

40. **Miscellaneous**.

(a) **Notices**. All notices or other communications between the parties shall be in writing and shall be deemed duly given upon delivery or refusal to accept delivery by the addressee thereof if delivered in person, or via certified mail, return receipt requested, or upon actual receipt if delivered by reputable overnight guaranty courier, addressed and sent to the parties at their addresses set forth above. Landlord and Tenant may from time to time by written notice to the other designate another address for receipt of future notices.

(b) **Joint and Several Liability**. If and when included within the term "**Tenant**," as used in this instrument, there is more than one person or entity, each shall be jointly and severally liable for the obligations of Tenant.

(c) **Financial Information**. Tenant shall furnish Landlord with true and complete copies of (i) Tenant's most recent annual financial statements within 90 days of the end of each of Tenant's fiscal years during the Term. The foregoing to the contrary notwithstanding, so long as Tenant's parent company is Arbutus Corporation and whose stock is listed for trading on the NASDAQ stock market or other public stock exchange and whose financial statements are publicly available within 3 months after the end of each calendar quarter, then Tenant's obligation to provide such financial statements shall be deemed satisfied by the availability of on-line access to U.S. Securities and Exchange Commission filings and other financial information of Arbutus Corporation on its corporate website at http://arbutusbio.com/.

(d) **Recordation**. Neither this Lease nor a memorandum of lease shall be filed by or on behalf of Tenant in any public record. Landlord may prepare and file, and upon request by Landlord Tenant will execute, a memorandum of lease.

(e) **Interpretation**. The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Lease or any exhibits or amendments hereto. Words of any gender used in this Lease shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires. The captions inserted in this Lease are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Lease, or any provision hereof, or in any way affect the interpretation of this Lease.

(f) **Not Binding Until Executed**. The submission by Landlord to Tenant of this Lease shall have no binding force or effect, shall not constitute an option for the leasing of the Premises, nor confer any right or impose any obligations upon either party until execution of this Lease by both parties.

(g) **Limitations on Interest**. It is expressly the intent of Landlord and Tenant at all times to comply with applicable law governing the maximum rate or amount of any interest payable on or in connection with this Lease. If applicable law is ever judicially interpreted so as to render usurious any interest called for under this Lease, or contracted for, charged, taken, reserved, or received with respect to this Lease, then it is Landlord's and Tenant's express intent that all excess amounts theretofore collected by Landlord be credited on the applicable obligation (or, if the obligation has been or would thereby be paid in full, refunded to Tenant), and the provisions of this Lease immediately shall be deemed reformed and the amounts thereafter collectible hereunder reduced, without the necessity of the execution of any new document, so as to comply with the applicable law, but so as to permit the recovery of the fullest amount otherwise called for hereunder.

(h) **Choice of Law**. Construction and interpretation of this Lease shall be governed by the internal laws of the state in which the Premises is located, excluding any principles of conflicts of laws.

(i) **Time**. Time is of the essence as to the performance of each party's obligations under this Lease.

(j) **OFAC**. Tenant and Landlord are currently (i) in compliance with and shall at all times during the Term of this Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (ii) not listed on, and shall not during the Term of this Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List, or the Sectoral Sanctions Identifications List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (iii) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

(k) **Incorporation by Reference**. All exhibits and addenda attached hereto are hereby incorporated into this Lease and made a part hereof. If there is any conflict between such exhibits or addenda and the terms of this Lease, except as otherwise set forth in this Lease to the contrary, such exhibits or addenda shall control.

(l) **No Accord and Satisfaction**. No payment by Tenant or receipt by Landlord of a lesser amount than the monthly installment of Base Rent or any Additional Rent will be other than on account of the earliest stipulated Base Rent and Additional Rent, nor will any endorsement or statement on any check or letter accompanying a check for payment of any Base Rent or Additional Rent be an accord and satisfaction. Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or to pursue any other remedy provided in this Lease.

(m) **Non-Disclosure of Terms**. Tenant acknowledges and agrees that the terms of this Lease are confidential and constitute proprietary information of Landlord. Disclosure of such terms could adversely affect the ability of Landlord and its affiliates to negotiate, manage, and administer other leases. Accordingly, as a material inducement for Landlord to enter into this Lease, Tenant, and behalf of itself and its partners, managers, members, officers, directors, employees, agents, and attorneys, agrees that it shall not intentionally and voluntarily disclose

the terms and conditions of this Lease to any publication or other media or any apparent prospective tenant of the Building, or real estate agent or broker, either directly or indirectly. Notwithstanding the confidentiality provisions herein, Tenant may disclose the existence and/or contents of this Lease: (i) as and only to the extent required by Legal Requirements or in response to a request by a Governmental Authority; (ii) as necessary to seek advice from existing or prospective professional advisors, including, without limitation, tax preparers, auditors, accountants, bank personnel, brokers, business advisors, legal advisors, lenders, and financial advisors; (iii) as necessary to manage and enforce the terms of this Lease, (iv) on a "need to know basis," to Tenant's directors, officers, employees, affiliates, subsidiaries, parents, partners, successors in interest, and subtenants as long as such entities or individuals are advised of the non-disclosure obligations under this Lease, or (v) if the information is already a matter of public record or generally known to the public.

(n) **Hazardous Activities**. Notwithstanding any other provision of this Lease, Landlord, for itself and its employees, agents and contractors, reserves the right to refuse to perform any repairs or services in any portion of the Premises that, pursuant to Tenant's routine safety guidelines, practices or custom or prudent industry practices, require any form of protective clothing or equipment other than safety glasses. In any such case, Tenant shall contract with parties who are acceptable to Landlord, in Landlord's reasonable discretion, for all such repairs and services, and Landlord shall, to the extent required, equitably adjust Tenant's Share of Operating Expenses in respect of such repairs or services to reflect that Landlord is not providing such repairs or services to Tenant.

(o) **Triple Net Lease**. Landlord and Tenant acknowledge and agree that this Lease is intended to operate, function, and be interpreted as a triple net lease. Accordingly, except as expressly provided in this Lease, (i) Tenant shall be responsible for all costs and expenses associated with the Building and Premises, and (ii) Landlord shall have no responsibility for making any expenditure or for incurring any obligation, cost, expense, or liability of any kind whatsoever in connection with this Lease or the ownership, alteration, maintenance, operation, repair, or replacement of the Building and Premises.

[Signatures on next page]

IN WITNESS WHEREOF, Landlord and Tenant have executed this Lease under seal as of the day and year first above written.

TENANT:

ARBUTUS BIOPHARMA, INC.,
a Delaware corporation

By: /s/ Mark J. Murray (SEAL)
Name: Mark J. Murray
Title: President and CEO

LANDLORD:

ARE-PA REGION NO. 7, LLC,
a Delaware limited liability company

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

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

By: /s/ Jennifer Banks (SEAL)
Name: Jennifer Banks
Title: EVP, General Counsel

EXHIBIT A TO LEASE
DESCRIPTION OF PREMISES

EXHIBIT A

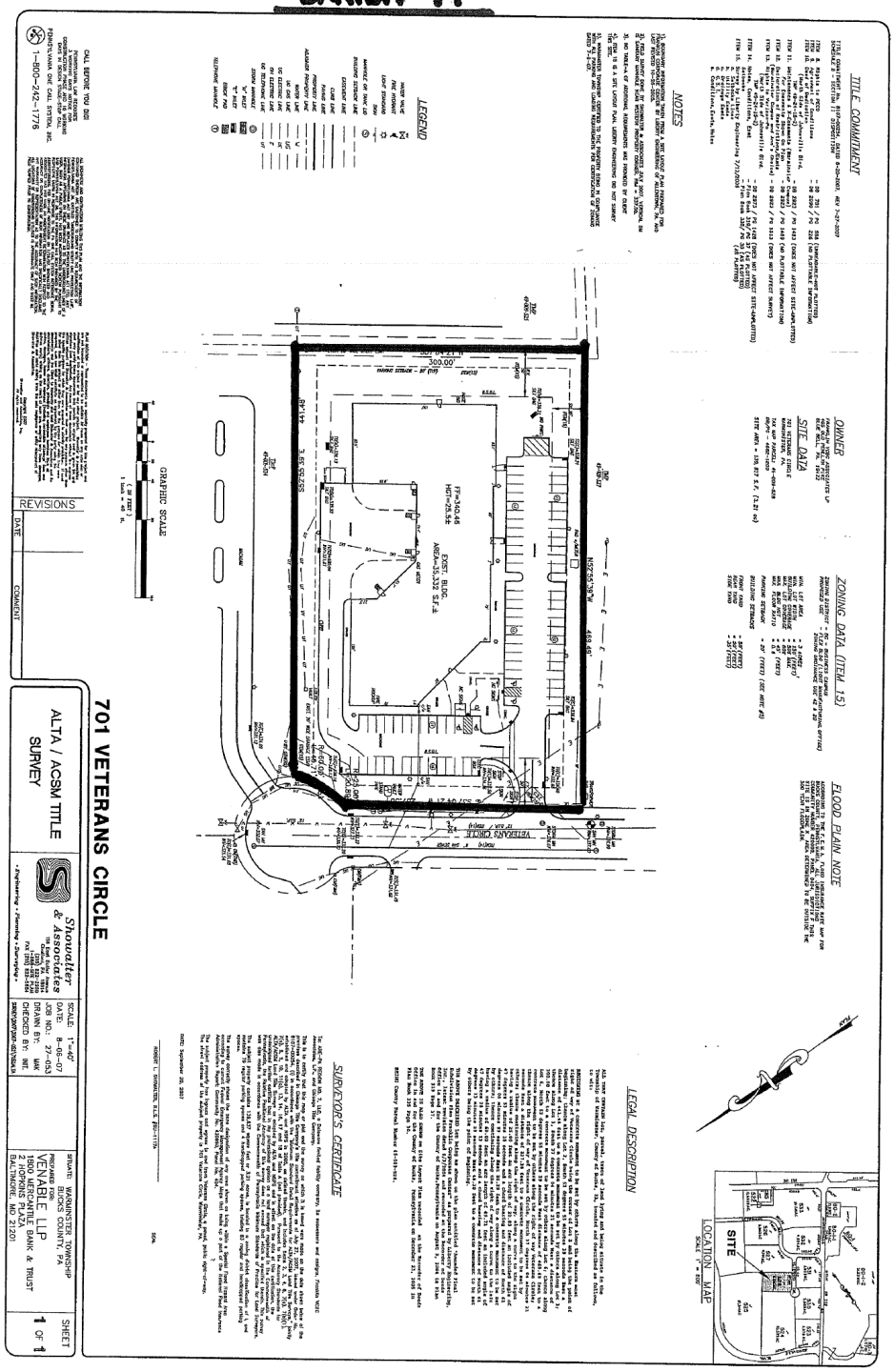


EXHIBIT B TO LEASE
DESCRIPTION OF PREMISES

ALL THAT CERTAIN lot, parcel, tract of land lying and being situate in the Township of Warminster, County of Bucks, PA, bounded and described as follows, to wit:

BEGINNING at a concrete monument to be set by others along the Eastern most right of way of Veterans Circle being the corner of Lot 2 and being the point of beginning; thence along Lot 2, South 52 degrees 55 minutes 39 seconds East a distance of 441.48 feet to a concrete monument to be set by others along Lot 3; thence along Lot 3, South 37 degrees 04 minutes 21 seconds West a distance of 300.00 feet to a concrete monument to be set by others along Lot 6; thence along Lot 6, North 52 degrees 55 minutes 39 seconds West distance of 469.49 feet to a concrete monument to be set by others along the right of way Veterans Circle; thence along the right of way of Veterans Circle, North 37 degrees 04 minutes 21 seconds East a distance of 237.38 feet to a concrete monument to be set by others; thence continuing along the right of way, along a curve to the right having a radius of 25.00 feet an arc length of 20.89 feet an included angle of 47 degrees 53 minutes 15 seconds and a chord bearing and distance of North 61 degrees 00 minutes 59 seconds East 20.29 feet to a concrete monument to be set by others; thence continuing along the right of way along a curve to the left having a radius of 60.00 feet an arc length of 49.71 feet an included angle of 47 degrees 28 minutes 13 seconds and a chord bearing and distance of North 61 degrees 13 minutes 29 seconds East 48.30 feet to a concrete monument to be set by others being the point of beginning.

THE ABOVE DESCRIBED Lot being as shown on the plan entitled "Amended Final Subdivision Plan Franklin Corporate Center" as prepared by Liberty Engineering, Inc., latest revision dated 8/3/2004 and recorded at the Recorder of Deeds Office in and for the County of Bucks.

BEING County Parcel Number 49-009-528

BEING the same premises which FRANKLIN CORPORATE CENTER ASSOCIATES, L.P., A PENNSYLVANIA LIMITED PARTNERSHIP, by Indenture bearing date 10/12/2005 and recorded in the Office of the Recorder of Deeds, in and for the County of Bucks in Land Record Book 4682 page 1200 etc., granted and conveyed unto FRANKLIN VCBC ASSOCIATES, L.P., BY ITS GENERAL PARTNER, FRANKLIN SERVICES CORPORATION, in fee.

EXHIBIT C TO LEASE
WORK LETTER

THIS WORK LETTER (this "**Work Letter**") is incorporated into that certain Lease (the "**Lease**") dated as of June __, 2016 by and between **ARE-PA REGION NO. 7, LLC**, a Delaware limited liability company ("**Landlord**"), and **ARBUTUS BIOPHARMA, INC.**, a Delaware corporation ("**Tenant**"). Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

1. **General Requirements**.

(a) **Tenant's Authorized Representative**. Tenant designates Mike McElhaugh and Mike Sofia (either such individual acting alone, "**Tenant's Representative**") as the only persons authorized to act for Tenant pursuant to this Work Letter. Landlord shall not be obligated to respond to or act upon any request, approval, inquiry or other communication ("**Communication**") from or on behalf of Tenant in connection with this Work Letter unless such Communication is in writing (including e-mail transmissions) from Tenant's Representative. Tenant may change either Tenant's Representative at any time upon not less than 5 business days advance written notice to Landlord.

(b) **Landlord's Authorized Representative**. Landlord designates Lawrence J. Diamond and Edward J. Rose (either such individual acting alone, "**Landlord's Representative**") as the only persons authorized to act for Landlord pursuant to this Work Letter. Tenant shall not be obligated to respond to or act upon any request, approval, inquiry or other Communication from or on behalf of Landlord in connection with this Work Letter unless such Communication is in writing (including e-mail transmissions) from Landlord's Representative. Landlord may change either Landlord's Representative at any time upon not less than 5 business days advance written notice to Tenant.

(c) **Architects, Consultants and Contractors**. Landlord and Tenant hereby acknowledge and agree that the architect ("**TI Architect**") for the Tenant Improvements (as defined in Section 2(a) below), the general contractor and any subcontractors for the Tenant Improvements shall be selected by Tenant, subject to Landlord's approval, which approval shall not be unreasonably withheld, conditioned or delayed. Tenant shall assign to Landlord any warranty made by any contractor or any subcontractor with respect to the Tenant Improvements.

2. **Tenant Improvements.**

(a) **Tenant Improvements Defined**. As used herein, "**Tenant Improvements**" shall mean all improvements to the Premises desired by Tenant of a fixed and permanent nature. Other than funding the TI Allowance (as defined below) as provided herein, Landlord shall not have any obligation whatsoever with respect to the finishing of the Premises for Tenant's use and occupancy.

(b) **Tenant's Space Plans**. Tenant shall deliver to Landlord schematic drawings and outline specifications ("**TI Design Drawings**") detailing Tenant's requirements for the Tenant Improvements. Not more than 7 days thereafter, Landlord shall deliver to Tenant and the TI Architect the written objections, questions or comments of Landlord with regard to the TI Design Drawings. Tenant shall cause the TI Design Drawings to be revised to address such written comments and shall resubmit said drawings to Landlord for approval thereafter. Such process shall continue until Landlord has approved the TI Design Drawings.

(c) **Working Drawings**. Following the approval of the TI Design Drawings by Landlord, Tenant shall cause the TI Architect to prepare and deliver to Landlord for review and comment construction plans, specifications and drawings for the Tenant Improvements ("**TI Construction Drawings**"), which TI Construction Drawings shall be prepared substantially in accordance with the TI Design Drawings. Tenant shall be solely responsible for ensuring that the TI Construction Drawings reflect Tenant's requirements for the Tenant Improvements. Landlord shall deliver its written comments on the TI Construction Drawings to Tenant not later than 7 business days after Landlord's receipt of the same; provided, however, that Landlord may not disapprove any matter that is consistent with the TI Design Drawings. Tenant and the

TI Architect shall consider all such comments in good faith and shall, after receipt, notify Landlord how Tenant proposes to respond to such comments. Any disputes in connection with such comments shall be resolved in accordance with Section 2(d) hereof. Provided that the design reflected in the TI Construction Drawings is consistent with the TI Design Drawings, Landlord shall approve the TI Construction Drawings submitted by Tenant. Once approved by Landlord, subject to the provisions of Section 4 below, Tenant shall not materially modify the TI Construction Drawings except as may be reasonably required in connection with the issuance of the TI Permit (as defined in Section 3(a) below).

(d) **Approval and Completion**. If any dispute regarding the design of the Tenant Improvements is not settled within 10 business days after notice of such dispute is delivered by one party to the other, Tenant may make the final decision regarding the design of the Tenant Improvements, provided (i) Tenant acts reasonably and such final decision is either consistent with or a compromise between Landlord's and Tenant's positions with respect to such dispute, (ii) that all costs and expenses resulting from any such decision by Tenant shall be payable by Tenant, and (iii) Tenant's decision will not affect the base Building, structural components of the Building or any Landlord Element (in which case Landlord shall make the final decision). Any changes to the TI Construction Drawings following Landlord's and Tenant's approval of same requested by Tenant shall be processed as provided in Section 4 hereof.

3. **Performance of the Tenant Improvements.**

(a) **Commencement and Permitting of the Tenant Improvements**. Tenant shall commence construction of the Tenant Improvements upon obtaining and delivering to Landlord a building permit ("**TI Permit**") authorizing the construction of the Tenant Improvements consistent with the TI Construction Drawings approved by Landlord. The cost of obtaining the TI Permit shall be payable by Tenant. Landlord shall assist Tenant in obtaining the TI Permit. Prior to the commencement of the Tenant Improvements, Tenant shall deliver to Landlord a copy of any contract with Tenant's contractors (including the TI Architect), and certificates of insurance from any contractor performing any part of the Tenant Improvement evidencing industry standard commercial general liability, automotive liability, "builder's risk", and workers' compensation insurance. Tenant shall cause the general contractor to provide a certificate of insurance naming Landlord, Alexandria Real Estate Equities, Inc., and Landlord's lender (if any) as additional insureds for the general contractor's liability coverages required above.

(b) **Selection of Materials, Etc**. Where more than one type of material or structure is indicated on the TI Construction Drawings approved by Tenant and Landlord, the option will be within Tenant's reasonable discretion if the matter concerns the Tenant Improvements, and within Landlord's sole and absolute subjective discretion if the matter concerns the structural components of the Building or any Landlord Element.

(c) **Tenant Liability**. Tenant shall be responsible for correcting any deficiencies or defects in the Tenant Improvements.

(d) **Substantial Completion**. Tenant shall substantially complete or cause to be substantially completed the Tenant Improvements in a good and workmanlike manner, in accordance with the TI Permit subject, in each case, to Minor Variations and normal "punch list" items of a non-material nature that do not interfere with the use of the Premises ("**Substantial Completion**" or "**Substantially Complete**"). Upon Substantial Completion of the Tenant Improvements, Tenant shall require the TI Architect and the general contractor to execute and deliver, for the benefit of Tenant and Landlord, a Certificate of Substantial Completion in the form of the American Institute of Architects ("**AIA**") document G704. For purposes of this Work Letter, "**Minor Variations**" shall mean any modifications reasonably required: (i) to comply with all applicable Legal Requirements and/or to obtain or to comply with any required permit (including the TI Permit); (ii) to comport with good design, engineering, and construction practices that are not material; or (iii) to make reasonable adjustments for field deviations or conditions encountered during the construction of the Tenant Improvements.

4. **Changes**. Any changes requested by Tenant to the Tenant Improvements after the delivery and approval by Landlord of the TI Design Drawings, shall be requested and instituted in accordance with the provisions of this

Section 4 and shall be subject to the written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed.

(a) **Tenant's Right to Request Changes**. If Tenant shall request changes ("**Changes**"), Tenant shall request such Changes by notifying Landlord 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 such Change. Such Change Request must be signed by Tenant's Representative. Landlord shall review and approve or disapprove such Change Request within 3 business days thereafter, provided that Landlord's approval shall not be unreasonably withheld, conditioned or delayed.

(b) **Implementation of Changes**. If Landlord approves such Change, Tenant may cause the approved Change to be instituted. If any TI Permit modification or change is required as a result of such Change, Tenant shall promptly provide Landlord with a copy of such TI Permit modification or change.

5. **Costs.**

(a) **Budget for Tenant Improvements**. Before the commencement of construction of the Tenant Improvements, Tenant shall obtain a detailed breakdown, by trade, of the costs incurred or that will be incurred, in connection with the design and construction of the Tenant Improvements ("**Budget**"), and deliver a courtesy copy of the Budget to Landlord. The Budget shall be based upon the TI Construction Drawings approved by Landlord and shall include a payment to Landlord of administrative rent ("**Administrative Rent**") equal to the out of pocket costs, fees, and expenses incurred by or on behalf of Landlord in monitoring and inspecting the construction of the Tenant Improvements, which sum shall be payable by Tenant.

(b) **TI Allowance**. Landlord shall provide to Tenant a tenant improvement allowance (collectively, "**TI Allowance**") as follows:

1. a "**Tenant Improvement Allowance**" in the maximum amount of $[***] per rentable square foot in the Premises, or $[***] in the aggregate; and

2. at Tenant's sole discretion and election, an "**Additional Tenant Improvement Allowance**" in the maximum amount of $[***] per rentable square foot in the Premises, or $[***] in the aggregate, which shall, to the extent requested and used by Tenant (with no obligation by Tenant whatsoever to request or use the same), result in adjustments to the Base Rent as set forth in Section 4 of the Lease.

Before commencing the Tenant Improvements, Tenant shall notify Landlord how much Additional Tenant Improvement Allowance Tenant has elected to receive from Landlord. Such election shall be final and binding on Tenant, and may not thereafter be modified without Landlord's consent, which may be granted or withheld in Landlord's sole and absolute subjective discretion. The TI Allowance shall be disbursed in accordance with this Work Letter.

Tenant shall have no right to the use or benefit (including any reduction to Base Rent) of any portion of the TI Allowance not required for the construction of (i) the Tenant Improvements described in the TI Construction Drawings approved pursuant to Section 2(d) or (ii) any Changes pursuant to Section 4. Tenant shall have no right to any portion of the TI Allowance that is not disbursed before the last day of the month that is 24 months after the Commencement Date.

(c) **Costs Includable in TI Allowance**. The TI Allowance shall be used solely for the payment of design, permits and construction costs in connection with the construction of the Tenant Improvements, including, without limitation, the cost of electrical power and other utilities used in connection with the construction of the Tenant Improvements, the cost of preparing the TI Design Drawings and the TI Construction Drawings, all costs set forth in the Budget, including Landlord's Administrative Rent, and the cost of Changes (collectively, "**TI Costs**"). Notwithstanding anything to the contrary contained herein, the TI Allowance shall not be used to purchase any furniture, personal property or other non-leasehold improvements equipment, including, but not be limited to, Tenant's voice or data cabling, non-ducted biological safety cabinets and other scientific equipment not incorporated into the Tenant Improvements.

(d) **Excess TI Costs**. Landlord shall have no obligation to bear any portion of the cost of any of the Tenant Improvements except to the extent of the TI Allowance. Notwithstanding anything to the contrary set forth in this Section 5(d), Tenant shall be fully and solely liable for TI Costs and the cost of Minor Variations as the same become due and payable to the TI Architect and contractors performing the Tenant Improvements, subject to reimbursement by Landlord for the TI Allowance as set forth in Section 5(e).

(e) **Payment for TI Costs**. Landlord shall disburse the TI Allowance to Tenant within 30 days after the *later* of (i) Substantial Completion of the Tenant Improvements and (ii) Tenant's delivery to Landlord of the following items: (i) sworn statements setting forth the names of all contractors and first tier subcontractors who did the work and final, unconditional lien waivers from all such contractors and first tier subcontractors; (ii) as-built plans (one copy in print format and two copies in electronic CAD format) for such Tenant Improvements; (iii) a certification of substantial completion in Form AIA G704, (iv) a certificate of occupancy for the Premises; and (v) copies of all operation and maintenance manuals and warranties affecting the Premises.

6. **Miscellaneous.**

(a) **Consents**. Whenever consent or approval of either party is required under this Work Letter, that party shall not unreasonably withhold, condition or delay such consent or approval, except as may be expressly set forth herein to the contrary.

(b) **Modification**. No modification, waiver or amendment of this Work Letter or of any of its conditions or provisions shall be binding upon Landlord or Tenant unless in writing signed by Landlord and Tenant.

EXHIBIT D TO LEASE
ACKNOWLEDGMENT OF COMMENCEMENT DATE

This **ACKNOWLEDGMENT OF COMMENCEMENT DATE** is made as of this _____ day of _____, 2016, between **ARE-PA REGION NO. 7, LLC**, a Delaware limited liability company ("**Landlord**"), and **ARBUTUS BIOPHARMA, INC.**, a Delaware corporation ("**Tenant**"), and is attached to and made a part of the Lease Agreement dated as of July __, 2016 ("**Lease**"), by and between Landlord and Tenant. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

Landlord and Tenant hereby acknowledge and agree that the Commencement Date of the Base Term of the Lease is [November 1, 2016] (subject to the applicable Base Rent Abatement set forth in Section 4(a) of the Lease) and the expiration date of the Base Term of the Lease shall be midnight on [April 30, 2027]. In case of a conflict between the terms of the Lease and the terms of this Acknowledgement of Commencement Date, this Acknowledgement of Commencement Date shall control for all purposes.

IN WITNESS WHEREOF, Landlord and Tenant have executed this ACKNOWLEDGMENT OF COMMENCEMENT DATE under seal to be effective on the date first above written.

TENANT:

ARBUTUS BIOPHARMA, INC.,
a Delaware corporation

By:_____(SEAL)
Name:_____
Title:_____

LANDLORD:

ARE-PA REGION NO. 7, LLC,
a Delaware limited liability company

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

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

By:_____(SEAL)
Name:_____
Title:_____

EXHIBIT E TO LEASE

Rules and Regulations

1. The sidewalk, entries, and driveways of the Premises shall not be obstructed by Tenant, or any Tenant Party, or used by them for any purpose other than ingress and egress to and from the Premises.

2. Tenant shall not place any objects, including antennas, on the roof of the Building.

3. Except for laboratory animals and animals assisting the disabled, no animals shall be allowed in the offices, halls, or corridors in the Premises.

4. Tenant shall not disturb the occupants of adjoining buildings by the use of any radio or musical instrument or by the making of loud or improper noises.

5. Tenant shall not install or operate any steam or gas engine or boiler, or other mechanical apparatus in the Premises, except as specifically approved in the Lease. The use of oil, gas or inflammable liquids for heating, lighting or any other purpose not constituting a Permitted Use is expressly prohibited.

6. Parking any type of recreational vehicles is specifically prohibited on or about the Premises. Except for the overnight parking of operative vehicles, no vehicle of any type shall be stored in the parking areas at any time. In the event that a vehicle is disabled, it shall be removed within 48 hours. There shall be no "For Sale" or other advertising signs on or about any parked vehicle. All vehicles shall be parked in the designated parking areas in conformity with all signs and other markings.

7. Tenant shall maintain the Premises free from rodents, insects and other pests.

8. Tenant shall not cause any unnecessary labor by reason of Tenant's carelessness or indifference in the preservation of good order and cleanliness. Landlord shall not be responsible to Tenant for any loss of property on the Premises, however occurring, or for any damage done to the effects of Tenant by the janitors or any other employee or person.

9. Tenant shall not permit long-term outside storage of trucks and other vehicles in or about the Premises, or dumping of waste or refuse or permit any harmful materials to be placed in any drainage system or sanitary system in or about the Premises.

10. All moveable trash receptacles provided by the trash disposal firm for the Premises must be kept in the trash enclosure areas, if any, provided for that purpose.

11. No auction, public or private, will be permitted on the Premises.

12. No awnings shall be placed over the windows in the Premises except with the prior written consent of Landlord.

13. The Premises shall not be used for lodging or for any immoral or illegal purposes or for any purpose other than that specified in the Lease.

14. Tenant shall ascertain from Landlord the maximum amount of electrical current that can safely be used in the Premises, taking into account the capacity of the electrical wiring in the Premises, and shall not use more than such safe capacity. Landlord's consent to the installation of electric equipment shall not relieve Tenant from the obligation not to use more electricity than such safe capacity.

15. Tenant assumes full responsibility for protecting the Premises from theft, robbery and pilferage.

16. Tenant shall not install or operate on the Premises any machinery or mechanical devices of a nature not directly related to Tenant's ordinary use of the Premises and shall keep all such machinery free of vibration, noise and air waves that may be transmitted beyond the Premises.

EXHIBIT F TO LEASE
TENANT'S PERSONAL PROPERTY

None except as set forth below:

NONE

EXHIBIT G TO LEASE
GUARANTY

GUARANTY OF LEASE

THIS GUARANTY OF LEASE ("**Guaranty"**) is made as of 9th day of August, 2016, by **ARBUTUS BIOPHARMA CORPORATION**, a corporation organized under the laws of British Columbia, Canada ("**Guarantor**"), in favor of **ARE-PA REGION NO. 7, LLC**, a Delaware limited liability company ("**Landlord**"), in connection with that certain Lease Agreement dated of even date herewith ("**Lease**") pursuant to which Landlord leases to Arbutus Biopharma, Inc., a Delaware corporation ("**Tenant**"), the premises located at 701 Veterans Circle, Warminster, Pennsylvania 18974-3531 ("**Premises**"). Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease. As a material inducement to and in consideration of Landlord's entering into the Lease, Landlord having indicated that it would not enter into the Lease without the execution and delivery of this Guaranty, Guarantor does hereby agree with Landlord as follows:

1. **Guarantor does hereby unconditionally guarantee, without deduction by reason of set off, defense, or counterclaim, as a primary obligor and not as a surety, and promises to perform and be liable for any and all obligations and liabilities of Tenant under the terms of the Lease, including, without implied limitation, Tenant's obligation to pay timely such rents, charges, costs, and impositions as are set forth in the Lease**. Guarantor further agrees to defend with counsel acceptable to Landlord, and to indemnify and save Landlord harmless from and against any and all loss, cost, damage, liability, or expense arising out of any breach by Tenant of any of the terms, conditions, and covenants of the Lease, or out of any breach of warranty or misrepresentation made by Tenant under the Lease or heretofore or hereafter made to Landlord, including reasonable attorneys' fees and any other costs incurred by Landlord in connection therewith.

2. The undertakings contained in this Guaranty shall be the personal liability of Guarantor. Guarantor acknowledges that after any Default by Tenant in the performance of any term, condition, or covenant of the Lease, the liability of Guarantor under this Guaranty shall be primary and that, in the enforcement of its rights, Landlord shall be entitled to look to Guarantor for the performance of the obligations of Tenant that Guarantor has guaranteed, without first commencing any action or proceeding against Tenant, and likewise, enforcement of Landlord's rights against Tenant shall not impair or limit the right of Landlord to enforce this Guaranty, and any such action by Landlord shall not operate as a release of the liability of Guarantor under this Guaranty. The guaranteed obligations include both payment and performance. **The obligations of Guarantor shall be absolute and unconditional and shall remain in full force and effect until all amounts due pursuant to the Lease have been paid in full and all of Tenant's obligations thereunder have been performed in full.**

3. If Tenant shall at any time Default in the performance or observance of any of the terms, covenants, or conditions in the Lease on Tenant's part to be kept performed or observed, Guarantor will keep, perform, and observe same, as the case may be, in the place and stead of Tenant.

4. The obligations of Guarantor hereunder shall not be released by Landlord's receipt, application, or release of any security given for the performance and observance of any covenant or condition in the Lease on Tenant's part to be performed or observed, regardless of whether Guarantor consents thereto or receives notice thereof.

5. The liability of Guarantor hereunder shall in no way be affected by (a) the release or discharge of Tenant in any creditor's receivership, bankruptcy, or other proceeding; (b) the impairment, limitation, or modification of the liability of Tenant or the estate of Tenant in bankruptcy, or of any remedy for the enforcement of Tenant's liability under the Lease resulting from the operation of any present or future provision of the Bankruptcy Act or other statute or from the decision in any court; (c) the rejection of the Lease in any such proceedings; (d) the assignment or transfer of the Lease by Tenant; (e) any disability or other defense of Tenant; (f) the cessation from any cause other than as provided under the Lease whatsoever of the liability of Tenant; (g) the exercise by Landlord of any of its rights or remedies reserved under the Lease or by law; or (h) any termination of the Lease, other than as provided under the Lease.

6. Guarantor agrees that none of its obligations and no right against Guarantor hereunder shall in any way be discharged, impaired, or otherwise affected by any extension of time for, or by any partial of complete waiver

of the performance of any of Tenant's obligations under the Lease, or by any other alteration, amendment, assignment, expansion, extension, or modification in or to the Lease, or by any release or waiver of any term, covenant, or condition of the Lease, or by any delay in the enforcement of any rights against Tenant, Guarantor, or any other person or entity under the Lease. Without limitation, Guarantor agrees that the Lease may be altered, amended, assigned, expanded, extended, or modified from time to time on such terms and provisions as may be satisfactory to Landlord without notice to or further assent by Guarantor, and Guarantor hereby waives notice of acceptance of this Guaranty, notice of any obligations guaranteed hereby or of any action taken or omitted in reliance hereon, and notice of any Defaults of Tenant under the Lease and waives presentment, demand for payment or performance, protest, notice of dishonor, nonpayment or nonperformance of any such obligations, suit or taking of other action by Landlord against, and any other notice to, any party liable thereon and waives suretyship defenses generally, other than full and timely payment and performance of all obligations hereby guaranteed, and Guarantor agrees to cause Tenant to preserve the enforceability of all instruments hereby guaranteed, as modified with Landlord's consent, and to cause Tenant to refrain from any act or omission that might be the basis for a claim that Guarantor has any defense to Guarantor's obligations hereunder, exclusive only of the defense that Tenant has fully and timely paid and performed all obligations hereby guaranteed. No invalidity, irregularity, or unenforceability of all or any part of such obligations or of any security therefor and no insolvency, bankruptcy, liquidation proceeding, or dissolution affecting Tenant or Guarantor shall affect, impair, or be a defense to this Guaranty. The liability of Guarantor hereunder is primary and unconditional and shall not be subject to any offset, defense (other than the defense of full and timely payment and performance) or counterclaim of Guarantor. This is a continuing guaranty.

7. Guarantor represents that this Guaranty, and the Lease hereby guaranteed, as originally delivered and as modified, amended, or supplemented, have been duly authorized and are the legal, valid, and binding obligations of Guarantor and Tenant, enforceable in accordance with their respective terms, and Guarantor further agrees that no invalidity of any term shall affect or impair Guarantor's liability under this Guaranty.

8. This Guaranty is intended to be fully effective in accordance with its terms notwithstanding any exculpatory provisions inconsistent herewith contained in the Lease.

9. Guarantor may be joined in any action against Tenant in connection with the obligations of Tenant under the Lease and recovery may be had against Guarantor in any such action. Landlord may enforce the obligations of Guarantor hereunder without first taking any action whatsoever against Tenant or its successors and assigns, or pursue any other remedy or apply any security it may hold.

10. Until all of Tenant's obligations under the Lease are fully performed, Guarantor: (a) shall have no right of subrogation against Tenant by reason of any payments or actions of performance by Guarantor under this Guaranty; and (b) subordinates any liability or indebtedness of Tenant now or hereafter held by Guarantor to the obligations of Tenant under, arising out of, or related to the Lease or Tenant's use and occupancy of the Premises. Furthermore, from and after the occurrence of any Default by Tenant in the performance of any term, condition, covenant, or obligation under the Lease, Guarantor agrees that it will not accept or receive any dividend, payment, or reimbursement from Tenant, including any payment on account of any indebtedness from Tenant to Guarantor, and that if Guarantor does then receive any such dividend, payment, or reimbursement the same shall be held in trust for Landlord and forthwith will be turned over to Landlord in the form received.

11. The liability of Guarantor and all rights, powers, and remedies of Landlord hereunder and under any other agreement now or at any time hereafter in force between Landlord and Guarantor relating to the Lease shall be cumulative and not alternative and such rights, powers, and remedies shall be in addition to all rights, powers, and remedies given to Landlord by law.

12. This Guaranty applies to, inures to the benefit of and binds all parties hereto, and their successors and assigns. This Guaranty may be assigned by Landlord voluntarily or by operation of law. Guarantor will not become a party to a merger, consolidation, or reorganization with any other entity, except where (a) such merger, consolidation, or reorganization, as the case may be, is for a good business purpose and not principally for the purpose of transferring this Guaranty, (b) the net worth (as determined in accordance with generally accepted accounting principles ("**GAAP**")) of the surviving entity is not less than the net worth (as determined in accordance with GAAP) of Guarantor as of the date of this Guaranty, and (c) such surviving entity shall agree

in writing to assume all of the terms, covenants, and conditions of this Guaranty arising after the effective date of the merger, consolidation, or reorganization. Guarantor shall provide prompt written notice to Landlord of such merger, consolidation, or reorganization along with reasonably detailed information confirming that the conditions set forth in this paragraph have been satisfied in full.

13. Within 20 days after written request from Landlord, Guarantor shall furnish Landlord with true and complete copies of Guarantor's most recent audited annual financial statements. The financial statements shall be prepared in accordance with GAAP and shall be true and correct in all material respects. The foregoing to the contrary notwithstanding, so long as Guarantor's stock is listed for trading on the NASDAQ stock market or other public stock exchange and Guarantor's financial statements are publicly available within 3 months after the end of each calendar quarter, then Guarantor's obligation to provide such financial statements shall be deemed satisfied by the availability of on-line access to U.S. Securities and Exchange Commission filings and other financial information of the Guarantor on its corporate website at http://arbutusbio.com/.

14. If Landlord desires to sell, finance, or refinance the Premises, or any part thereof, Guarantor hereby shall, subject to the provisions of Section 13, deliver to any lender or buyer designated by Landlord such financial statements of Guarantor as may be reasonably required by such lender or buyer. Such statements shall include the past 3 years' financial statements of Guarantor. All such financial statements shall be received by Landlord in confidence and shall be used only for the foregoing purposes.

15. If claim is ever made upon Landlord for repayment of any amount or amounts received by Landlord in payment of the obligations under the Lease and Landlord repays all or any part of such amount, then, notwithstanding any revocation or termination of this Guaranty or the termination of the Lease, Guarantor shall be and remain liable to Landlord for the amount so repaid.

16. This Guaranty shall constitute the entire agreement between Guarantor and Landlord with respect to the subject matter hereof. No provision of this Guaranty or right of Landlord hereunder may be waived nor may Guarantor be released from any obligation hereunder except by a writing duly executed and delivered by an authorized officer of Landlord.

17. When the context and construction so requires, all words used in the singular herein shall be deemed to have been used in the plural. The word "person" as used herein shall include an individual, company, firm, association, partnership, corporation, trust, or other legal entity of any kind whatsoever.

18. Should any one or more provisions of this Guaranty be determined to be illegal or unenforceable, all other provisions shall nevertheless be effective.

19. Guarantor represents that the person signing below is duly authorized to execute and deliver this Guaranty on behalf of Guarantor and to bind Guarantor hereby.

20. The waiver or failure to enforce any provision of this Guaranty shall not operate as a waiver of any other breach of such provision or any other provisions hereof.

21. Guarantor shall pay, immediately upon written demand from Landlord, all costs and expenses incurred by Landlord, including, but not limited to, attorneys' fees, expert witness fees, paralegal fees, other litigation expenses (such as expenses for photocopying, electronic legal research, and deposition transcripts), and court costs in connection with or arising out of any action or proceeding brought by Landlord to enforce any obligation of Guarantor under this Guaranty. Such expenses are recoverable at all levels, including appeals and post-judgment actions or proceedings. The giving of a notice of default by Landlord shall constitute part of an action or proceeding under this Guaranty, entitling Landlord to reimbursement of such fees and expenses, even if an action or proceeding is not commenced in a court of law and regardless of whether the Default is cured.

22. Any and all matters in dispute between the parties to this Guaranty, whether arising from or relating to this Guaranty itself, or arising from alleged extra-contractual facts prior to, during, or subsequent to this Guaranty, including, without limitation, fraud, misrepresentation, negligence or any other alleged tort or violation of the contract, shall be governed by, construed, and enforced in accordance with the laws of the Commonwealth of

Pennsylvania, regardless of conflicts of laws principles. Any claim, action, suit, or proceeding seeking to enforce any provision of, or based on any matter arising out of or in connection with, this Guaranty or the transactions contemplated hereby shall be brought only in the United States District Court for the Eastern District of Pennsylvania or any court of the Commonwealth of Pennsylvania, and each of the parties hereto hereby consents to the jurisdiction of such courts (and of the appropriate appellate courts therefrom in any such claim, action, suit, or proceeding) and irrevocably waives, to the fullest extent permitted by law, any objection that it may now or hereafter have to the laying of venue of any such claim, action, suit, or proceeding in any such court or that any such claim, action, suit, or proceeding that is brought in any such court has been brought in an inconvenient forum. Subject to applicable law, process in any such claim, action, suit, or proceeding may be served on any party anywhere in the world, whether within or without the jurisdiction of any such court, and such service shall be made by personal service made on such party or by mail sent to such party at the address set forth in Section 24 below. Personal service may be made on such party's resident agent.

23. The term "Landlord" whenever used herein refers to and means the Landlord in the Lease and also any assignee of Landlord, whether by outright assignment or by assignment for security, and also any successor to the interest of Landlord or of any assignee of such Lease or any part thereof whether by assignment or otherwise. The term "Tenant" whenever used herein refers to and means the Tenant in the Lease and also any assignee of Tenant, assignee or sublessee of such Lease or any part thereof, whether by assignment, sublease, or otherwise.

24. Any notice or other communication to be given under this Guaranty by either party to the other will be in writing and delivered personally or mailed by certified mail, postage prepaid and return receipt requested, or delivered by an express overnight delivery service, charges prepaid, or transmitted by facsimile, as follows:

If to Landlord:	ARE-PA Region No. 7, LLC c/o Alexandria Real Estate Equities, Inc. Attention: Corporate Secretary 385 E. Colorado Blvd., Suite 299 Pasadena, CA 91101 Facsimile: 626.578.7318
With a copy to:	Kevin L. Shepherd, Esq. Venable LLP Suite 900 750 East Pratt Street Baltimore, MD 21202 Facsimile No.: 410.244.7742
If to Guarantor:	Arbutus Biopharma Corporation Attn: General Counsel 100 - 8900 Glenlyon Parkway Burnaby, British Columbia Canada V5J 5J8

Any address or name specified above may be changed by a notice given by the addressee to the other party in accordance with this numbered paragraph. Any notice will be deemed given and effective (i) if given by personal delivery, as of the date of delivery in person; or (ii) if given by mail, upon receipt as set forth on the return receipt; or (iii) if given by overnight courier, one (1) business day after timely deposit with the courier; or (iv) if given by facsimile, upon receipt of the appropriate confirmation of transmission by facsimile. The inability to deliver because of a changed address of which no notice was given of the rejection or other refusal to accept any notice will be deemed to be the receipt of the notice as of the date of such inability to deliver or the rejection or refusal to accept.

25. Guarantor shall from time to time, within 15 days after written request from Landlord, execute, acknowledge, and deliver to Landlord a statement (i) certifying that this Guaranty is unmodified and in full force and effect or, if modified, stating the nature of such modification and certifying that this Guaranty as so modified, is in full force and effect, (ii) acknowledging that Guarantor does not have any offsets, claims, counterclaims, deductions, or defenses with respect to any of its obligations under this Guaranty and that there are not any uncured defaults on the part of Guarantor hereunder, or specifying such defaults if any are claimed, and (iii) certifying such other matters as Landlord may reasonably request, or as may be requested by Landlord's current

or prospective lenders or mortgagees, insurance carriers, auditors, and prospective purchasers. Any such statement may be relied upon by any such parties. If Guarantor shall fail to execute and return such statement within the time required herein, such failure shall be deemed to be a breach of the obligations of Guarantor hereunder, or, alternatively, at Landlord's election, Guarantor shall be deemed to have agreed with the matters set forth therein.

26. GUARANTOR WAIVES TRIAL BY JURY IN ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY guarantor or landlord AGAINST THE OTHER ON ANY MATTER ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS GUARANTY OR THE RELATIONSHIP OF THE PARTIES CREATED HEREUNDER.

IN WITNESS WHEREOF, Guarantor has executed this Guaranty under seal as of the date first above written.

"Guarantor"

ARBUTUS BIOPHARMA CORPORATION,
a corporation organized under the laws of British Columbia, Canada

By: /s/ Mark J. Murray (SEAL)
Name: Mark J. Murray
Title: President and CEO

Exhibit 10.2

Confidential treatment has been requested for portions of this exhibit. The copy filed herewith omits the information subject to the confidentiality request. Omissions are designated as [***]. A complete version of this exhibit has been filed separately with the Securities and Exchange Commission.

FIRST AMENDMENT TO LEASE AGREEMENT

This FIRST AMENDMENT TO LEASE AGREEMENT ("**this First Amendment**") is dated as of October 7, 2016 ("**Effective Date**"), by and between **ARE-PA REGION NO. 7, LLC**, a Delaware limited liability company, having an address at 385 E. Colorado Boulevard, Suite 299, Pasadena, California 91101 ("**Landlord**"), and **ARBUTUS BIOPHARMA, INC.**, a Delaware corporation, having an address at 100-8900 Glenlyon Parkway, Burnaby, British Columbia, Canada V5J 5J8 ("**Tenant**").

RECITALS

A**.** Landlord and Tenant have entered into that certain Lease Agreement ("**Lease**") dated as of August 9, 2016, wherein Landlord leased to Tenant certain premises containing approximately 35,155 rentable square feet ("**Premises**") located at 701 Veterans Circle, Warminster, Pennsylvania 18974-3531 , as more particularly described in the Lease.

B. Although the Lease indicated that the Commencement Date would occur on November 1, 2016, Tenant had the right to designate an earlier Commencement Date by sending Landlord an Early Commencement Date Notice.

C. Tenant sent Landlord an Early Commencement Date Notice dated August 17, 2016 requesting that the Commencement Date occur on October 7, 2016.

D. Section 3(a) of the Lease provides that if the Commencement Date does not occur on November 1, 2016 because of Tenant's delivery of the Early Commencement Date Notice, the dates in the tables set forth in Section 3(a) and Section 4(a) would be revised to reflect the actual Commencement Date that occurs before November 1, 2016.

E. Landlord and Tenant thus desire to amend the Lease to revise the tables set forth in Section 3(a) and Section 4(a) of the Lease.

AGREEMENT

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

1. **Definitions; Recitals**. Terms used in this First Amendment but not otherwise defined shall have the meanings set forth in the Lease. The Recitals form an integral part of this First Amendment and are hereby incorporated by reference.

2. **Revision to Section 3(a) Table**. The table setting forth the Base Rent in Section 3(a) of the Lease is hereby amended by deleting that table in its entirety and replacing it with the following table:

Time Period	Annual Rate Per Rentable Square Foot	Monthly Installment of Base Rent
10.7.16 to 10.31.17	$17.00	$49,803†
11.1.17 to 10.31.18	$[***]	$[***]
11.1.18 to 10.31.19	$[***]	$[***]
11.1.19 to 10.31.20	$[***]	$[***]
11.1.20 to 10.31.21	$[***]	$[***]
11.1.21 to 10.31.22	$[***]	$[***]
11.1.22 to 10.31.23	$[***]	$[***]
11.1.23 to 10.31.24	$[***]	$[***]
11.1.24 to 10.31.25	$[***]	$[***]
11.1.25 to 10.31.26	$[***]	$[***]
11.1.26 to 04.30.27	$22.85	$66,931

† subject to the Base Rent Abatement set forth in Section 4(a) of the Lease.

3. **Revision to Section 4(a) Table**. The table setting forth the Base Rent Abatement in Section 4(a) of the Lease is hereby amended by deleting that table in its entirety and replacing it with the following table:

Time Period	
10.7.16 to 4.30.17	3.1.23 to 4.30.23
2.1.18 to 4.30.18	3.1.24 to 4.30.24
3.1.19 to 4.30.19	3.1.25 to 4.30.25
3.1.20 to 4.30.20	3.1.26 to 4.30.26
3.1.21 to 4.30.21	3.1.27 to 4.30.27
3.1.22 to 4.30.22	

4. **Miscellaneous.**

4.1 **Entire Agreement**. The Lease, as amended by this First Amendment, is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. The Lease, as so amended by this First Amendment, may be amended only by an agreement in writing, signed by the parties hereto.

4.2 **Binding Effect**. This First Amendment is binding upon and shall inure to the benefit of the parties hereto, their respective agents, employees, members, representatives, officers, directors, divisions, subsidiaries, affiliates, assigns, heirs, successors in interest and shareholders.

4.3 **Counterparts**. This First Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon provided such signature page is attached to any other counterpart identical thereto except having additional signature pages executed by other parties to this First Amendment attached thereto.

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

4.5 **Ratification; Conflicts**. Except as amended and/or modified by this First Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this First Amendment. In the event of any conflict between the provisions of this First Amendment and the provisions of the Lease, the provisions of this First Amendment shall prevail. Regardless of whether specifically amended by this First Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this First Amendment.

4.6 **Non-Disclosure of Terms**. Tenant acknowledges and agrees that the terms of the Lease are confidential and constitute proprietary information of Landlord. Disclosure of such terms could adversely affect the ability of Landlord and its affiliates to negotiate, manage, and administer other leases and impair Landlord's relationship with other tenants. Accordingly, as a material inducement for Landlord to enter into this First Amendment, Tenant, on behalf of itself and its partners, managers, members, officers, directors, employees, agents, and attorneys, agrees that it shall not intentionally and voluntarily disclose the terms and conditions of the Lease to any publication or other media or any tenant or apparent prospective tenant of the Building or other portion of the Project, or real estate agent or broker, either directly or indirectly.

[**SIGNATURES APPEAR ON NEXT PAGE**]

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

TENANT:

ARBUTUS BIOPHARMA, INC.,
a Delaware corporation

By: /s/ Bruce Cousins (SEAL)
Name: Bruce Cousins
Title: EVP and Chief Financial Officer

LANDLORD:

ARE-PA REGION NO. 7, LLC,
a Delaware limited liability company

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

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

By: /s/ Jennifer Banks (SEAL)
Name: Jennifer Banks
Title: EVP, General Counsel

JOINDER AND CONSENT BY GUARANTOR

THIS JOINDER AND CONSENT OF THE GUARANTOR ("**this Joinder**") is made this 7th day of October, 2016, by **ARBUTUS BIOPHARMA CORPORATION**, a corporation organized under the laws of British Columbia, Canada ("**Guarantor**"). Guarantor is party to the certain Guaranty of Lease dated as of August 9, 2016 ("**Guaranty**") whereby Guarantor has guaranteed to Landlord the payment and performance of certain obligations of Tenant under that certain Lease Agreement ("**Original Lease**") dated as of August 9, 2016, as amended by a First Amendment to Lease Agreement of even date herewith ("**First Amendment**"; together with the Original Lease, the "**Lease**"), between Landlord and Tenant. Guarantor hereby joins in the First Amendment for the express purpose of acknowledging and consenting to the terms of the First Amendment and ratifying and confirming its obligations under the Guaranty.

IN WITNESS WHEREOF, Guarantor has executed and delivered this Joinder and Consent of the Guarantor under its seal as of the day and year first written above.

Guarantor:

ARBUTUS BIOPHARMA CORPORATION,
a corporation organized under the laws of British Columbia, Canada

By: /s/ Bruce Cousins (SEAL)
Name: Bruce Cousins
Title: EVP and Chief Financial Officer

Exhibit 10.3

ACKNOWLEDGMENT OF COMMENCEMENT DATE

This **ACKNOWLEDGMENT OF COMMENCEMENT DATE** is made as of this 7 day of October, 2016, between **ARE-PA REGION NO. 7, LLC**, a Delaware limited liability company ("**Landlord**"), and **ARBUTUS BIOPHARMA, INC.**, a Delaware corporation ("**Tenant**"), and is attached to and made a part of the Lease Agreement dated as of August 9, 2016 ("**Lease**"), by and between Landlord and Tenant. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

Landlord and Tenant hereby acknowledge and agree that the Commencement Date of the Base Term of the Lease is October 7, 2016 (subject to the applicable Base Rent Abatement set forth in Section 4(a) of the Lease) and the expiration date of the Base Term of the Lease shall be midnight on April 30, 2027. In case of a conflict between the terms of the Lease and the terms of this Acknowledgment of Commencement Date, this Acknowledgment of Commencement Date shall control for all purposes.

IN WITNESS WHEREOF, Landlord and Tenant have executed this ACKNOWLEDGMENT OF COMMENCEMENT DATE under seal to be effective on the date first above written.

TENANT:

ARBUTUS BIOPHARMA, INC.,
a Delaware corporation

By: /s/ Bruce Cousins (SEAL)
Name: Bruce Cousins
Title: EVP and Chief Financial Officer

LANDLORD:

ARE-PA REGION NO. 7, LLC,
a Delaware limited liability company

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

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

By: /s/ Jennifer Banks (SEAL)
Name: Jennifer Banks
Title: EVP, General Counsel

Exhibit 10.4

Without Prejudice

September 30, 2016

Mark Kowalski

Re: Termination and Severance Agreement

Further to our recent discussions, this letter confirms the termination of your employment with Arbutus Biopharma Corporation (the "Company") effective September 30, 2016. You will receive any earned but unpaid Base Salary and any accrued and unused vacation time as of this date.

The Company is terminating your employment without cause and accordingly is prepared to provide you with the termination compensation set out in Article 6(b) of your August 4, 2015 Employment Agreement. This compensation will be provided on or within 60 days of September 30, 2016 and as noted in your Employment Agreement, payment is contingent on you signing a release in favour of the Company.

The termination compensation is as follows:

1. A payment in the amount of $547,500.00 USD, less required deductions, representing eighteen (18) months of Base Salary;
2. A payment in the amount of $ 76,500.00 representing the average Bonus payment to you for the past three (3) calendar years, prorated as set out in Article 6(b)(ii) of your Employment Agreement; and
3. Continued insurance benefit coverage or reimbursement for premiums paid by you if you obtain equivalent private coverage in accordance with Article 6(b)(iii) of your Employment Agreement.

As noted above and in your Employment Agreement, in order to receive the above compensation, you are required to enter into a release of claims in favour of the Company. A copy of our Release is enclosed for your review.

The vesting period for your current options as per the following table, will end on September 30, 2016. There will be no extension beyond this. Please note:

1. that the Lock-Up Agreement by and between you and the Company, dated January 11, 2015 (the "Lock-Up Agreement"), will remain in full force and effect and your obligations thereunder will continue until such obligations terminate or expire pursuant to the terms of the Lock-Up Agreement;
2. per the recent Compensation Committee approval, any options granted to you will expire twelve (12) months after September 30, 2016 unless exercised by you.

Please contact Jean Jen if further information is required.

Tekmira/Arbutus Options

Award date	Granted #	Exercise price	Expiry Date	Vesting terms	Options vested
August 12, 2013	50,000	**CAD$**16.40	August 11, 2023	1/4 immed. 1/4 on 1st, 2nd & 3rd anniversary	50,000
February 5, 2014	25,000	**CAD$**16.40	February 4, 2024	1/4 immed. 1/4 on 1st, 2nd & 3rd anniversary	18,750
March 30, 2015	65,000	$ 17.57	March 30, 2025	1st, 2nd, and 3rd anniversary	21,667
July 9, 2015	35,000	$ 17.57	March 30, 2025	1st, 2nd, and 3rd anniversary	11,667
March 15, 2016	85,000	$ 3.94	March 15, 2026	1st, 2nd, and 3rd anniversary	0

Following your last day of work, you will enter into a consulting agreement with the Company the principal terms of which will be that you will provide transitional business management services to the Company for a period of 12 months. A formal consulting agreement will be provided to you in due course.

Confidentiality, Non-Competition and Non-Solicitation

We take this opportunity to remind you of your on-going obligations to the Company regarding Confidentiality, Non-Competition and Non-Solicitation as set out in your Employment Agreement. By signing this letter and accepting the payments referred to above, you acknowledge and agree that you are bound by these obligations.

Notwithstanding anything in this letter, the attached General Release or the Confidentiality, Non-Competition and Non-Solicitation as set out in your Employment Agreement (collectively, the "Agreements"), nothing in the Agreements prohibits you from reporting possible violations of United States federal law or regulation to any United States governmental agency or entity, including but not limited to the Department of Justice, the Securities and Exchange Commission, the Congress, and any agency Inspector General, or making other disclosures that are protected under the whistleblower provisions of United States federal law or regulation without prior authorization from or any notice to the Company. Please take the time to consider the terms of this letter and the enclosed Release carefully and obtain any advice you deem appropriate. Once you have done so, please sign the enclosed duplicate copy of this letter where indicated below and return it to me on or before October 7, 2016. Your signature will constitute a binding agreement between you and the Company and will to allow us to process the termination compensation expeditiously address the other matters. Please also ensure that you sign (in the presence of a witness) the enclosed release.
Please contact me or Darcy O'Grady if you have any questions regarding the above.

Thank you for your cooperation and professionalism and for your service to the Company.

Yours truly,

/s/ Mark Murray

Mark J. Murray
President and Chief Executive Officer

/encls

Accepted and agreed by, Mark Kowalski:

September 30, 2016
Date

/s/ Mark Kowalski
Mark Kowalski

GENERAL RELEASE

The Executive agrees, for himself, his spouse, heirs, executor or administrator, assigns, insurers, attorneys, and other persons or entities acting or purporting to act on his behalf (the "**Executive's Parties**"), to irrevocably and unconditionally release, acquit, and forever discharge the Company, its affiliates, subsidiaries, directors, officers, employees, shareholders, partners, agents, representatives, predecessors, successors, assigns, insurers, attorneys, benefit plans sponsored by the Company, and said plans' fiduciaries, agents and trustees (the "**Company's Parties**"), from any and all actions, causes of action, suits, claims, obligations, liabilities, debts, demands, contentions, damages, judgments, levies, and executions of any kind, whether in law or in equity, known or unknown, which the Executive's Parties have, have had, or may in the future claim to have against the Company's Parties by reason of, arising out of, related to, or resulting from the Executive's employment with the Company or the termination of that employment. This release specifically includes without limitation any claims arising in tort or contract, any claim based on wrongful discharge, any claim based on breach of contract, any claim arising under federal, state or local law prohibiting race, sex, age, religion, national origin, handicap, disability, or other forms of discrimination, any claim arising under federal, state, or local law concerning employment practices, and any claim relating to compensation or benefits. It is understood and agreed that the waiver of benefits and claims contained in this section does not include a waiver of the right to payment of any vested, non-forfeitable benefits to which the Executive or a beneficiary of the Executive may be entitled under the terms and provisions of any employee benefit plan of the company which have accrued as of the Date of Termination, and does not include a waiver of the right to benefits and payment of consideration to which the Executive may be entitled under this Agreement or any of the agreements contemplated by this Agreement (including the indemnification agreement and the stock option agreement). The Executive acknowledges that he is entitled to only the severance benefits and compensation set forth in this Agreement, and that all other claims for any other benefits or compensation are hereby waived, except those expressly stated in the preceding sentence.

Executive agrees that he will not make any derogatory statements, either oral or written, or otherwise disparage any of the Company's Parties or their products, employees, services, work and/or employment.

The Company agrees that it will not make any derogatory statements, either oral or written, or otherwise disparage any of the Executive's Parties.

The Executive hereby acknowledges his understanding that under this Agreement he is releasing any known or unknown claims he may have.

The Executive expressly waives and relinquishes all rights and benefits under that section and any law of any jurisdiction of similar effect with respect to his release of claims.

[Signature Page Follows]

IN WITNESS WHEREOF I have hereunto set my hand this 30th day of September 2016.

SIGNED, SEALED and DELIVERED by Mark Kowalski in the presence of:	)	/s/ Mark Kowalski
	)	Mark Kowalski
/s/ Victoria Currie	)	
Signature	)	
Victoria Currie	)	
Name	)	
Vancouver, BC	)	
Address	)	
Manager, HR Operations	)	
Occupation	)	

Exhibit 10.5

Without Prejudice

September 30, 2016

Michael Abrams

Re: Termination and Severance Agreement

Further to our recent discussions, set out below are the terms we have agreed upon regarding the ending of your employment with Arbutus Biopharma Corporation (the "Company"). Please review the letter and enclosure carefully and seek any advice you deem appropriate.

1. Your last day of work will be September 30, 2016. You will receive any earned but unpaid Base Salary and any accrued and unused vacation time as of this date.
2. On or within ten (10) business days after September 30, 2016, you will be provided with a lump sum, all-inclusive payment in the amount of $417,000.00 USD, less required deductions. This payment represents 80% of your Base Salary for a period of eighteen (18) months, as set out in paragraphs 2(a) and 6(b)(i) of your August 4, 2015 Employment Agreement.
3. As per paragraph 6(b)(iii) of your Employment Agreement, provided that you timely elect COBRA coverage, the Company shall pay on your behalf the COBRA premiums, if any, for the continuation of coverage under Arbutus' company health plan that you and your dependents are eligible to receive for the earlier of (x) a period of up to 24 months from the Termination Date, or (y) until you become eligible to receive health insurance benefits under any other employer's group health plan. In addition, the Company shall pay to you the Accrued Benefit (as defined in the Employment Agreement) pursuant to Section 6(b).
4. Except as noted in paragraphs 3 and 5 of this letter, no other payments will be provided to you and no perquisites or benefits of any nature or kind will be provided or continued, including those set out in paragraphs 6(b)(ii) of your Employment Agreement.
5. The vesting period for your current options as per the following table, will end on September 30, 2016. There will be no extension beyond this. Please note:
    a) that the Lock-Up Agreement by and between you and the Company, dated January 11, 2015 (the "Lock-Up Agreement"), will remain in full force and effect and your obligations thereunder will continue until such obligations terminate or expire pursuant to the terms of the Lock-Up Agreement;
    b) per the recent Compensation Committee approval, any options granted to you will expire twelve (12) months after September 30, 2016 unless exercised by you.

Please contact Jean Jen if further information is required.

Tekmira/Arbutus Options

Name	Award date	Granted #	Exercise price	Expiry Date	Vesting terms
Mike Abrams	December 9, 2008	5,000	$ 1.80	8-Dec-18	Immediate
Mike Abrams	January 28, 2010	5,000	$ 3.85	27-Jan-20	Immediate
Mike Abrams	August 10, 2011	5,000	$ 2.40	9-Aug-21	Immediate
Mike Abrams	December 23, 2011	5,000	$ 1.70	22-Dec-21	Immediate
Mike Abrams	December 10, 2012	5,000	$ 5.15	9-Dec-22	Immediate
Mike Abrams	January 2, 2014	75,000	$ 8.30	1-Jan-24	1/4 immed. 1/4 on 1st, 2nd & 3rd anniversary
Mike Abrams	March 30, 2015	50,000	$ 17.57	March 30, 2025	1st, 2nd, and 3rd anniversary
Mike Abrams	July 9, 2015	35,000	$ 17.57	March 30, 2025	1st, 2nd, and 3rd anniversary from grant date
Mike Abrams	March 15, 2016	45,000	$ 3.94	March 15, 2026	1st, 2nd, and 3rd anniversary
Mike Abrams	March 15, 2016	5,000	$ 3.94	March 15, 2026	1st, 2nd, and 3rd anniversary

6. Following your last day of work, you will enter into a consulting agreement with the Company the principal terms of which will be that you will provide transitional business management services to the Company for a period of 12 months. A formal consulting agreement will be provided to you in due course.
7. The payments and other terms described above are in full satisfaction of all matters and claims related to your employment with the Company and as such we will require you to sign a release in favour of the Company. A copy of the Release is enclosed.

Confidentiality, Non-Competition and Non-Solicitation

We take this opportunity to remind you of your on-going obligations to the Company regarding Confidentiality, Non-Competition and Non-Solicitation as set out in your Employment Agreement. By signing this letter and accepting the payments referred to above, you acknowledge and agree that you are bound by these obligations.

Notwithstanding anything in this letter, the attached General Release or the Confidentiality, Non-Competition and Non-Solicitation as set out in your Employment Agreement (collectively, the "Agreements"), nothing in the Agreements prohibits you from reporting possible violations of United States federal law or regulation to any United States governmental agency or entity, including but not limited to the Department of Justice, the Securities and Exchange Commission, the Congress, and any agency Inspector General, or making other disclosures that are protected under the whistleblower provisions of United States federal law or regulation without prior authorization from or any notice to the Company.

I trust the above terms are an accurate reflection of our agreement. To confirm your acceptance and to allow us to process the payment and expeditiously address the other matters, I ask that you sign the enclosed duplicate copy of this letter and return it to me on or before September 30, 2016. Your signature will constitute a binding agreement between you and the Company. Please also ensure that you sign (in the presence of a witness) and return to me the enclosed Release on or before September 30, 2016.

Thank you for your cooperation and professionalism in reaching this agreement. Thank you also for your service to the Company.

Yours truly,

/s/ Mark Murray

Mark Murray,
President and Chief Executive Officer

/encls

Accepted and agreed by, Michael Abrams:

September 30, 2016	**/s/ Michael Abrams**
Date	**Michael Abrams**

GENERAL RELEASE

The Executive agrees, for himself, his spouse, heirs, executor or administrator, assigns, insurers, attorneys, and other persons or entities acting or purporting to act on his behalf (the "**Executive's Parties**"), to irrevocably and unconditionally release, acquit, and forever discharge the Company, its affiliates, subsidiaries, directors, officers, employees, shareholders, partners, agents, representatives, predecessors, successors, assigns, insurers, attorneys, benefit plans sponsored by the Company, and said plans' fiduciaries, agents and trustees (the "**Company's Parties**"), from any and all actions, causes of action, suits, claims, obligations, liabilities, debts, demands, contentions, damages, judgments, levies, and executions of any kind, whether in law or in equity, known or unknown, which the Executive's Parties have, have had, or may in the future claim to have against the Company's Parties by reason of, arising out of, related to, or resulting from the Executive's employment with the Company or the termination of that employment. This release specifically includes without limitation any claims arising in tort or contract, any claim based on wrongful discharge, any claim based on breach of contract, any claim arising under federal, state or local law prohibiting race, sex, age, religion, national origin, handicap, disability, or other forms of discrimination, any claim arising under federal, state, or local law concerning employment practices, and any claim relating to compensation or benefits. It is understood and agreed that the waiver of benefits and claims contained in this section does not include a waiver of the right to payment of any vested, non-forfeitable benefits to which the Executive or a beneficiary of the Executive may be entitled under the terms and provisions of any employee benefit plan of the company which have accrued as of the Date of Termination, and does not include a waiver of the right to benefits and payment of consideration to which the Executive may be entitled under this Agreement or any of the agreements contemplated by this Agreement (including the indemnification agreement and the stock option agreement). The Executive acknowledges that he is entitled to only the severance benefits and compensation set forth in this Agreement, and that all other claims for any other benefits or compensation are hereby waived, except those expressly stated in the preceding sentence.

Executive agrees that he will not make any derogatory statements, either oral or written, or otherwise disparage any of the Company's Parties or their products, employees, services, work and/or employment.

The Company agrees that it will not make any derogatory statements, either oral or written, or otherwise disparage any of the Executive's Parties.

The Executive hereby acknowledges his understanding that under this Agreement he is releasing any known or unknown claims he may have.

The Executive expressly waives and relinquishes all rights and benefits under that section and any law of any jurisdiction of similar effect with respect to his release of claims.

[Signature Page Follows]

IN WITNESS WHEREOF I have hereunto set my hand this 30th day of September 2016.

SIGNED, SEALED and DELIVERED by Mike Abrams in the presence of:	)	
/s/ Gloria Pichii Signature	)	/s/ Michael Abrams Michael Abrams
Gloria Pichii Name	)	
100 - 8900 Glenlyon Pky, Burnaby, BC Address	)	
Executive Assistant Occupation	)	

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14 OR 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark Murray, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arbutus Biopharma Corporation;

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 the annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 3, 2016

/s/ Mark Murray
Name: Mark Murray
Title: President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION PURSUANT TO RULE 13a-14 OR 15d-14 OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Bruce Cousins, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arbutus Biopharma Corporation;

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 the annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 3, 2016

/s/ Bruce Cousins
Name: Bruce Cousins
Title: Executive Vice President, Finance and
Chief 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

In connection with the Quarterly Report on Form 10-Q of Arbutus Biopharma Corporation (the "Company") for the quarter ended September 30, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I Mark Murray, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

Date: November 3, 2016

/s/ Mark Murray
Name: Mark Murray
Title: President and Chief Executive Officer

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

In connection with the Quarterly Report on Form 10-Q of Arbutus Biopharma Corporation (the "Company") for the quarter ended September 30, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I Bruce Cousins, Executive Vice President, Finance and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

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

Date: November 3, 2016

/s/ Bruce Cousins
Name: Bruce Cousins
Title: Executive Vice President, Finance and
Chief Financial Officer