

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended **June 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
(State or Other Jurisdiction of
Incorporation or Organization)

980,597,776
(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 No

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

Yes No

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

(Do not check if a 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

As of July 31, 2016, the registrant had 54,796,741 common shares, no par value, outstanding.

ARBUTUS BIOPHARMA CORP.

TABLE OF CONTENTS

	Page
<u>PART I. FINANCIAL INFORMATION</u>	<u>F- 1</u>
ITEM 1. <u>FINANCIAL STATEMENTS (UNAUDITED)</u>	<u>F- 1</u>
ITEM 2. <u>MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	<u>F- 17</u>
ITEM 3. <u>QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	<u>F- 32</u>
ITEM 4. <u>DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING</u>	<u>F- 33</u>
<u>PART II. OTHER INFORMATION</u>	<u>F- 34</u>
ITEM 1. <u>LEGAL PROCEEDINGS</u>	<u>F- 34</u>
ITEM 1A. <u>RISK FACTORS</u>	<u>F- 34</u>
ITEM 2. <u>UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS</u>	<u>F- 34</u>
ITEM 3. <u>DEFAULTS UPON SENIOR SECURITIES</u>	<u>F- 34</u>
ITEM 4. <u>MINE SAFETY DISCLOSURES</u>	<u>F- 34</u>
ITEM 5. <u>OTHER INFORMATION</u>	<u>F- 34</u>
ITEM 6. <u>EXHIBITS</u>	<u>F- 35</u>

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (UNAUDITED)

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Balance Sheets

(Unaudited)

(Expressed in thousands, except share and per share amounts)

(Prepared in accordance with US GAAP)

	June 30, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	\$ 42,970	\$ 166,779
Short-term investments (note 2)	122,340	14,525
Accounts receivable	456	1,008
Accrued revenue	128	128
Investment tax credits receivable	148	246
Prepaid expenses and other assets	2,043	1,196
Total current assets	168,085	183,882
Long-term investments (note 2)	—	10,070
Property and equipment	14,121	12,912
Less accumulated depreciation	(10,177)	(9,729)
Property and equipment, net of accumulated depreciation	3,944	3,183
Intangible assets (note 3)	196,318	352,642
Goodwill (note 3)	162,514	162,514
Total assets	\$ 530,861	\$ 712,291
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable and accrued liabilities (note 5)	\$ 7,753	\$ 8,827
Deferred revenue (note 4)	711	868
Liability-classified options (notes 2 and 6)	1,312	—
Warrants (note 2)	308	883
Total current liabilities	10,084	10,578
Deferred revenue, net of current portion (note 4)	—	213
Contingent consideration (note 8)	7,993	7,497
Deferred tax liability	81,460	146,324
Total liabilities	99,537	164,612
Stockholders' equity:		
Common shares (note 6)		
Authorized - unlimited number with no par value		
Issued and outstanding: 54,796,741 (December 31, 2015 - 54,570,691)	861,148	834,240
Additional paid-in capital	32,817	30,206
Deficit	(412,859)	(266,985)
Accumulated other comprehensive loss	(49,782)	(49,782)
Total stockholders' equity	431,324	547,679
Total liabilities and stockholders' equity	\$ 530,861	\$ 712,291

Nature of business and future operations (note 1)

Contingencies and commitments (note 8)

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)

(Expressed in thousands, except share and per share amounts)

(Prepared in accordance with US GAAP)

	Three months ended		Six months ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Revenue (note 4)				
Collaborations and contracts	\$ 32	\$ 2,310	\$ 139	\$ 5,830
Licensing fees, milestone and royalty payments	277	1,130	773	2,292
Total revenue	309	3,440	912	8,122
Expenses				
Research, development, collaborations and contracts	15,215	9,690	28,359	20,247
General and administrative	23,766	7,662	30,985	10,378
Depreciation of property and equipment	252	147	469	267
Acquisition costs	—	361	—	9,656
Impairment of intangible assets (note 3)	156,324	—	156,324	—
Total expenses	195,557	17,860	216,137	40,548
Loss from operations	(195,248)	(14,420)	(215,225)	(32,426)
Other income (losses)				
Interest income	435	81	679	283
Foreign exchange gains (losses)	33	(2,571)	2,975	4,467
Gain on disposition of financial instrument (note 4)	—	—	1,000	—
Decrease in fair value of warrant liability (note 2)	168	2,024	329	801
Increase in fair value of contingent consideration (note 8)	(252)	—	(496)	—
Total other income (losses)	384	(466)	4,487	5,551
Loss before income taxes	(194,864)	(14,886)	(210,738)	(26,875)
Income tax benefit	64,864	—	64,864	—
Net loss	\$ (130,000)	\$ (14,886)	\$ (145,874)	\$ (26,875)
Loss per common share				
Basic and diluted	\$ (2.47)	\$ (0.27)	\$ (2.80)	\$ (0.64)
Weighted average number of common shares				
Basic and diluted	52,716,059	54,255,804	52,052,165	42,297,517
Comprehensive loss				
Cumulative translation adjustment	—	3,223	—	(5,951)
Comprehensive loss	\$ (130,000)	\$ (11,663)	\$ (145,874)	\$ (32,826)

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)

(Expressed in thousands, 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	—	25,950	3,328	—	—	29,278
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)	—	—	2,676	—	—	2,676
Issuance of common shares pursuant to exercise of options	55,550	266	(150)	—	—	116
Issuance of common shares pursuant to exercise of warrants	170,500	692	—	—	—	692
Net loss	—	—	—	(145,874)	—	(145,874)
Balance, June 30, 2016	54,796,741	\$ 861,148	\$ 32,817	\$ (412,859)	\$ (49,782)	\$ 431,324

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION
Condensed Consolidated Statements of Cash Flow
(Unaudited)

(Expressed in thousands)

(Prepared in accordance with US GAAP)

	Three months ended		Six months ended	
	June 30,		June 30,	
	2016	2015	2016	2015
OPERATING ACTIVITIES				
Net loss for the period	\$ (130,000)	\$ (14,886)	\$ (145,874)	\$ (26,875)
Items not involving cash:				
Deferred Income taxes	(64,864)	—	(64,864)	—
Depreciation of property and equipment	252	147	469	267
Stock-based compensation - research, development, collaborations and contract expenses	2,519	1,377	5,466	2,705
Stock-based compensation - general and administrative expenses	19,592	4,046	24,558	4,525
Unrealized foreign exchange (gains) losses	51	2,639	(2,956)	(4,418)
Change in fair value of warrant liability	(168)	(2,024)	(329)	(801)
Change in fair value of contingent consideration	252	—	496	—
Impairment of intangible assets (note 3)	156,324	—	156,324	—
Net change in non-cash operating items:				
Accounts receivable	(116)	(1,738)	552	(4,624)
Accrued revenue	—	1,304	—	178
Investment tax credits receivable	98	—	98	—
Prepaid expenses and other assets	(573)	(519)	(847)	(298)
Accounts payable and accrued liabilities	42	(7,351)	(1,074)	(5,343)
Deferred revenue	(213)	334	(370)	(957)
Net cash used in operating activities	(16,804)	(16,671)	(28,351)	(35,641)
INVESTING ACTIVITIES				
Disposition (acquisition) of short and long-term investments, net	(84,439)	(9,944)	(97,745)	27,419
Cash acquired through acquisition	—	—	—	324
Acquisition of property and equipment	(954)	(383)	(1,230)	(524)
Net cash provided by (used) in investing activities	(85,393)	(10,327)	(98,975)	27,219
FINANCING ACTIVITIES				
Proceeds from issuance of common shares, net of issuance costs	—	2	—	142,177
Issuance of common shares pursuant to exercise of options	1	939	116	1,559
Issuance of common shares pursuant to exercise of warrants	445	19	445	44
Net cash provided by financing activities	446	960	561	143,780
Effect of foreign exchange rate changes on cash and cash equivalents	(51)	967	2,956	(340)
(Decrease) Increase in cash and cash equivalents	(101,802)	(25,071)	(123,809)	135,018
Cash and cash equivalents, beginning of period	144,772	232,276	166,779	72,187
Cash and cash equivalents, end of period	\$ 42,970	\$ 207,205	\$ 42,970	\$ 207,205
Supplemental cash flow information				
Non-cash transactions:				
Investment tax credit received	—	\$ 25	\$ —	25
Acquisition of Arbutus Inc. excluding cash acquired	—	\$ —	\$ —	381,618

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

(formerly Tekmira Pharmaceuticals Corporation)

Notes to Consolidated Financial Statements

(Tabular amounts in thousands of US Dollars, except share and per share amounts)

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 ("HBV"), a disease of the liver caused by 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 June 30, 2016 and for all periods presented. The results of operations for the three and six months ended June 30, 2016 and June 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 under 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 six months ended June 30, 2016, potential common shares of 5,488,162 (June 30, 2015 – 6,399,738) were excluded from the calculation of loss per common share because their inclusion would be anti-dilutive, of which 1,258,824 (June 30, 2015 - 3,625,340) 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	June 30, 2016
Assets				
Cash and cash equivalents	\$ 42,970	—	—	\$ 42,970
Short-term investments	112,213	—	—	112,213
Total	\$ 155,183	—	—	\$ 155,183
Liabilities				
Liability-classified options	—	\$ —	\$ 1,312	\$ 1,312
Warrants	—	—	308	308
Contingent consideration	—	—	7,993	7,993
Total	—	—	\$ 9,613	\$ 9,613

	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
Six months ended June 30, 2015	\$ 5,099	\$ (341)	\$ (801)	\$ (351)	\$ 3,606
Six months ended June 30, 2016	\$ 883	\$ (246)	\$ (329)	\$ —	\$ 308

The change in fair value of warrant liability for the six months ended June 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 June 30, 2016 and at December 31, 2015 are as follows:

	June 30, 2016	December 31, 2015
Dividend yield	—%	—%
Expected volatility	67.37%	49.07%
Risk-free interest rate	0.54%	0.48%
Expected average term	0.4 years	0.6 years
Fair value of warrants outstanding	\$ 1.53	\$ 2.33
Aggregate fair value of warrants outstanding	\$ 308	\$ 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 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, 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
Six months ended June 30, 2015 \$	4,736	\$ 400	\$ 5,136
Six months ended June 30, 2016 \$	7,497	\$ 496	\$ 7,993

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

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 not yet determined the extent of the impact of adoption.

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 is currently evaluating the expected impact that the update could have on the condensed consolidated financial statements and related disclosures.

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 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements – Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern. The update is intended to provide guidance in GAAP about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. Under amendments to GAAP, the assessment period is within one year after the date that the financial statements are issued (or available to be issued). The amendments are effective for the annual period ending after December 15, 2016, which for the Company means January 1, 2017, and for annual periods and interim periods thereafter. Early application is permitted. The Company does not plan to early adopt this update. The Company is currently evaluating the expected impact that the update could have on the condensed consolidated financial statements and related disclosures.

3. Impairment evaluations for intangible assets and goodwill

All 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

For the three and six 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. The following table summarizes the carrying values, net of impairment of the intangible assets as at June 30, 2016:

	June 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. No impairment charge on goodwill was recorded for the period ended June 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 June 30,		Six months ended June 30,	
	2016	2015	2016	2015
Collaborations and contracts				
DoD (a)	\$ —	\$ 1,862	\$ —	\$ 4,907
Monsanto (b)	—	269	—	517
Dicerna (d)	32	179	139	406
Total research and development collaborations and contracts	32	2,310	139	5,830
Licensing fees, milestone and royalty payments				
Monsanto licensing fees and milestone payments (b)	—	805	—	1,647
Acuitas milestone payments	—	—	255	—
Dicerna licensing fee (c)	214	263	427	526
Spectrum royalty payments (d)	63	62	91	119
Total licensing fees, milestone and royalty payments	277	1,130	773	2,292
Total revenue	\$ 309	\$ 3,440	\$ 912	\$ 8,122

The following table sets forth deferred collaborations and contracts revenue:

	June 30, 2016	December 31, 2015
DoD (a)	\$ 15	\$ 15
Dicerna current portion (d)	696	853
Deferred revenue, current portion	711	868
Dicerna long-term portion (d)	—	213
Total deferred revenue	\$ 711	\$ 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 six months ended June 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, which the Company continues to estimate to be approximately 28 months as at June 30, 2016, that is, completion is expected to occur in March 2017.

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.

The Company believes the development and regulatory milestones are substantive, due to the existence of substantive uncertainty upon the execution of the arrangement, and that the achievement of the development and regulatory events are based in part on the Company's performance and the occurrence of a specific outcome resulting from performance. The Company has not received any milestone payments to date.

(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 six months ended June 30, 2016, the Company recorded \$60,000 and \$91,000 in Marqibo royalty revenue (three and six months ended June 30, 2015 - \$62,000 and \$119,000 respectively). For the six months ended June 30, 2016, the Company accrued 2.5% in royalties due to TPC in respect of the Marqibo royalty earned by the Company – see note 7, contingencies and commitments.

5. Accounts payable and accrued liabilities

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

	June 30, 2016	December 31, 2015
Trade accounts payable	\$ 1,744	\$ 2,610
Research and development accruals	4,323	2,358
Professional fee accruals	568	640
Deferred lease inducements	265	297
Payroll accruals	347	2,331
Other accrued liabilities	506	591
	\$ 7,753	\$ 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 June 30, 2016, are presented in the following table:

	June 30, 2016	January 1, 2016
Dividend yield	—%	—%
Expected volatility	82.77%	97.78%
Risk-free interest rate	0.88%	0.86%
Expected average term (years)	5.0	5.3
Fair value of options outstanding	\$ 2.08	\$ 3.33
Aggregate fair value of options outstanding (in thousands)	\$ 1,312	\$ 1,909
Number of options outstanding	694,500	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 forfeited, canceled or expired	(23,833)	5.94	4.60	—
Balance, June 30, 2016	694,500	\$ 7.28	\$ 5.64	\$ 288

Liability options expire at various dates from August 2, 2016 to May 22, 2024.

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

Range of Exercise prices (US\$)	Options outstanding June 30, 2016			Options exercisable June 30, 2016		
	Number of options outstanding	Weighted average remaining contractual life (years)	Weighted average exercise price (US\$)	Number of options exercisable	Weighted average exercise price (US\$)	
\$1.32 to \$1.86	120,000	4.6	\$ 1.54	120,000	\$ 1.54	
\$2.32 to \$3.60	100,000	2.1	2.97	100,000	2.97	
\$3.99 to \$4.45	124,000	6.3	4.23	121,143	4.22	
\$5.03 to \$6.43	95,000	6.2	6.13	76,250	6.06	
\$7.06 to \$7.06	150,000	7.3	7.06	135,000	7.06	
\$9.69 to \$14.35	105,500	7.7	12.01	81,462	11.89	
\$1.32 to \$14.35	694,500	5.8	\$ 5.64	633,854	\$ 5.33	

At June 30, 2016, there were 633,854 liability options exercisable with a weighted average exercise price of \$5.33 (C\$6.88). The weighted average remaining contractual life of exercisable liability options as at June 30, 2016 was 5.6 years. The aggregate intrinsic value of in-the-money liability options exercisable at June 30, 2016 was \$288,000.

A summary of the Company's non-vested liability stock option activity and related information at June 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	(73,354)	2.20
Non-vested options forfeited	—	
Non-vested at June 30, 2016	60,646	\$ 2.24

The weighted average remaining contractual life for liability options expected to vest at June 30, 2016 was 7.5 years and the weighted average exercise price for these options was \$8.87 (C\$11.46) per share.

The total fair value of liability options that vested during the six months ended June 30, 2016 was \$161,000.

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 June 30, 2016 was the accounts receivable balance of \$456,000 (December 31, 2015 -\$1,008,000).

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

8. Contingencies and commitments

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 June 30, 2016, a cumulative contribution of \$2,866,000 (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 six months ended June 30, 2016, the Company earned royalties on Marqibo sales in the amount of \$60,000 and \$91,000 respectively (three and six months ended June 30, 2015 – \$62,000 and \$119,000 respectively) (see note 4(d)), resulting in \$2,000 being recorded by the Company as royalty payable to TPC (June 30, 2015 -\$3,000). The cumulative amount paid or accrued up to June 30, 2016 was \$2,000, resulting in the contingent amount due to TPC being \$2,852,000 (C\$3,684,000)

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 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 as well as to Spectrum. Alnylam has in turn sublicensed back to the Company under the licensed UBC patents for discovery, development and commercialization of RNAi products. In 2009, the Company entered into a supplemental agreement with UBC, Alnylam and Acuitas, in relation to a separate research collaboration to be conducted among UBC, Alnylam and Acuitas to which the Company has license rights. The settlement agreement signed in late 2012 to resolve the litigation among the Company, Alnylam, and Acuitas, provided for the effective termination of all obligations under such supplemental agreement as between and among all litigants.

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 is currently disputing 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 an 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 determined that it needed to discontinue 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, based on termination provisions for cause and clinical failure. Under the agreement, no penalty is imposed for termination for cause or for clinical failure.

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 determined that it needed to discontinue the TLR9 development program based on significant research and analysis (refer to note 3 above).

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 six month period ended June 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; 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; completion in March 2017 of the performance period under the Dicerna Agreements; the option of the Company to renew its agreement with Blumberg or exercise its right to obtain an exclusive, royalty bearing, worldwide license from Blumberg to any intellectual property generated by any funded research project; single dose HBsAg reduction data on ARB-1467 in 3Q16; multidose HBsAg reduction data on ARB-1467 in 4Q16; filing an IND (or equivalent) for ARB-1740 in 2H16; filing an IND (or equivalent) for AB-423 in 2H16; the research benefits of the collaboration with The Baruch S. Blumberg Institute, including expanding our HBV drug candidate pipeline through internal development, acquisitions and in-licenses; 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-PLK1 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; potential development milestones and mid-single-digit royalty payments on future DCR-PH1 sales; discontinuing the OCB-030 development program with NeuroVive; discontinuing the ARB-1598 development program; and not filing an IND (or equivalent) for our cccDNA formation inhibitor in the second half of 2016.

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.

Candidate	Stage of Development			Milestone(s)
	IND Enabling	Phase I	Phase II	
ARB-1467 <i>RNAi 1.0 (formerly TKM-HBV)</i>				3Q16: Single dose HBsAg reduction data 4Q16: Multidose HBsAg reduction data
ARB-1740 <i>RNAi 2.0</i>				2H16: File IND (or equivalent)
AB-423 <i>Core Protein/ Capsid Inhibitor</i>				2H16: File IND (or equivalent)

Program	Objective(s)
cccDNA Formation Inhibitor	<ul style="list-style-type: none"> Selectively inhibit cccDNA formation by preventing removal of viral polymerase enzyme from rcDNA
HBsAg Secretion Inhibitor	<ul style="list-style-type: none"> Inhibit HBsAg production and secretion from infected cells Re-engage the immune response in patients
cccDNA Epigenetic Modifier	<ul style="list-style-type: none"> Control cccDNA transcription Inhibit the formation of new virus and sub-viral particles
STING Agonist	<ul style="list-style-type: none"> Elicit an antiviral response and inhibit HBV replication
RNaseH Inhibitor	<ul style="list-style-type: none"> Further suppression of viral replication when used in combination
Lead Candidate Backups	<ul style="list-style-type: none"> Core protein/capsid assembly, RNAi, etc.

HBsAg – HBV Surface Antigen

STING – Stimulator of Interferon Genes

cccDNA – Covalently Closed Circular DNA

RNaseH – Ribonuclease H

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 study evaluates two dose levels of ARB-1467 administered as three monthly doses in chronic HBV infected patients who are on stable background nucleot(s)ide analog therapy. Eight subjects will be enrolled in each of the two dose cohorts with six subjects receiving ARB-1467, and two receiving placebo. The ARB-1467 Phase II multi-dosing study has been initiated and single dose and multi-dose HBsAg reduction data are expected in the second half of 2016.

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 IND (or equivalent filing) for ARB-1740 in the second half 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 nucleoside 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 in the second half 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. 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

On July 19, 2016, we announced the following topline results from the completed Phase I/II TKM-PLK1 clinical study in patients with advanced Hepatocellular Carcinoma (HCC):

- 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;
- Tumor density reduction of up to 59% was observed;

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-single-digit royalty payments 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 (PH1) development program. Dicerna will use our third generation LNP technology for delivery of DCR-PH1, Dicerna's product incorporating its Dicer substrate RNA (DsiRNA) molecule, for the treatment of PH1, a rare, inherited liver disorder that often results in kidney failure and for which there are no approved therapies. In December 2015, Dicerna announced initiation of dosing in healthy volunteers with plans to initiate the Phase I clinical trial in patients with PH1 in 2016. We are entitled to potential development milestones and mid-single-digit royalty payments on future DCR-PH1 sales.

Recent Developments

NeuroVive Pharmaceutical AB

In September 2014, Arbutus Inc., our wholly owned subsidiary, entered into a license agreement with NeuroVive that granted us an exclusive, worldwide, sublicensable license to develop, manufacture and commercialize, for the treatment of HBV, oral dosage form sanglifehrin based cyclophilin inhibitors (including OCB-030). We have decided to discontinue the OCB-030 development program based on significant research and analysis, and therefore provided NeuroVive with a notice of termination of our license agreement in July 2016.

Baruch S. Blumberg Institute

In October 2014, Arbutus, Inc., our wholly owned subsidiary, entered into a research collaboration and funding agreement (the "Agreement") with the Baruch S. Blumberg Institute, a Pennsylvania not-for-profit corporation ("Blumberg"), under which we were to provide \$1.0 million per year of research funding for three years, renewable at our option for an additional three years, for Blumberg to conduct research projects in the field of the hepatitis B virus and liver cancer pursuant to a research plan to be agreed upon by the parties. In exchange, we received the right to obtain an exclusive, royalty bearing, worldwide license to intellectual property generated by Blumberg in the course of the funded research.

On June 5, 2016, we and Blumberg entered into an amended and restated research collaboration and funding agreement. The Agreement was amended and restated, among other things, primarily to:

- i. increase the annual funding amount we provided to Blumberg for its research in the fields of hepatitis B virus and liver cancer from \$1 million to \$1.1 million;
- ii. extend the initial term of the Agreement through to October 29, 2018;

- iii. provide an option for us to extend the term of the Agreement 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 an exclusive, royalty-bearing, worldwide and all-fields license under Blumberg's rights in certain other inventions described in the Agreement.

TLR9 Agonist (ARB-1598)

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 6 different series of compounds, including the product candidate ARB-1598. We have conducted additional research and analysis on ARB-1598, which has led to the decision to discontinue the ARB-1598 development program.

cccDNA Formation Inhibitor (cccDNA Sterilizer Drug Class)

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.

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 June 30, 2016, for the purpose of calculating the fair value, the weighed-average expected life of outstanding was 5.3 and 5.0 years, respectively; the weighted-average risk-free interest rate was 0.86% and 0.88%, respectively; the weighted-average volatility was 97.8% and 82.77%, respectively; and the dividend yield was 0% based on no history of dividend payment by the Company. For the six month period ended June 30, 2016, we recorded a total share-based compensation expense related to the change in fair value of liability options of \$746,000.

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 June 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 six month period ended June 30, 2016, we recorded a gain in earnings due to the decrease in fair value of warrant liability of \$168,000 and \$329,000 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, 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 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.

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 not yet determined the extent of the impact of adoption.

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 does not plan to early adopt this update. We are currently evaluating the expected impact that the update could have on the condensed consolidated financial statements and related disclosures.

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 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements – Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern. The update is intended to provide guidance in GAAP about management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related footnote disclosures. Under amendments to GAAP, the assessment period is within one year after the date that the financial statements are issued (or available to be issued). The amendments are effective for the annual period ending after December 15, 2016, which for us means January 1, 2017, and for annual periods and interim periods thereafter. Early application is permitted. We do not plan to early adopt this update. We are currently evaluating the expected impact that the update could have on the condensed consolidated financial statements and related disclosures.

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

	Q2 2016	Q1 2016	Q4 2015	Q3 2015	Q2 2015	Q1 2015	Q4 2014	Q3 2014
Revenue								
Collaborations and contracts:								
DoD	\$ —	\$ —	\$ (0.1)	\$ 2.0	\$ 1.9	\$ 3.0	\$ 2.8	\$ 1.5
Monsanto	—	—	3.9	0.3	0.3	0.2	0.3	0.3
Dicerna	—	0.1	0.7	0.7	0.2	0.2	0.3	0.2
Other	—	—	—	—	—	—	—	1.6
	—	0.1	4.5	3.0	2.4	3.4	3.4	3.6
Acuitas licensing payments	—	0.3	—	—	—	—	—	—
Monsanto licensing fees and milestone payments	—	—	7.9	0.7	0.8	0.8	0.9	0.7
Dicerna licensing fee	0.2	0.2	0.3	0.3	0.3	0.3	0.1	—
Spectrum milestone and royalty payments	0.1	—	0.1	0.1	0.1	0.1	—	0.1
Total revenue	0.3	0.6	12.7	4.1	3.6	4.6	4.4	4.4
Expenses	(195.6)	(20.6)	(24.4)	(62.2)	(17.9)	(22.7)	(15.6)	(11.2)
Other income (losses)	0.4	4.1	5.5	14.0	(0.5)	6.0	5.0	(1.8)
Loss before income taxes	(194.9)	(15.9)	(6.2)	(44.2)	(14.8)	(12.1)	(6.2)	(8.6)
Income tax benefit	64.9	—	1.0	15.2	—	—	—	—
Net loss	(130.0)	(15.9)	(5.2)	(29.0)	(14.8)	(12.1)	(6.2)	(8.6)
Basic and diluted net loss per share	\$ (2.47)	\$ (0.31)	\$ (0.10)	\$ (0.57)	\$ (0.27)	\$ (0.40)	\$ (0.27)	\$ (0.39)

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, estimated to complete in Q1 2017. In addition, we have recognized Dicerna collaboration revenue for inventory manufacture and 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.

Included in "other collaborations and contract revenue" is revenue from a BMS batch formulation agreement. In August 2014, the collaboration expired and both parties' obligations under the agreement ended. Revenue recognized in Q3 2014 relates to the release of the deferred revenue balance of \$1.6 million.

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 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 Q2 2014, we initiated a Phase I/II Clinical Trial for TKM-PLK1 in patients with HCC. 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 Q2 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.

Other income (losses) / Other income (losses) consist primarily of changes in the fair value of our warrant liability and foreign exchange differences. Other losses increased in Q3 2014 due primarily to the increase in fair value of our warrant liability. 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 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 exercises.

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 relate 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 and other income (losses) 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		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Total revenue	\$ 309	\$ 3,440	\$ 912	\$ 8,122
Operating expenses	195,557	17,860	216,137	40,548
Loss from operations	(195,248)	(14,420)	(215,225)	(32,426)
Net loss	\$ (130,000)	\$ (14,886)	\$ (145,874)	\$ (26,875)
Basic and diluted loss per share	(2.47)	(0.27)	(2.80)	(0.64)

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

	Three months ended June 30,			
	2016	% of Total	2015	% of Total
DoD	\$ —	—%	\$ 1,862	54%
Monsanto	—	—%	269	8%
Dicerna	32	10%	179	5%
Total collaborations and contracts revenue	32	10%	2,310	67%
Monsanto licensing fee and milestone payments	—	—%	805	23%
Acuitas milestone payment	—	—%	—	—%
Dicerna licensing fee	214	69%	263	8%
Spectrum milestone and royalty payments	63	20%	62	2%
Total revenue	\$ 309		\$ 3,440	

	Six months ended June 30,			
	2016	% of Total	2015	% of Total
DoD	\$ —	—%	\$ 4,907	60%
Monsanto	—	—%	517	6%
Dicerna	139	15%	406	5%
Total collaborations and contracts revenue	139	15%	5,830	72%
Monsanto licensing fee and milestone payments	—	—%	1,647	20%
Acuitas milestone payment	255	28%	—	—%
Dicerna licensing fee	427	47%	526	6%
Spectrum milestone and royalty payments	91	10%	119	1%
Total revenue	\$ 912		\$ 8,122	

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 \$1,000,000 in exercise fee, which has been recorded as other income for the six-months ended June 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. Licensing fee revenue recognized for the three and six months ended June 30, 2016 relates to the earned portion of the upfront payment of \$2.5 million for the use of our technology, which is being recognized over the period over which we provide services to Dicerna, estimated to complete in March 2017. We recognized collaboration revenue of \$0.03 million and \$0.14 million respectively for the three and six months ended June 30, 2016 earned on material manufactured for, and services provided to, Dicerna.

Acuitas revenue

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.

Spectrum revenue

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 June 30,			
	2016	% of Total	2015	% of Total
Research, development, collaborations and contracts	\$ 15,215	8%	\$ 9,690	54%
General and administrative	23,766	12%	7,662	43%
Depreciation	252	—%	147	1%
Acquisition costs	—	—%	361	2%
Impairment of intangible assets	156,324	80%	\$ —	—%
Total operating expenses	\$ 195,557		\$ 17,860	

	Six months ended June 30,			
	2016	% of Total	2015	% of Total
Research, development, collaborations and contracts	\$ 28,359	13%	\$ 20,247	50%
General and administrative	30,985	14%	10,378	26%
Depreciation	469	—%	267	1%
Acquisition costs	—	—%	9,656	24%
Impairment of intangible assets	156,324	72%	—	—%
Total operating expenses	\$ 216,137		\$ 40,548	

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 increased during the three and six months ended June 30, 2016 as compared to the three and six months ended June 30, 2015 as we increased spending on ARB-1467 for which Phase II clinical trials were initiated. 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.

R&D compensation expense increased in the three and six months ended June 30, 2016 as compared to the three and six months ended June 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 six months ended June 30, 2016 we incurred a total of \$15.9 million and \$20.6 million respectively, of incremental non-cash compensation expense as compared to three and six months ended June 30, 2015, related to the expiry of repurchase rights on shares issued as part of the consideration paid for the merger with Arbutus Inc., of which \$0.5 million and \$1.6 million has been included as part of research, development, collaborations and contracts expense, and \$15.4 million and \$19.0 million included as part of general and administrative expense for the three and six months ended June 30, 2016 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 higher in the three and six months ended June 30, 2016 compared to the three and six months ended June 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 incremental 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) of which \$14.0

million is an incremental expense for the three-months ended June 30, 2016 period due to an accelerated expiration of repurchase rights triggered by the departure of two of the four former Arbutus Inc. shareholders.

Acquisition costs

In the six months ended June 30, 2015, we incurred \$9.7 million in costs for professional fees related to completing the merger with Arbutus Inc. This is a one-time cost specific to the merger with Arbutus Inc., and we do not expect to incur recurring acquisition costs.

Impairment of intangible assets

For the three and six months ended June 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.

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

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Interest income	\$ 435	\$ 81	\$ 679	\$ 283
Foreign exchange gains (losses)	33	(2,571)	2,975	4,467
Gain on disposition of financial instrument	—	—	1,000	—
Decrease in fair value of warrant liability	168	2,024	329	801
Increase in fair value of contingent consideration	(252)	—	(496)	—
Total other income (losses)	\$ 384	\$ (466)	\$ 4,487	\$ 5,551

Foreign exchange gains

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 June 30, 2016, we recorded a foreign exchange gain of \$0.03 million which is primarily an unrealized gain related to an appreciation 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 three and six months ended June 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

In the three and six months ended June 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, as discussed above.

LIQUIDITY AND CAPITAL RESOURCES

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

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Net loss for the period	\$ (130,000)	\$ (14,886)	\$ (145,874)	\$ (26,875)
Adjustments to reconcile net loss to net cash provided by operating activities	113,958	6,185	119,164	2,278
Changes in operating assets and liabilities	(762)	(7,970)	(1,641)	(11,044)
Net cash used in operating activities	(16,804)	(16,671)	(28,351)	(35,641)
Net cash provided by (used in) investing activities	(85,393)	(10,327)	(98,975)	27,219
Net cash provided by financing activities	446	960	561	143,780
Effect of foreign exchange rate changes on cash & cash equivalents	(51)	967	2,956	(340)
Net increase (decrease) in cash and cash equivalents	(101,802)	(25,071)	(123,809)	135,018
Cash and cash equivalents, beginning of period	144,772	232,276	166,779	72,187
Cash and cash equivalents, end of period	42,970	207,205	42,970	207,205

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 June 30, 2016, we had an aggregate of approximately \$165.3 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 six months ended June 30, 2016, operating activities used \$28.4 million in cash as compared to \$35.6 million of cash used in the six months ended June 30, 2015. The decrease in cash used from operating activities is primarily related to the significant costs incurred related to the acquisition of Arbutus Inc. in March 2015.

For the six months ended June 30, 2016, investing activities used \$99.0 million in cash as we acquired short-term investments during the first half of 2016.

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 June 30, 2016 we held \$43.0 million in cash and cash equivalents and \$122.3 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 current collaborative partnership and licensing agreements with Dicerna;
- 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 / As at the date of this discussion we do not have any material commitments for capital expenditure.

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

Other than as disclosed elsewhere in this MD&A, there have not been any material changes to our contractual obligations from those disclosed in our Form 10-K for the year ended December 31, 2015.

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 July 31, 2016, we had 54,796,741 common shares issued and outstanding, outstanding options to purchase an additional 4,028,338 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 June 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 June 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 June 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 \$0.6 million. We recorded foreign exchange gains of \$3 million for the six months ended June, 2016.

ITEM 4. CONTROLS AND PROCEDURES

As of June 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 June 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 June 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.

University of British Columbia (“UBC”)

Certain early work on lipid nanoparticle delivery systems and related inventions was undertaken at 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 under the UBC license to Alnylam as well as to Talon. Alnylam has in turn sublicensed back to us under the licensed UBC patents for discovery, development and commercialization of RNAi products. In mid-2009, we and our subsidiary Protiva entered into a supplemental agreement with UBC, Alnylam and Acuitas Technologies, Inc., in relation to a separate research collaboration to be conducted among UBC, Alnylam and Acuitas to which we have license rights. The settlement agreement signed in late 2012 to resolve the litigation among Alnylam, Acuitas, Arbutus and Protiva provided for the effective termination of all obligations under such supplemental agreement as between and among all litigants.

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 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.

EXHIBIT INDEX

Exhibit Number	Description
10.1*	Amended 2011 Omnibus Share Compensation Plan
10.2*	2016 Omnibus Share and Incentive Plan
10.3*†	Amended and Restated Research Collaboration and Funding Agreement, between Arbutus Biopharma Inc. and the Baruch S. Blumberg Institute
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.

ARBUTUS BIOPHARMA 2011 OMNIBUS SHARE COMPENSATION PLAN

**(as approved by the board of directors on May 10, 2011 and
approved by the shareholders at the June 22, 2011 Annual and Special General Meeting;
as amended and approved by the board of directors on May 15, 2012 and
approved by the shareholders at the June 20, 2012 Annual and Special General Meeting;
as amended and approved by the board of directors on March 26, 2014 and
approved by the shareholders at the May 8, 2014 Annual and Special General Meeting; as amended and approved by the board of
directors in April, 2015 and
approved by the shareholders at the July 9, 2015 Annual and Special General Meeting; as amended and approved by the board of
directors on April 5, 2016 and approved by the shareholders at the May 19, 2016 annual meeting of shareholders)**

ARBUTUS BIOPHARMA CORPORATION

ARBUTUS BIOPHARMA CORPORATION 2011 OMNIBUS SHARE COMPENSATION PLAN

(as approved by the board of directors on May 10, 2011 and approved by the shareholders at the June 22, 2011 Annual and Special General Meeting as amended and approved by the board of directors on May 15, 2012 and approved by the shareholders at the June 20, 2012 Annual and Special General Meeting; as amended and approved by the board of directors on March 26, 2014 and approved by the shareholders at the May 8, 2014 Annual and Special General Meeting; as amended and approved by the board of directors in April, 2015 and approved by the shareholders at the July 9, 2015 Annual and Special General Meeting; as amended and approved by the board of directors on April 5, 2016 and approved by the shareholders at the May 19, 2016 annual meeting of shareholders)

1. PURPOSE OF THE PLAN

1.1 Purpose of this Plan. The purpose of this Plan is to promote the interests of the Corporation by:

- (a) furnishing certain directors, officers, employees or consultants of the Corporation or an Affiliate or other persons as the Compensation Committee may approve with greater incentive to further develop and promote the business and financial success of the Corporation;
- (b) furthering the identity of interests of persons to whom equity-based incentive awards may be granted with those of the shareholders of the Corporation generally through share ownership in the Corporation; and
- (c) assisting the Corporation in attracting, retaining and motivating its directors, officers, employees and consultants.

The Corporation believes that these purposes may best be effected by granting equity-based incentive awards to Eligible Participants.

2. DEFINITIONS

2.1 Definitions. In this Plan, unless there is something in the subject matter or context inconsistent therewith, capitalized words and terms will have the following meanings:

- (a) **“Affiliate”** means an affiliate company as defined in the Securities Act;
- (b) **“Associate”** means an associate as defined in the Securities Act;
- (c) **“Award”** means an award of Deferred Stock Units, Options, Restricted Stock Units, or Tandem SARs;

- (d) **“Award Agreement”** means an agreement evidencing a Deferred Stock Unit, Option, Restricted Stock Unit or Tandem SAR, entered into by and between the Corporation and an Eligible Person;
- (e) **“Blackout Period”** means an interval of time during which trading in securities of the Corporation by officers, directors and employees of the Corporation is prohibited pursuant to the Corporation’s Insider Trading Policy;
- (f) **“Board of Directors”** means the board of directors of the Corporation as constituted from time to time;
- (g) **“Change in Control”** means:
- (i) any merger or consolidation in which voting securities of the Corporation possessing more than fifty percent (50%) of the total combined voting power of the Corporation’s outstanding securities are transferred to a person or persons different from the persons holding those securities immediately prior to such transaction and the composition of the Board of Directors following such transaction is such that the directors of the Corporation prior to the transaction constitute less than fifty percent (50%) of the Board of Directors membership following the transaction;
 - (i) any acquisition, directly or indirectly, by a person or related group of persons (other than the Corporation or a person that directly or indirectly controls, is controlled by, or is under common control with, the Corporation) of beneficial ownership of voting securities of the Corporation possessing more than fifty percent (50%) of the total combined voting power of the Corporation’s outstanding securities;
 - (ii) any acquisition, directly or indirectly, by a person or related group of persons of the right to appoint a majority of the directors of the Corporation or otherwise directly or indirectly control the management, affairs and business of the Corporation;
 - (iii) any sale, transfer or other disposition of all or substantially all of the assets of the Corporation; and
 - (iv) a complete liquidation or dissolution of the Corporation;
- provided however, that a Change in Control shall not be deemed to have occurred if such Change in Control results solely from the issuance, in connection with a *bona fide* financing or series of financings by the Corporation or any of its Affiliates, of voting securities of the Corporation or any of its Affiliates or any rights to acquire voting securities of the Corporation or any of its Affiliates which are convertible into voting securities;
- (h) **“Common Shares”** means the common shares in the capital of the Corporation as constituted on the Effective Date, provided that if the rights of any Participant are

subsequently adjusted pursuant to Article 20 hereof, “Common Shares” thereafter means the shares or other securities or property which such Participant is entitled to purchase after giving effect to such adjustment;

- (i) **“Compensation Committee”** has the meaning ascribed thereto in Section 5.1 of this Plan;
- (j) **“Consultant”** means any individual, corporation or other person engaged to provide ongoing valuable services to the Corporation or an Affiliate;
- (k) **“Corporation”** means Arbutus Biopharma Pharmaceuticals Corporation and includes any successor corporation thereto;
- (l) **“Deferred Stock Unit”** means a right granted to an Eligible Person in accordance with Section 11 to receive, on a deferred payment basis, a cash payment or Common Shares, or any combination thereof, as determined by the Compensation Committee and on the terms contained in this Plan;
- (m) **“Director”** shall mean a member of the Board.
- (n) **“Effective Date”** has the meaning ascribed thereto by Section 3.1 of this Plan;
- (o) **“Eligible Person”** means a director, officer, employee or Consultant of the Corporation or an Affiliate or a person otherwise approved by the Compensation Committee;
- (p) **“Exercise Price”** means the price per Common Share at which a Participant may purchase Common Shares pursuant to an Option, provided that if such price is adjusted pursuant to Section 20.1 hereof, “Exercise Price” thereafter means the price per Common Share at which such Participant may purchase Common Shares pursuant to such Option after giving effect to such adjustment;
- (q) **“Fair Market Value”** as it relates to Common Shares means:
 - (i) where the Common Shares are listed for trading on a Stock Exchange, the closing price of the Common Shares on such Stock Exchange as determined by the Compensation Committee, for the Trading Session on the day prior to the relevant time as it relates to an Award; or
 - (ii) where the Common Shares are not publicly traded, the value which is determined by the Compensation Committee to be the fair value of the Common Shares at the relevant time as it relates to an Award, taking into consideration all factors that the Compensation Committee deems appropriate, including, without limitation, recent sale and offer prices of the Common Shares in private transactions negotiated at arm’s length;

- (r) **“Insider”** means:
- (i) an insider as defined in the Securities Act; and
 - (ii) an Associate or Affiliate of any person who is an insider;
- (s) **“Key Employee”** means an employee of the Corporation who at any time during the calendar year is an officer of the Corporation whose annual compensation is equal to or greater than US\$130,000, an employee whose share ownership in the Corporation is 5% or more, or an employee whose share ownership in the Corporation is 1% or more and whose annual compensation exceeds US\$150,000, or as U.S. federal tax law is amended in this regard from time to time;
- (t) **“Legal Representative”** has the meaning ascribed thereto by Section 14.1 of this Plan;
- (u) **“Merger and Acquisition Transaction”** means:
- (i) any merger;
 - (ii) any acquisition;
 - (iii) any amalgamation;
 - (iv) any offer for shares of the Corporation which if successful would entitle the offeror to acquire all of the voting securities of the Corporation; or
 - (v) any arrangement or other scheme of reorganization;
- that results in a Change in Control;
- (v) **“Non Blackout Trading Day”** means a day on which (i) a Trading Session occurs, and (ii) no Blackout Period is in place;
- (w) **“Notice of Settlement”** means a notice delivered to the Corporation in the form prescribed by the Corporation from time to time, or in absence of such form, a written notice indicating the Participant’s desire to receive his or her Settlement Amount and delivered to the Corporation;
- (x) **“Options”** means stock options granted hereunder to purchase Common Shares from treasury pursuant to the terms and conditions hereof and as evidenced by an Option Agreement and “Option” means any one of them;
- (y) **“Option Agreement”** means an agreement evidencing an Option, entered into by and between the Corporation and an Eligible Person;

- (z) **“Outstanding Common Shares”** at the time of any share issuance or grant of Options means the number of Common Shares that are outstanding immediately prior to the share issuance or grant of Options in question, on a non-diluted basis, or such other number as may be determined under the applicable rules and regulations of all regulatory authorities to which the Corporation is subject, including the Stock Exchange;
- (aa) **“Participant”** means a person to whom an Award has been granted under this Plan;
- (bb) **“Plan”** means the Arbutus Biopharma 2011 Omnibus Share Compensation Plan, as the same may from time to time be supplemented or amended and in effect;
- (cc) **“Restricted Stock Unit”** means a right granted to an Eligible Person in accordance with Section 10 to receive a cash payment or Common Shares, or a combination thereof, as determined by the Compensation Committee, equal in value to the Fair Market Value of the Common Shares on an applicable future settlement date as specified by the Compensation Committee, on the terms and conditions and calculated in accordance with Section 10 hereof;
- (dd) **“Section 162(m)”** means Section 162(m) of the U.S. Internal Revenue Code, or any successor provision, and the applicable Treasury Regulations promulgated thereunder;
- (ee) **“Section 409A”** means Section 409A of the U.S. Internal Revenue Code, or any successor provision, and applicable Treasury Regulations and other applicable guidance thereunder;
- (ff) **“Specified Employee”** means a specified employee as defined in Section 409A(a)(2)(B) of the U.S. Internal Revenue Code or applicable proposed or final regulations under Section 409A, determined in accordance with procedures established by the Corporation and applied uniformly with respect to all plans maintained by the Corporation that are subject to Section 409A;
- (gg) **“Settlement Amount”** means an amount paid to the holder of Deferred Stock Units as determined pursuant to Section 11;
- (hh) **“Securities Act”** means the *Securities Act*, R.S.B.C. 1996, c.418, as amended from time to time;
- (ii) **“Stock Exchange”** means such stock exchange or other organized market on which the Common Shares are listed or posted for trading;
- (jj) **“Tandem SAR”** means a right, granted in accordance with Section 9 in tandem with an Option, to receive upon the exercise thereof payment in cash, Common Shares or any combination thereof, as determined by the Compensation Committee, an amount equal to the excess of the Fair Market Value of the Common Shares on the date of exercise of such Tandem SAR over the Option

Exercise Price, on the terms and conditions and calculated in accordance with Section 9 hereof;

- (kk) **“Terminated Service”** means that a Participant has, except as a result of death or disability, ceased to be a director, officer, employee or Consultant of the Corporation, as the case may be;
- (ll) **“Trading Session”** means a trading session on a day which the applicable Stock Exchange is open for trading;
- (mm) **“U.S. Exchange Act”** means the U.S. Securities Exchange Act of 1934, as amended from time to time;
- (nn) **“U.S. Internal Revenue Code”** means the Internal Revenue Code of 1986 of the United States, as amended from time to time;
- (oo) **“U.S. Nonqualified Stock Option”** means an Option to purchase Common Shares other than a U.S. Qualified Incentive Stock Option;
- (pp) **“U.S. Optionee”** or **“U.S. Person”** means a Participant who is a citizen or a resident of the United States (including its territories, possessions and all areas subject to the jurisdiction); and
- (qq) **“U.S. Qualified Incentive Stock Option”** means an Option to purchase Common Shares with the intention that it qualify as an “incentive stock option” as that term is defined in Section 422 of the U.S. Internal Revenue Code, such intention being evidenced by the resolutions of the Compensation Committee at the time of grant.

3. **EFFECTIVE DATE OF PLAN**

3.1 Effective Date of this Plan. The effective date (the “Effective Date”) of this Plan is June 22, 2011, the date on which this Plan was adopted by the shareholders of the Corporation.

4. **COMMON SHARES SUBJECT TO PLAN**

4.1 Common Shares Subject to this Plan. The aggregate number of Common Shares in respect of which Awards may be granted pursuant to this Plan shall not exceed 6,493,870. The number of Common Shares in respect of which Awards may be granted pursuant to this Plan may be increased, decreased or fixed by the Board of Directors, as permitted under the applicable rules and regulations of all regulatory authorities to which the Corporation is subject, including the Stock Exchange.

4.2 Computation of Available Shares. For the purposes of computing the number of Common Shares available for grant under this Plan, Common Shares subject to any Award (or any portion thereof) that have expired or are forfeited, surrendered, cancelled or otherwise terminated prior to the issuance or transfer of such Common Shares and Common Shares subject to an Award (or any portion thereof) that is settled in cash in lieu of settlement in Common Shares shall again be available for grant under this Plan. Notwithstanding the foregoing, any

Common Shares subject to an Award that are withheld or otherwise not issued (upon either an exercise of any Option or Tandem SAR or any settlement of any Award) in order to satisfy the Participant's withholding obligations or in payment of any Option Exercise Price shall reduce the number of Common Shares available for grant under the limitations set forth in this Article 4.

4.3 Reservation of Shares. The Board of Directors will reserve for allotment from time to time out of the authorized but unissued Common Shares sufficient Common Shares to provide for issuance of all Common Shares which are issuable under all outstanding Awards.

4.4 No Fractional Shares. No fractional Common Shares may be purchased or issued under this Plan.

4.5 Settlement of Awards. Subject to the terms and limitations of the Plan, payments or transfers to be made upon the exercise settlement of an Award, other than an Option, may be made in such form or forms as the Compensation Committee shall determine (including, without limitation, cash or Common Shares), and payment or transfers made in whole or in part in Common Shares may, in the discretion of the Compensation Committee, be issued from treasury or purchased in the open market.

5. ADMINISTRATION OF PLAN

5.1 Administration of Plan. The Board of Directors may at any time appoint a committee (the "Compensation Committee") to, among other things, interpret, administer and implement this Plan on behalf of the Board of Directors in accordance with such terms and conditions as the Board of Directors may prescribe, consistent with this Plan (provided that if at any such time such a committee has not been appointed by the Board of Directors, this Plan will be administered by the Board of Directors, and in such event references herein to the Compensation Committee shall be construed to be a reference to the Board of Directors). The Board of Directors will take such steps which in its opinion are required to ensure that the Compensation Committee has the necessary authority to fulfil its functions under this Plan.

5.2 Award Agreements. Each Award will be evidenced by an Award Agreement which incorporates such terms and conditions as the Compensation Committee in its discretion deems appropriate and consistent with the provisions of this Plan (and the execution and delivery by the Corporation of an Award Agreement with a Participant shall be conclusive evidence that such Award Agreement incorporates terms and conditions approved by the Compensation Committee and is consistent with the provisions of this Plan). Each Award Agreement will be executed by the Participant to whom the Award is granted and on behalf of the Corporation by any member of the Compensation Committee or any officer of the Corporation or such other person as the Compensation Committee may designate for such purpose.

5.3 Powers of Compensation Committee. The Compensation Committee is authorized, subject to the provisions of this Plan, to establish from time to time such rules and regulations, make such determinations and to take such steps in connection with this Plan as in the opinion of the Compensation Committee are necessary or desirable for the proper administration of this Plan. For greater certainty, without limiting the generality of the foregoing, the Compensation Committee will have the power, where consistent with the general purpose

and intent of this Plan and subject to the specific provisions of this Plan and any approval of the Stock Exchange, if applicable:

- (a) to interpret and construe this Plan and any Award Agreement and to determine all questions arising out of this Plan and any Award Agreement, and any such interpretation, construction or determination made by the Compensation Committee will be final, binding and conclusive for all purposes;
- (b) to determine to which Eligible Persons Awards are granted, and to grant, Awards;
- (c) to determine the number of Common Shares issuable pursuant to each Award;
- (d) to determine the Exercise Price for each Option;
- (e) to determine the time or times when Awards will be granted, vest and be exercisable, as applicable;
- (f) to determine the vesting terms of Awards, which may be based upon the passage of time, continued employment or service, on the basis of corporate or personal performance objectives, or any combination of the foregoing as determined by the Compensation Committee;
- (g) to determine any acceleration of vesting;
- (h) to determine if the Common Shares that are subject to an Award will be subject to any restrictions or repurchase rights upon the exercise or settlement of such Award including, where applicable, the endorsement of a legend on any certificate representing Common Shares acquired on the exercise or settlement of any Award to the effect that such Common Shares may not be offered, sold or delivered except in compliance with the applicable securities laws and regulations of Canada, the United States or any other country and if any rights or restrictions exist they will be described in the applicable Award Agreement;
- (i) to determine the expiration date for each Award and to extend the period of time for which any Award is to remain exercisable or may be settled in appropriate circumstances, including, without limitation, in the event of the Participant's cessation of employment or service, provided that such date may not be later than the earlier of (A) the latest date permitted under the applicable rules and regulations of all regulatory authorities to which the Corporation is subject, including the Stock Exchange, and (B) in the case of an Option and, if applicable, Tandem SAR, the date which is the tenth anniversary of the date on which such Option and, if applicable, Tandem SAR is granted;
- (j) to prescribe the form of the instruments relating to the grant, exercise, or settlement, as applicable, and other terms of Awards;

- (k) to enter into an Award Agreement evidencing each Award which will incorporate such terms as the Compensation Committee in its discretion deems consistent with this Plan;
- (l) to take such steps and require such documentation from Eligible Persons which in its opinion are necessary or desirable to ensure compliance with the rules and regulations of the Stock Exchange and all applicable laws;
- (m) to adopt such modifications, procedures and subplans as may be necessary or desirable to comply with the provisions of the laws of Canada, the United States and other countries in which the Corporation or its Affiliates may operate to ensure the viability and maximization of the benefits from the Awards granted to Participants residing in such countries and to meet the objectives of this Plan; and
- (n) to determine such other matters as provided for herein.

5.4 Prohibition on Option and Tandem SAR Repricing. Except as provided in Section 20.1 hereof, the Compensation Committee may not, without prior approval of the shareholders of the Corporation, seek to effect any re-pricing of any previously granted, “underwater” Option or Tandem SAR by: (i) amending or modifying the terms of the Option or Tandem SAR to lower the exercise price; (ii) canceling the underwater Option or Tandem SAR and granting either (A) replacement Options or Tandem SAR having a lower exercise price; or (B) Restricted Stock Units, in exchange; or (iii) cancelling or repurchasing the underwater Option or Tandem SAR for cash or other securities. An Option or Tandem SAR will be deemed to be “underwater” at any time when the Fair Market Value of the Common Shares covered by such Award is less than the exercise price of the Award.

6. GRANT OF OPTIONS

Subject to the rules set out below, the Compensation Committee or the Board of Directors (or in the case of any proposed Participant who is a member of the Compensation Committee, the Board of Directors) may from time to time grant to any Eligible Person one or more Options as the Compensation Committee or the Board of Directors deems appropriate.

6.1 Date Option Granted. The date on which an Option will be deemed to have been granted under this Plan will be the date on which the Compensation Committee or the Board of Directors, as applicable, authorizes the grant of such Option or such other date as may be specified by the Compensation Committee or the Board of Directors, as applicable, at the time of such authorization.

6.2 Number of Common Shares/Maximum Grant. The number of Common Shares that may be purchased under any Award will be determined by the Compensation Committee, provided that:

- (a) the number of Common Shares reserved for issuance to any one Participant pursuant to this Plan within any one year period shall not, in aggregate, exceed the lesser of (i) 5% of the total number of Outstanding Common Shares on a non-

diluted basis and (ii) 2,500,000 Common Shares (subject to adjustment as provided for in Section 20.1); and

(a) the number of Common Shares:

(vi) issuable, at any time, to Participants that are Insiders; and

(vii) issued to Participants that are Insiders within any one year period;

pursuant to this Plan, or when combined with all of the Corporation's other security based share compensation arrangements shall not, in aggregate, exceed 10% of the total number of Outstanding Common Shares on a non-diluted basis;

For the purposes of this Section 6.2, Common Shares issued pursuant to an entitlement granted prior to the grantee becoming an Insider may be excluded in determining the number of Common Shares issuable to Insiders. A Participant who holds Options at the time of granting an Option, may hold more than one Option.

6.3 Exercise Price. The Exercise Price per Common Share under each Option will be determined by the Compensation Committee, in its sole discretion, but will in no event be less than the Fair Market Value of the date of the grant.

7. U.S. QUALIFIED INCENTIVE STOCK OPTION PROVISIONS

To the extent required by Section 422 of the U.S. Internal Revenue Code, U.S. Qualified Incentive Stock Options shall be subject to the following additional terms and conditions and if there is any conflict between the terms of this Article and other provisions under this Plan, the provisions under this Article shall prevail:

7.1 Eligible Employees. All classes of employees of the Corporation or one of its parent corporations or subsidiary corporations may be granted U.S. Qualified Incentive Stock Options. U.S. Qualified Incentive Stock Options shall only be granted to U.S. Optionees who are, at the time of grant, officers, key employees or directors of the Corporation or one of its parent corporations or subsidiary corporations (provided, for purposes of this Article 7 only, such directors are then also officers or key employees of the Corporation or one of its parent corporations or subsidiary corporations). For purposes of this Article 7, "parent corporation" and "subsidiary corporation" shall have the meanings attributed to those terms for the purposes of Section 422 of the U.S. Internal Revenue Code. Any director of the Corporation who is a U.S. Optionee shall be ineligible to vote upon the granting of such Option; and for greater certainty, contractors of the Corporation or subsidiary corporations may not be granted U.S. Qualified Incentive Stock Options.

7.2 Dollar Limitation. To the extent the aggregate fair market value (determined as of the grant date) of Common Shares with respect to which U.S. Qualified Incentive Stock Options are exercisable for the first time by a U.S. Optionee during any calendar year (under this Plan and all other stock option plans of the Corporation) exceeds U.S. \$100,000, such portion in excess of U.S. \$100,000 shall be treated as a U.S. Nonqualified Stock Option. In the event the

U.S. Optionee holds two or more such Options that become exercisable for the first time in the same calendar year, such limitation shall be applied on the basis of the order in which such Options are granted.

7.3 10% Shareholders. If any U.S. Optionee to whom a U.S. Qualified Incentive Stock Option is to be granted under this Plan at the time of the grant of such U.S. Qualified Incentive Stock Option is the owner of shares possessing more than ten percent (10%) of the total combined voting power of all classes of shares of the Corporation, then the following special provisions shall be applicable to the U.S. Qualified Incentive Stock Option granted to such individual:

- (i) the Exercise Price (per Common Share) subject to such U.S. Qualified Incentive Stock Option shall not be less than one hundred ten percent (110%) of the fair market value of one Common Share at the time of grant; and
- (ii) for the purposes of this Article 7 only, the option exercise period shall not exceed five (5) years from the date of grant.

The determination of 10% ownership shall be made in accordance with Section 422 of the U.S. Internal Revenue Code.

7.4 Exercisability. To qualify for U.S. Qualified Incentive Stock Option tax treatment, an Option designated as a U.S. Qualified Incentive Stock Option must be exercised within three months after termination of employment for reasons other than death, except that, in the case of termination of employment due to total disability, such Option must be exercised within one year after such termination. Employment shall not be deemed to continue beyond the first 90 days of a leave of absence unless the U.S. Optionee's reemployment rights are guaranteed by statute or contract. For purposes of this Section 7.4, "total disability" shall mean a mental or physical impairment of the U.S. Optionee which is expected to result in death or which has lasted or is expected to last for a continuous period of 12 months or more and which causes the U.S. Optionee to be unable, in the opinion of the Corporation and two independent physicians, to perform his or her duties for the Corporation and to be engaged in any substantial gainful activity. Total disability shall be deemed to have occurred on the first day after the Corporation and the two independent physicians have furnished their opinion of total disability to the Compensation Committee.

7.5 Taxation of U.S. Qualified Incentive Stock Options. In order to obtain certain tax benefits afforded to U.S. Qualified Incentive Stock Options under Section 422 of the U.S. Internal Revenue Code, the U.S. Optionee must hold the Common Shares issued upon the exercise of a U.S. Qualified Incentive Stock Option for two years after the date of grant of the U.S. Qualified Incentive Stock Option and one year from the date of exercise. A U.S. Optionee may be subject to U.S. alternative minimum tax at the time of exercise of a U.S. Qualified Incentive Stock Option. The Compensation Committee may require a U.S. Optionee to give the Corporation prompt notice of any disposition of shares acquired by the exercise of a U.S. Qualified Incentive Stock Option prior to the expiration of such holding periods.

7.6 Transferability. No U.S. Qualified Incentive Stock Option granted under this Plan may be assigned or transferred by the U.S. Optionee other than by will or by the laws of descent and distribution, and during the U.S. Optionee's lifetime, such U.S. Qualified Incentive Stock Option may be exercised only by the U.S. Optionee.

7.7 Compensation Committee Governance if U.S. Registrant. If and so long as the Common Shares are registered under Section 12(b) or 12(g) of the U.S. Securities Exchange Act, the Board of Directors will consider in selecting the members of the Compensation Committee, with respect to any persons subject or likely to become subject to Section 16 of the U.S. Securities Exchange Act, the provisions regarding "nonemployee directors" as contemplated by Rule 16b-3 under the U.S. Securities Exchange Act and "outside directors" as contemplated by Section 162(m).

7.8 Exercise Price. Notwithstanding Section 6.3, no U.S. Qualified Incentive Stock Option granted under the Plan shall have an Exercise Price less than the fair market value of the underlying Common Shares at the date of grant of such Option, as determined at such time in good faith by the Board or Directors or the Compensation Committee, as the case may be.

7.9 Approval by Shareholders. No U.S. Qualified Incentive Stock Option granted to a U.S. Optionee under this Plan shall become exercisable unless and until this Plan shall have been approved by the shareholders of the Corporation within 12 months of approval by the Board of Directors of the Corporation.

7.10 Option Agreements. Each Option will be evidenced by an Option Agreement which incorporates such terms and conditions as the Compensation Committee in its discretion deems appropriate and consistent with the provisions of this Plan (and the execution and delivery by the Corporation of an Option Agreement with a Participant shall be conclusive evidence that such Option Agreement incorporates terms and conditions approved by the Compensation Committee and is consistent with the provisions of this Plan). Each Option Agreement will be executed by the Participant to whom the Option is granted and on behalf of the Corporation by any member of the Compensation Committee or any officer of the Corporation or such other person as the Compensation Committee may designate for such purpose. Each Option Agreement will specify the reasons for the Corporation granting Options to such Participant.

8. EXERCISE OF OPTIONS

8.1 Exercise of Options. Subject to the terms and conditions of this Plan, the Compensation Committee may impose such limitations or conditions on the exercise or vesting of any Option as the Compensation Committee in its discretion deems appropriate, including limiting the number of Common Shares for which any Option may be exercised during any period as may be specified by the Compensation Committee and which number of Common Shares for which such Option may be exercised in any period will be specified in the Option Agreement with respect to such Option. Each Option Agreement will provide that the Option granted thereunder may be exercised only by notice signed by the Participant or the Legal Representative of the Participant and accompanied by full payment for the Common Shares being purchased. Such consideration may be paid in any combination of the following:

- (a) cash, bank draft or certified cheque; or
- (b) such other consideration as the Compensation Committee may permit consistent with applicable laws.

As soon as practicable after any exercise of an Option, a certificate or certificates representing the Common Shares in respect of which such Option is exercised will be delivered by the Corporation to the Participant.

8.2 Conditions. Notwithstanding any of the provisions contained in this Plan or in any Option Agreement, the Corporation's obligation to issue Common Shares to a Participant pursuant to the exercise of an Option will be subject to, if applicable:

- (b) completion of such registration or other qualification of such Common Shares or obtaining approval of such governmental authority as the Corporation will determine to be necessary or advisable in connection with the authorization, issuance or sale thereof;
- (c) the admission of such Common Shares to listing or quotation on the Stock Exchange; and
- (d) the receipt from the Participant of such representations, agreements and undertakings, including as to future dealings in such Common Shares, as the Corporation or its counsel determines to be necessary or advisable in order to safeguard against the violation of the securities laws of any jurisdiction.

9. GRANT OF TANDEM SARs

9.1 Grant of Tandem SARs. The Compensation Committee or the Board of Directors, as applicable, may from time to time grant an Award of Tandem SARs to a Participant for each Option granted to such Participant on such terms and conditions, consistent with the Plan, as the Compensation Committee or the Board of Directors, as applicable, shall determine.

9.2 Terms of Tandem SARs. Tandem SARs may be granted at or after the grant date of the related grant of Options, and each Tandem SAR shall be subject to the same terms and conditions and denominated in the same currency as the Option to which it relates and the additional terms and conditions set forth in this Article 9.

9.3 Exercise of Tandem SARs. The Participant shall have the right to elect to exercise either an Option or the related Tandem SAR, if so granted. If the Participant elects to exercise a Tandem SAR, the related Option shall be cancelled. Tandem SARs may be exercised only if and to the extent the Options related thereto are then vested. Tandem SARs shall be exercisable at the election of the Participant by delivering to the Corporation a notice specifying the number of Options in respect of which the Tandem SARs are exercised. The Participant shall not pay the Option Exercise Price attributable to the Option to which the Tandem SAR is related, but must pay or satisfy, in accordance with the terms of Article 17, any withholding amounts or administrative costs with respect to such exercise.

9.4 Settlement of Tandem SARs. Upon exercise of a Tandem SAR, and subject to payment or other satisfaction of all related withholding obligations in accordance with Article 17, such Tandem SAR shall be settled and the Participant shall be entitled to a cash payment, Common Shares or a combination thereof, at the discretion of the Compensation Committee, and settlement:

- (a) made in Common Shares shall be equal to such number of Common Shares having an aggregate value equal to the excess of the Fair Market Value of a Common Share on the date of exercise of the Tandem SAR over the Option Exercise Price for the corresponding Option, multiplied by the number of Tandem SARs exercised;
- (b) made by a cash payment shall be an aggregate amount equivalent to the value derived by 9.4(a); and
- (c) made by a combination of a cash payment and Common Shares shall be equivalent to the value derived by 9.4(a).

10. GRANT OF RESTRICTED STOCK UNITS

10.1 Grant of Restricted Stock Units. Restricted Stock Units may be granted pursuant to the terms of the Plan from time to time by the Compensation Committee or the Board of Directors, as applicable. The date on which any Restricted Stock Unit will be deemed to have been granted will be the date on which the Compensation Committee or the Board of Directors, as applicable, authorizes the grant of such Award.

10.2 Vesting Terms. Restricted Stock Units shall become vested at such times, in such instalments, and subject to such terms and conditions as may be determined by the Compensation Committee and set forth in the applicable Award Agreement.

10.3 Settlement of Restricted Stock Units. Restricted Stock Units shall be settled upon, or as soon as reasonably practicable following, the vesting thereof, subject to payment or other satisfaction of all related withholding obligations in accordance with Article 17 hereof and administrative costs. Settlement shall be made by a cash payment, Common Shares, or a combination thereof, as determined by the Compensation Committee in its sole discretion, and settlement:

- (d) made in Common Shares shall be made by delivery of one Common Share for each such Restricted Stock Unit then being settled;
- (e) made by a cash payment shall be an aggregate amount equal to the product of the Fair Market Value of the Common Shares on the applicable settlement date as specified by the Compensation Committee, multiplied by the number of Restricted Stock Units then being settled; and
- (f) made by a combination of a cash payment and Common Shares shall be equivalent to the value derived by 10.3(b).

11. GRANT OF DEFERRED STOCK UNITS

11.1 Grant of Deferred Stock Units. Deferred Stock Units may be granted pursuant to the terms of the Plan from time to time by the Compensation Committee or the Board of Directors, as applicable. The date on which any Deferred Stock Unit will be deemed to have been granted will be the date on which the Compensation Committee or the Board of Directors, as applicable, authorizes the grant of such Award.

11.2 Vesting Terms. Deferred Stock Units shall become vested at such times and subject to such terms and conditions as may be determined by the Compensation Committee and set forth in the applicable Award Agreement.

11.3 Determination of Deferred Stock Units. Deferred Stock Units awarded pursuant to this Plan will be credited to an account maintained for each Participant by the Corporation as and when awards are made. The number of Deferred Share Units to be credited to a Participant will be determined on the date on which the Compensation Committee or the Board of Directors, as applicable, authorizes the grant of DSU award, on a one Deferred Share Unit per Share basis.

11.4 Settlement of Deferred Stock Units. Deferred Stock Units shall be settled upon the Terminated Service of a Participant, pursuant to the terms and conditions of this Section 11.4, and subject to payment or other satisfaction of all related withholding obligations in accordance with Article 17 hereof and administrative costs. Settlement Amounts in respect of Deferred Stock Units shall be settled by a cash payment, Common Shares or any combination thereof, as determined by the Compensation Committee in its sole discretion, and settlement:

- (a) made in Common Shares shall be made by delivery of one Common Share for each such Deferred Stock Unit then being settled on the Filing Date;
- (b) made by a cash payment shall be an aggregate amount equivalent to the value derived by 11.4(a); and
- (c) made by a combination of a cash payment and Common Shares will be equivalent to the value derived by 11.4(a).

11.5 Payment of Settlement Amount.

- (a) Non-U.S. Persons
 - (i) a Participant who is not a U.S. Person and who has Terminated Service may receive their Settlement Amount by filing a Notice of Settlement on or before December 15 of the first calendar year commencing after the date of the Participant's Terminated Service. If the Participant fails to file such notice on or before that December 15, the Participant will be deemed to have filed the Notice of Settlement on that December 15.

- (ii) subject to Article 18 herein, the Corporation shall make payment of the Settlement Amount as soon as reasonably possible following the Filing Date.
 - (iii) in the event of the death of a Participant who is not a U.S. Person, the Corporation will, subject to Article 18 herein, make payment of the Settlement Amount within two months of the Participant's death to or for the benefit of the legal representative of the deceased Participant. For the purposes of this subsection, the Filing Date shall be the date of the Participant's death.
 - (iv) if a Participant who is not a U.S. Person dies after the Participant has Terminated Service but before filing a Notice of Settlement, Section 11.5(a)(iii) will apply.
- (b) U.S. Persons
- (i) in the event that a Participant who is a U.S. Person and not a Key Employee has Terminated Service, the Corporation will, subject to Article 18 herein, make payment of the Settlement Amount as soon as reasonably possible following such Participant's Terminated Service. For the purposes of this subsection, the Filing Date shall be the date that such Participant Terminated Service.
 - (ii) in the event that a Participant who is a U.S. Person and a Key Employee has Terminated Service, the Corporation will, subject to Article 18 herein, make payment of the Settlement Amount as soon as is reasonably possible following the date that is 6 months after the date that such Participant Terminated Service. For the purposes of this subsection, the Filing Date shall be the date which is 6 months after the date that such Participant Terminated Service. In the event of death of such a Participant during the 6 month period following the date the Participant Terminated Service, the rules under Section 11.5(b)(ii) shall then apply.
 - (iii) in the event of the death of a Participant who is a U.S. Person, the Corporation will, subject to Article 18 herein, make payment of the Settlement Amount within two months of the Participant's death to or for the benefit of the legal representative of the deceased Participant. For the purposes of this subsection, the Filing Date shall be the date of the Participant's death.

12. TERM OF AWARDS

12.1 Term of Options and Tandem SARS. Unless otherwise determined by the Compensation Committee, each Option and Tandem SAR granted pursuant to this Plan will, subject to the provisions of this Plan, expire automatically on the earlier of:

- (g) the date determined by the Compensation Committee and specified in the Award Agreement pursuant to which such Option and, if applicable, Tandem SAR is granted, provided that such date may not be, subject to Article 18 later than the earlier of (A) the date which is the tenth anniversary of the date on which such Option and, if applicable, Tandem SAR is granted, and (B) the latest date permitted under the applicable rules and regulations of all regulatory authorities to which the Corporation is subject, including the Stock Exchange;
- (h) in the event the Participant ceases to be an Eligible Person for any reason, other than the death of the Participant or the termination of the Participant for cause, such period of time after the date on which the Participant ceases to be an Eligible Person as may be specified by the Compensation Committee or as specified in an agreement among the Participant and the Corporation, and in the absence of such specification or agreement, will be deemed to be the date that is three months following the Participant ceasing to be an Eligible Person
- (i) in the event of the termination of the Participant as a director, officer, employee or Consultant of the Corporation or an Affiliate for cause, the date of such termination;
- (j) in the event of the death of a Participant prior to: (A) the Participant ceasing to be an Eligible Person; or (B) the date which is the number of days specified by the Compensation Committee pursuant to subparagraph (b) above from the date on which the Participant ceased to be an Eligible Person; the date which is one year after the date of death of such Participant or such other date as may be specified by the Compensation Committee and which period will be specified in the Award Agreement with the Participant with respect to such Option ; and
- (k) notwithstanding the foregoing provisions of subparagraphs (b), (c) and (d) of this Section 12.1, the Compensation Committee may, subject Article 19 and to regulatory approval, at any time prior to expiry of an Option extend the period of time within which an Option may be exercised by a Participant who has ceased to be an Eligible Person, but such an extension shall not be granted beyond the original expiry date of the Option as provided for in subparagraph (a) above.

12.2 Options and Tandem SARs Cease to Vest. Notwithstanding the foregoing, except as expressly permitted by the Compensation Committee, all Options will cease to vest as at the date upon which the Participant ceases to be an Eligible Person.

12.3 Accelerated Vesting of Options and Tandem SARs on Death. In the event of the death of the Participant prior to the Participant ceasing to be an Eligible Person, all Options and Tandem SARs of such Participant shall become immediately vested.

12.4 Term of Restricted Stock Units. Unless otherwise determined by the Compensation Committee:

- (c) in the event a Participant ceases to be an Eligible Person due to death or retirement, any then outstanding Restricted Stock Units that have not become vested and settled prior to the Participant ceasing to be an Eligible Person shall immediately vest and be settled as soon as reasonably practicable after the date that such Participant ceases to be an Eligible Person;
- (d) in the event a Participant ceases to be an Eligible Person due to resignation, any then outstanding Restricted Stock Units that have not become vested and settled prior to the Participant ceasing to be an Eligible Person shall immediately be forfeited and cancelled; and
- (e) in the event a Participant ceases to be an Eligible Person due to disability or termination without cause, any then outstanding Restricted Stock Units that have not become vested and settled prior to the Participant ceasing to be an Eligible Person shall vest and be settled at the discretion of the Compensation Committee.

12.5 Termination of a Participant for Cause. Notwithstanding any other provision hereof or in any Award Agreement, in the case of a Participant's termination for cause, any and all then outstanding Awards granted to the Participant, whether or not vested, shall be immediately forfeited and cancelled, without any consideration therefore, and any and all rights of such Participant with respect to and arising from this Plan shall terminate, as of the commencement of the date that notice of such termination is given, without regard to any period of reasonable notice or any salary continuance, unless otherwise determined by the Compensation Committee.

13. CHANGE IN STATUS

13.1 A change in the status, office, position or duties of a Participant from the status, office, position or duties held by such Participant on the date on which the Award was granted to such Participant will not result in the termination of the Award granted to such Participant provided that such Participant remains a director, officer, employee or Consultant of the Corporation or an Affiliate.

14. NON-TRANSFERABILITY OF AWARDS

14.1 Each Award Agreement will provide that the Award granted thereunder is not transferable or assignable and may be exercised or settled, as the case may be, only by the Participant or, in the event of the death of the Participant or the appointment of a committee or duly appointed attorney of the Participant or of the estate of the Participant on the grounds that the Participant is incapable, by reason of physical or mental infirmity, of managing their affairs, the Participant's legal representative or such committee or attorney, as the case may be (the "Legal Representative").

15. REPRESENTATIONS AND COVENANTS OF PARTICIPANTS

15.1 Each Award Agreement will contain representations and covenants of the Participant that:

- (f) the Participant is a director, officer, employee, or Consultant of the Corporation or an Affiliate or a person otherwise approved as an “Eligible Person” under this Plan by the Compensation Committee;
- (g) the Participant has not been induced to enter into such Award Agreement by the expectation of employment or continued employment with the Corporation or an Affiliate;
- (h) the Participant is aware that the grant of the Award and the issuance by the Corporation of Common Shares thereunder are exempt from the obligation under applicable securities laws to file a prospectus or other registration document qualifying the distribution of the Awards or the Common Shares to be distributed thereunder under any applicable securities laws;
- (i) upon each exercise or settlement of an Award, the Participant, or the Legal Representative of the Participant, as the case may be, will, if requested by the Corporation, represent and agree in writing that the person is, or the Participant was, a director, officer, employee or Consultant of the Corporation or an Affiliate or a person otherwise approved as an “Eligible Person” under this Plan by the Compensation Committee and has not been induced to purchase the Common Shares by expectation of employment or continued employment with the Corporation or an Affiliate, and that such person is not aware of any commission or other remuneration having been paid or given to others in respect of the trade in the Common Shares; and
- (j) if the Participant or the Legal Representative of the Participant exercises or settles the Award, the Participant or the Legal Representative, as the case may be, will prior to and upon any sale or disposition of any Common Shares received pursuant to the exercise or settlement of the Award, comply with all applicable securities laws and all applicable rules and regulations of all regulatory authorities to which the Corporation is subject, including the Stock Exchange, and will not offer, sell or deliver any of such Common Shares, directly or indirectly, in the United States or to any citizen or resident of, or any Corporation, partnership or other entity created or organized in or under the laws of, the United States, or any estate or trust the income of which is subject to United States federal income taxation regardless of its source, except in compliance with the securities laws of the United States.

16. PROVISIONS RELATED TO SHARE ISSUANCES

16.1 Each Award Agreement will contain such provisions as in the opinion of the Compensation Committee are required to ensure that no Common Shares are issued on the exercise or settlement of an Award unless the Compensation Committee is satisfied that the issuance of such Common Shares will be exempt from all registration or qualification requirements of applicable securities laws and will be permitted under the applicable rules and regulations of all regulatory authorities to which the Corporation is subject, including the Stock Exchange. In particular, if required by any regulatory authority to which the Corporation is

subject, including the Stock Exchange, an Award Agreement may provide that shareholder approval to the grant of an Award must be obtained prior to the exercise or settlement of the Award or to the amendment of the Award Agreement.

17. WITHHOLDING TAX

17.1 The Participant will be solely responsible for paying any applicable withholding taxes arising from the grant, vesting, exercise or settlement of any Award and payment is to be made in a manner satisfactory to the Corporation. Notwithstanding the foregoing, the Corporation will have the right to withhold from any Award or any Common Shares issuable pursuant to an Award or from any cash amounts otherwise due or to become due from the Corporation to the Participant, an amount equal to any such taxes.

18. EXERCISE AND SETTLEMENT OF AWARDS DURING BLACKOUT PERIODS

18.1 Adjustment for Exercise of Awards during Blackout Periods. Where the expiry date of an Option or Tandem SAR occurs during a Blackout Period or within ten Non Blackout Trading Days following the end of a Blackout Period, the expiry date for such Option or Tandem SAR shall be the date which is ten Non-Blackout Trading Days following the end of such Blackout Period.

18.2 Extension for Settlement during Blackout Periods. Where the date for the settlement of Restricted Stock Units or the payment of a Settlement Amount occurs during a Blackout Period, the Corporation shall make such settlement or pay such Settlement Amount to the holder of such an Award within ten Non Blackout Trading Days following the end of such Blackout Period.

19. SUSPENSION, AMENDMENT OR TERMINATION OF PLAN

19.1 Suspension, Amendment or Termination of Plan. This Plan will terminate on the tenth anniversary of the Effective Date. The Compensation Committee will have the right at any time to suspend, amend or terminate this Plan and, subject to Section 19.2, may:

- (a) with approval of shareholders of the Corporation by ordinary resolution make any amendment to any Award Agreement or the Plan; and
- (b) without approval of shareholders of the Corporation make the following amendments to any Award Agreement or the Plan:
 - (i) amendments of a clerical nature, including but not limited to the correction of grammatical or typographical errors or clarification of terms;
 - (ii) amendments to reflect any requirements of any regulatory authorities to which the Corporation is subject, including the Stock Exchange;
 - (iii) subject to the terms and conditions of the Plan, amendments to vesting provisions of Award Agreements;

- (iv) extend the term of Options and Tandem SARs held by non-Insiders of the Corporation;
- (v) reduce the Exercise Price per Common Share under any Option held by non-Insiders of the Corporation or replace such Option with a lower Exercise Price per Common Share under such replacement Option; and
- (vi) amendments which provide cashless exercise features to an Option that require the full deduction of the number of underlying Common Shares from the total number of Common Shares subject to the Plan.

Notwithstanding the foregoing, all procedures and necessary approvals required under the applicable rules and regulations of all regulatory authorities to which the Corporation is subject shall be complied with and obtained in connection with any such suspension, termination or amendment to the Plan or amendments to any Award Agreement.

19.2 Limitations. In exercising its rights pursuant to Section 19.1, the Compensation Committee will not have the right to:

- (a) without the prior approval of shareholders and except as permitted pursuant to Article 20, (i) extend the term of an Option or Tandem SAR held by an Insider of the Corporation; or (ii) reduce the Exercise Price per Common Share under any Option held by an Insider of the Corporation; (iii) cancel any Option held by an Insider and replace such Option within three months; or (iv) increase the number of Common Shares or value subject to the limitations contained in Section 6.2;
- (b) affect in a manner that is adverse or prejudicial to, or that impairs, the benefits and rights of any Participant under any Award previously granted under this Plan (except as permitted pursuant to Article 20 and except for the purpose of complying with applicable securities laws or the bylaws, rules and regulations of any regulatory authority to which the Corporation is subject, including the Stock Exchange);
- (c) decrease the number of Common Shares which may be purchased pursuant to any Option (except as permitted pursuant to Article 20) without the consent of such Participant;
- (d) set the Exercise Price of any Option below the Fair Market Value of such Option on the date of grant;
- (e) increase the Exercise Price at which Common Shares may be purchased pursuant to any Option (except as permitted pursuant to Article 20) without the consent of such Participant;
- (f) extend the term of any Option beyond a period of ten years or the latest date permitted under the applicable rules and regulations of all regulatory authorities to which the Corporation is subject, including the Stock Exchange;

- (g) grant any Award if this Plan is suspended or has been terminated; or
- (h) change or adjust any outstanding U.S. Qualified Incentive Stock Option without the consent of the Participant if such change or adjustment would constitute a “modification” that would cause such U.S. Qualified Incentive Stock Option to fail to continue to qualify as a U.S. Qualified Incentive Stock Option.

19.3 Powers of Compensation Committee Survive Termination. The full powers of the Compensation Committee as provided for in this Plan will survive the termination of this Plan until all Awards have been exercised or settled in full or have otherwise expired.

20. ADJUSTMENTS

20.1 Adjustments. Appropriate adjustments in the number of Common Shares subject to this Plan, as regards Awards granted or to be granted, in the Option Exercise Price of an Option, in the number of Common Shares to be issued or cash payments to be made in respect of the settlement of any Award, or any other matter of will be conclusively determined by the Compensation Committee to give effect to adjustments in the number of Common Shares resulting from subdivisions, consolidations, substitutions, or reclassifications of the Common Shares, the payment of stock dividends by the Corporation (other than dividends in the ordinary course) or other relevant changes in the capital of the Corporation or from a proposed merger, amalgamation or other corporate arrangement or reorganization involving the exchange or replacement of Common Shares of the Corporation for those in another corporation. Any dispute that arises at any time with respect to any such adjustment will be conclusively determined by the Compensation Committee, and any such determination will be binding on the Corporation, the Participant and all other affected parties.

20.2 Merger and Acquisition Transaction. In the event of a Merger and Acquisition Transaction or proposed Merger and Acquisition Transaction, the Compensation Committee, at its option, may do any of the following:

- (a) the Compensation Committee may, in a fair and equitable manner, determine the manner in which all unexercised Options or unsettled Awards granted under this Plan will be treated including, without limitation, requiring the acceleration of the time for the exercise or settlement of Awards by the Participants, the time for the fulfilment of any conditions or restrictions on such exercise or settlement, and the time for the expiry of such rights; or
- (b) the Compensation Committee or any corporation which is or would be the successor to the Corporation or which may issue securities in exchange for Common Shares upon the Merger and Acquisition Transaction becoming effective may offer any Participant the opportunity to obtain a new or replacement awards over any securities into which the Common Shares are changed or are convertible or exchangeable, on a basis proportionate to the number of Common Shares under Award, including Exercise Price, as applicable (and otherwise substantially upon the terms of the Award being replaced, or upon terms no less favourable to the Participant) including, without limitation, the periods during which the Award

may be exercised or settled and expiry dates of such Awards; and in such event, the Participant shall, if he accepts such offer, be deemed to have released his Award over the Common Shares and such Award shall be deemed to have lapsed and be cancelled; or

- (c) the Compensation Committee may commute for or into any other security or any other property or cash, any Award that is still capable of being exercised or settled, upon giving to the Participant to whom such Award has been granted at least 30 days written notice of its intention to commute such Award, and during such period of notice, the Award, to the extent it has not been exercised or settled, may be exercised or settled by the Participant without regard to any vesting conditions attached thereto; and on the expiry of such period of notice, the unexercised or unsettled portion of the Award shall lapse and be cancelled.

Section 20.1 and subsections (a), (b) and (c) of this Section 20.2 are intended to be permissive and may be utilized independently or successively in combination or otherwise, and nothing therein contained shall be construed as limiting or affecting the ability of the Compensation Committee to deal with Awards in any other manner. All determinations by the Compensation Committee under this Section will be final, binding and conclusive for all purposes.

20.3 Section 409A Provisions. Notwithstanding anything in the Plan or any Award Agreement to the contrary, to the extent that any amount or benefit that constitutes “deferred compensation” to a Participant under Section 409A and applicable guidance thereunder is otherwise payable or distributable to a Participant under the Plan or any Award Agreement solely by reason of the occurrence of a change in control or due to the Participant’s disability or “separation from service” (as such term is defined under Section 409A), such amount or benefit will not be payable or distributable to the Participant by reason of such circumstance unless the Compensation Committee determines in good faith that (i) the circumstances giving rise to such change in control event, disability or separation from service meet the definition of a change in control event, disability, or separation from service, as the case may be, in Section 409A(a)(2)(A) of the U.S. Internal Revenue Code and applicable proposed or final regulations, or (ii) the payment or distribution of such amount or benefit would be exempt from the application of Section 409A by reason of the short-term deferral exemption or otherwise. Any payment or distribution that otherwise would be made to a Participant who is a Specified Employee (as determined by the Compensation Committee in good faith) on account of separation from service may not be made before the date which is six months after the date of the Specified Employee’s separation from service (or if earlier, upon the Specified Employee’s death) unless the payment or distribution is exempt from the application of Section 409A by reason of the short-term deferral exemption or otherwise.

20.4 Limitations. The grant of Awards under this Plan will in no way affect the Corporation’s right to adjust, reclassify, reorganize or otherwise change its capital or business structure or to merge, amalgamate, reorganize, consolidate, dissolve, liquidate or sell or transfer all or any part of its business or assets or engage in any like transaction.

20.5 No Fractional Shares. No adjustment or substitution provided for in this Article 20 will require the Corporation to issue a fractional share in respect of any Award and the total substitution or adjustment with respect to each Award will be limited accordingly.

21. GENERAL

21.1 No Rights as Shareholder. Nothing herein or otherwise shall be construed so as to confer on any Participant any rights as a shareholder of the Corporation with respect to any Common Shares reserved for the purpose of any Award.

21.2 No Effect on Employment. Nothing in this Plan or any Award Agreement will confer upon any Participant any right to continue in the employ of or under contract with the Corporation or an Affiliate or affect in any way the right of the Corporation or any such Affiliate to terminate his or her employment at any time or terminate his or her consulting contract; nor will anything in this Plan or any Award Agreement be deemed or construed to constitute an agreement, or an expression of intent, on the part of the Corporation or any such Affiliate to extend the employment of any Participant beyond the time that he or she would normally be retired pursuant to the provisions of any present or future retirement plan of the Corporation or an Affiliate or any present or future retirement policy of the Corporation or an Affiliate, or beyond the time at which he or she would otherwise be retired pursuant to the provisions of any contract of employment with the Corporation or an Affiliate. Neither any period of notice nor any payment in lieu thereof upon termination of employment shall be considered as extending the period of employment for the purposes of the Plan.

21.3 No Fettering of Directors' Discretion. Nothing contained in this Plan will restrict or limit or be deemed to restrict or limit the right or power of the Board of Directors in connection with any allotment and issuance of Common Shares which are not allotted and issued under this Plan including, without limitation, with respect to other compensation arrangements.

21.4 Applicable Law. The Plan and any Award Agreement granted hereunder will be governed, construed and administered in accordance with the laws of the Province of British Columbia and the laws of Canada applicable therein.

21.5 Interpretation. References herein to any gender include all genders and to the plural includes the singular and vice versa. The division of this Plan into Sections and Articles and the insertion of headings are for convenience of reference only and will not affect the construction or interpretation of this Plan.

21.6 Reference. This Plan may be referred to as the "Arbutus Biopharma 2011 Share Compensation Plan".

ARBUTUS BIOPHARMA CORPORATION
2016 OMNIBUS SHARE AND INCENTIVE PLAN

Section 1. Purpose

The purpose of the Plan is to promote the interests of the Company by aiding the Company in attracting and retaining employees, officers, consultants, advisors and non-employee Directors to promote the business and financial success of the Company, to offer such persons incentives to put forth maximum efforts for the success of the Company's business and to compensate such persons through various share and cash based arrangements and provide them with opportunities for share ownership in the Company, thereby aligning the interests of such persons with the Company's shareholders.

Section 2. Definitions

As used in the Plan, the following terms shall have the meanings set forth below:

- (a) **"Affiliate"** shall mean any entity that, directly or indirectly through one or more intermediaries, is controlled by the Company.
- (b) **"Award"** shall mean any Option, Stock Appreciation Right, Restricted Stock, Restricted Stock Unit, Performance Award, Dividend Equivalent or Other Stock-Based Award granted under the Plan.
- (c) **"Award Agreement"** shall mean any written agreement, contract or other instrument or document evidencing an Award granted under the Plan (including a document in an electronic medium) executed in accordance with the requirements of Section 9(b).
- (d) **"Board"** shall mean the Board of Directors of the Company.
- (e) **"Cause"** in respect of a Participant means:
 - (i) if "Cause" is defined in an employment agreement between such Participant and the Company, the meaning of "Cause" as provided for in such employment agreement; and
 - (ii) if Cause is not so defined, a circumstance that would entitle the Company to terminate the employment or services of such Participant at law without notice or compensation as a result of such termination;
- (f) **"Change in Control"** means, unless specified otherwise in an existing agreement with a Participant:

- (i) the sale of all or substantially all of the assets of the Company to a non-Affiliate;
- (ii) a merger, reorganization, or consolidation involving the Company in which the voting securities outstanding immediately prior to the transaction represent or are converted into or exchanged for securities of the surviving or resulting entity that, immediately upon completion of the transaction, represent less than 50% of the outstanding voting power of the surviving or resulting entity;
- (iii) the acquisition of all or a majority of the outstanding voting securities of the Company in a single transaction or a series of related transactions by a person or group of persons;

provided however, that a Change in Control shall not be deemed to have occurred if such Change in Control results solely from the issuance, in connection with a bona fide financing or series of financings by the Company or an Affiliate of the Company, of voting securities of the Company or an Affiliate of the Company or any rights to acquire voting securities of the Company or an Affiliate of the Company which are convertible into voting securities, or if the Company effects a transaction solely to change the Company's domicile.

- (g) "**Committee**" shall mean the Compensation Committee of the Board or such other committee designated by the Board to administer the Plan. The Committee shall be comprised of not less than such number of Directors as shall be required to permit Awards granted under the Plan to qualify under Rule 16b-3, and each member of the Committee shall be a "non-employee director" within the meaning of Rule 16b-3 and an "outside director" within the meaning of Section 162(m).
- (h) "**Company**" shall mean Arbutus Biopharma Corporation and any successor corporation.
- (i) "**Director**" shall mean a member of the Board.
- (j) "**Dividend Equivalent**" shall mean any right granted under Section 6(e) of the Plan.
- (k) "**Effective Date**" shall have the meaning ascribed thereto in Section 11 of the Plan;
- (l) "**Eligible Person**" shall mean any employee, officer, non-employee Director, consultant, independent contractor or advisor providing services to the Company or any Affiliate, or any such person to whom an offer of employment or engagement with the Company or any Affiliate is extended.

- (m) “**Fair Market Value**” with respect to a Share as of any date shall mean (a) if the Share is listed on any established stock exchange, the price of one Share at the close of the regular trading session of such market or exchange on such date, as reported by The Wall Street Journal or a comparable reporting service, or, if no sale of Shares shall have occurred on such date, on the next preceding date on which there was a sale of Shares; (b) if the Shares are not so listed on any established stock exchange, the average of the closing “bid” and “asked” prices quoted by the OTC Bulletin Board, the National Quotation Bureau, or any comparable reporting service on such date or, if there are no quoted “bid” and “asked” prices on such date, on the next preceding date for which there are such quotes for a Share; or (c) if the Shares are not publicly traded as of such date, the per share value of a Share, as determined by the Board, or any duly authorized Committee of the Board, in its sole discretion, by applying principles of valuation with respect thereto.
- (n) “**Full Value Award**” shall mean any Award other than an Option, Stock Appreciation Right or similar Award, the value of which is based solely on an increase in the value of the Shares after the date of grant of such Award.
- (o) “**Good Reason**” in respect of a Participant means:
 - (i) if “Good Reason” is defined in an employment agreement between such Participant and the Company, the meaning of “Good Reason” as provided for in such employment agreement; and
 - (ii) if Good Reason is not so defined, a circumstance that would allow a Participant to claim “constructive dismissal” at law, including a material diminution in the Participant’s title, responsibilities, reporting relationship or compensation.
- (p) “**Non-Qualified Stock Option**” shall mean an option granted under Section 6(a) of the Plan that is not intended to be a U.S. Incentive Stock Option.
- (q) “**Option**” shall mean a U.S. Incentive Stock Option or a Non-Qualified Stock Option to purchase shares of the Company.
- (r) “**Other Stock-Based Award**” shall mean any right granted under Section 6(f) of the Plan.
- (s) “**Participant**” shall mean an Eligible Person designated to be granted an Award under the Plan.
- (t) “**Performance Award**” shall mean any right granted under Section 6(d) of the Plan.

- (u) **“Performance Goal”** with respect to a Performance Award shall mean one or more of the following performance goals, either individually, alternatively or in any combination, applied on a corporate, subsidiary, division, business unit or line of business basis:
- economic value added (EVA);
 - sales or revenue;
 - income (including without limitation operating income, pre tax income and income attributable to the Company);
 - cash flow (including without limitation free cash flow and cash flow from operating, investing or financing activities or any combination thereof);
 - earnings (including without limitation earnings before or after taxes, earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation and amortization (EBITDA) and earnings (whether before or after taxes), EBIT or EBITDA as a percentage of net sales;
 - returns (including one or more of return on actual or pro forma assets, net assets, equity, investment, revenue, sales, capital and net capital employed, total shareholder return (TSR) and total business return (TBR));
 - implementation, completion or achievement of critical corporate objectives or projects, including specified milestones in the discovery, development, commercialization and/or manufacturing of one or more products or product candidates; and
 - share price (minimum \$20.00 per Share).

Each such Performance Goal may be based (i) solely by reference to absolute results of individual performance or organizational performance at various levels (e.g., the Company’s performance or the performance of a subsidiary, division, business segment or business unit of the Company) or (ii) upon organizational performance relative to the comparable performance of other companies selected by the Committee. To the extent consistent with Section 162(m), the Committee may, when it establishes performance criteria, also provide for the exclusion of charges related to an event or occurrence which the Committee determines should appropriately be excluded, including (X) asset write downs, litigation or claim judgments or settlements, reorganizations, the impact of acquisitions and divestitures, restructurings, discontinued operations, extraordinary items, and other unusual or non recurring charges, (Y) foreign exchange gains and losses or an event either not directly related to the operations of the Company or not within the reasonable control of the Company’s management, or (Z) the cumulative effects of tax or accounting changes in accordance with U.S. generally accepted

accounting principles (or other accounting principles which may then be in effect). To the extent that Section 162(m) or applicable tax and/or securities laws change to permit Committee discretion to alter the governing performance measures without disclosing to shareholders and obtaining shareholder approval of such changes and without thereby exposing the Company to potentially adverse tax or other legal consequences, the Committee shall have the sole discretion to make such changes without obtaining shareholder approval.

- (v) “**Person**” shall mean any individual or entity, including a corporation, partnership, limited liability company, association, joint venture or trust.
- (w) “**Plan**” shall mean the Arbutus 2016 Omnibus Share and Incentive Plan, as amended from time to time.
- (x) “**Restricted Stock**” shall mean any Share granted under Section 6(c) of the Plan.
- (y) “**Restricted Stock Unit**” shall mean any unit granted under Section 6(c) of the Plan evidencing the right to receive a Share (or a cash payment equal to the Fair Market Value of a Share) at some future date.
- (z) “**Rule 16b-3**” shall mean Rule 16b-3 promulgated by the Securities and Exchange Commission under the U.S. Exchange Act, as amended, or any successor rule or regulation.
- (aa) “**Section 162(m)**” shall mean Section 162(m) of the U.S. Code, or any successor provision, and the applicable Treasury Regulations promulgated thereunder.
- (bb) “**Section 409A**” shall mean Section 409A of the U.S. Code, or any successor provision, and applicable Treasury Regulations and other applicable guidance thereunder.
- (cc) “**Share**” or “**Shares**” shall mean common shares without par value in the capital of the Company (or such other securities or property as may become subject to Awards pursuant to an adjustment made under Section 4(c) of the Plan).
- (dd) “**Specified Employee**” shall mean a specified employee as defined in Section 409A(a)(2)(B) of the U.S. Code or applicable proposed or final regulations under Section 409A, determined in accordance with procedures established by the Company and applied uniformly with respect to all plans maintained by the Company that are subject to Section 409A.
- (ee) “**Stock Appreciation Right**” shall mean any right granted under Section 4(b) of the Plan.
- (ff) “**U.S. Code**” shall mean the Internal Revenue Code of 1986 of the United States, as amended from time to time, and any regulations promulgated thereunder.

- (gg) “**U.S. Exchange Act**” shall mean the *Securities Exchange Act* of 1934 of the United States, as amended.
- (hh) “**U.S. Incentive Stock Option**” shall mean an option granted under Section 6(a) of the Plan that is intended to meet the requirements of Section 422 of the U.S. Code or any successor provision.

Section 3. Administration

- (a) *Power and Authority of the Committee.* The Plan shall be administered by the Committee. Subject to the express provisions of the Plan and to applicable law, the Committee shall have full power and authority to: (i) designate Participants; (ii) determine the type or types of Awards to be granted to each Participant under the Plan; (iii) determine the number of Shares to be covered by (or the method by which payments or other rights are to be calculated in connection with) each Award; (iv) determine the terms and conditions of any Award or Award Agreement, including any terms relating to the forfeiture of any Award and the forfeiture, recapture or disgorgement of any cash, Shares or other amounts payable with respect to any Award; (v) amend the terms and conditions of any Award or Award Agreement, subject to the limitations under Section 7; (vi) accelerate the exercisability of any Award or the lapse of any restrictions relating to any Award, subject to the limitations in Section 7, (vii) determine whether, to what extent and under what circumstances Awards may be exercised in cash, Shares, other securities, other Awards or other property (excluding promissory notes), or canceled, forfeited or suspended, subject to the limitations in Section 7; (viii) determine whether, to what extent and under what circumstances amounts payable with respect to an Award under the Plan shall be deferred either automatically or at the election of the holder thereof or the Committee, subject to the requirements of Section 409A; (ix) interpret and administer the Plan and any instrument or agreement, including an Award Agreement, relating to the Plan; (x) establish, amend, suspend or waive such rules and regulations and appoint such agents as it shall deem appropriate for the proper administration of the Plan; (xi) make any other determination and take any other action that the Committee deems necessary or desirable for the administration of the Plan; and (xii) adopt such modifications, rules, procedures and subplans as may be necessary or desirable to comply with provisions of the laws of non-U.S. jurisdictions in which the Company or an Affiliate may operate, including, without limitation, establishing any special rules for Affiliates, Eligible Persons or Participants located in any particular country, in order to meet the objectives of the Plan and to ensure the viability of the intended benefits of Awards granted to Participants located in such non-United States jurisdictions. Unless otherwise expressly provided in the Plan, all designations, determinations, interpretations and other decisions under or with respect to the Plan or any Award or Award Agreement shall be within the sole discretion of the Committee, may be made at any time and

shall be final, conclusive and binding upon any Participant, any holder or beneficiary of any Award or Award Agreement, and any employee of the Company or any Affiliate.

- (b) Delegation. The Committee may delegate to one or more officers or Directors of the Company, subject to such terms, conditions and limitations as the Committee may establish in its sole discretion, the authority to grant Awards; *provided, however*, that the Committee shall not delegate such authority (i) with regard to grants of Awards to be made to officers of the Company or any Affiliate who are subject to Section 16 of the U.S. Exchange Act or (ii) in such a manner as would cause the Plan not to comply with the requirements of Section 162(m), applicable exchange rules or applicable corporate law.
- (c) Power and Authority of the Board. Notwithstanding anything to the contrary contained herein, (i) the Board may, at any time and from time to time, without any further action of the Committee, exercise the powers and duties of the Committee under the Plan, unless the exercise of such powers and duties by the Board would cause the Plan not to comply with the requirements of Rule 16b-3 or Section 162(m); and (ii) only the Committee (or another committee of the Board comprised of directors who qualify as independent directors within the meaning of the independence rules of any applicable securities exchange where the Shares are then listed) may grant Awards to Directors who are not also employees of the Company or an Affiliate
- (d) Indemnification. To the full extent permitted by law, (i) no member of the Board, the Committee or any person to whom the Committee delegates authority under the Plan shall be liable for any action or determination taken or made in good faith with respect to the Plan or any Award made under the Plan, and (ii) the members of the Board, the Committee and each person to whom the Committee delegates authority under the Plan shall be entitled to indemnification by the Company with regard to such actions and determinations. The provisions of this paragraph shall be in addition to such other rights of indemnification as a member of the Board, the Committee or any other person may have by virtue of such person's position with the Company.

Section 4. Shares Available for Awards

- (a) Shares Available. Subject to adjustment as provided in Section 4(c) of the Plan, the aggregate number of Shares that may be issued under all Awards under the Plan shall equal 5,000,000. The aggregate number of Shares that may be issued under all Awards under the Plan shall be reduced by Shares subject to Awards issued under the Plan in accordance with the Share counting rules described in Section 4(b) below.

- (b) Counting Shares. For purposes of this Section 4, except as set forth in this Section 4(b), if an Award entitles the holder thereof to receive or purchase Shares, the number of Shares covered by such Award or to which such Award relates shall be counted on the date of grant of such Award against the aggregate number of Shares available for granting Awards under the Plan.
- (i) Shares Added Back to Reserve. Subject to the limitations in (ii) below, if any Shares covered by an Award or to which an Award relates are not purchased or are forfeited or are reacquired by the Company (including any Awards that are settled in cash), or if an Award otherwise terminates or is cancelled without delivery of any Shares, then the number of Shares counted against the aggregate number of Shares available under the Plan with respect to such Award, to the extent of any such forfeiture, reacquisition by the Company, termination or cancellation, shall again be available for granting Awards under the Plan.
- (ii) Shares Not Added Back to Reserve. Notwithstanding anything to the contrary in (i) above, the following Shares will not again become available for issuance under the Plan: (A) any Shares which would have been issued upon any exercise of an Option but for the fact that the exercise price was paid by a “net exercise” pursuant to Section 6(a)(iii)(B) or any Shares tendered in payment of the exercise price of an Option; (B) any Shares withheld by the Company or Shares tendered to satisfy any tax withholding obligation with respect to an Award under the Plan; (C) Shares covered by a share-settled Stock Appreciation Right issued under the Plan that are not issued in connection with settlement in Shares upon exercise; or (D) Shares that are repurchased by the Company using Option exercise proceeds.
- (iii) Cash-Only Awards. Awards that do not entitle the holder thereof to receive or purchase Shares shall not be counted against the aggregate number of Shares available for Awards under the Plan.
- (iv) Substitute Awards Relating to Acquired Entities. Shares issued under Awards granted in substitution for awards previously granted by an entity that is acquired by or merged with the Company or an Affiliate shall not be counted against the aggregate number of Shares available for Awards under the Plan.
- (c) Adjustments. In the event that any dividend (other than a regular cash dividend) or other distribution (whether in the form of cash, Shares, other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of Shares or other securities of the Company, issuance of warrants or other rights to purchase Shares or other securities of the Company or other similar corporate transaction or event affects the Shares such that an adjustment is necessary in

order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, then the Committee shall, in such manner as it may deem equitable, adjust any or all of (i) the number and type of Shares (or other securities or other property) that thereafter may be made the subject of Awards, (ii) the number and type of Shares (or other securities or other property) subject to outstanding Awards, (iii) the purchase price or exercise price with respect to any Award and (iv) the limitations contained in Section 4(d)(i) below; *provided, however*, that the number of Shares covered by any Award or to which such Award relates shall always be a whole number. Such adjustment shall be made by the Committee or the Board, whose determination in that respect shall be final, binding and conclusive.

- (d) Award Limitations Under the Plan. The limitation contained in this Section 4(d) shall apply only with respect to any Award or Awards granted under this Plan, and limitations on awards granted under any other shareholder-approved incentive plan maintained by the Company will be governed solely by the terms of such other plan.
- (iv) Section 162(m) Limitation for Awards Denominated in Shares. No Eligible Person may be granted any Stock Options, Stock Appreciation Rights or Performance Awards denominated in Shares, for more than 2,500,000 Shares (subject to adjustment as provided for in Section 4(c) of the Plan), in the aggregate in any calendar year.
- (v) Section 162(m) Limitation for Performance Awards Denominated in Cash. The maximum amount payable pursuant to all Performance Awards denominated in cash to any Eligible Person in the aggregate in any calendar year shall be \$5,000,000 in value. This limitation contained in this Section 4(d)(ii) does not apply to any Award or Awards subject to the limitation contained in Section 4(d)(i).
- (vi) Limitation Awards Granted to Non-Employee Directors. No Director who is not also an employee of the Company or an Affiliate may be granted any Award or Awards denominated in Shares that exceed in the aggregate \$500,000 (such value computed as of the date of grant in accordance with applicable financial accounting rules) in any calendar year. The foregoing limit shall not apply to any Award made pursuant to any election by the Director to receive an Award in lieu of all or a portion of annual and committee retainers and annual meeting fees.

Section 5. Eligibility

Any Eligible Person shall be eligible to be designated as a Participant. In determining which Eligible Persons shall receive an Award and the terms of any Award, the Committee may take into account the nature of the services rendered by the respective Eligible Persons, their present and potential

contributions to the success of the Company or such other factors as the Committee, in its discretion, shall deem relevant. Notwithstanding the foregoing, a U.S. Incentive Stock Option may only be granted to full-time or part-time employees (which term as used herein includes, without limitation, officers and Directors who are also employees), and a U.S. Incentive Stock Option shall not be granted to an employee of an Affiliate unless such Affiliate is also a “subsidiary corporation” of the Company within the meaning of Section 424(f) of the U.S. Code or any successor provision.

Section 6.Awards

- (a) Options. The Committee is hereby authorized to grant Options to Eligible Persons with the following terms and conditions and with such additional terms and conditions not inconsistent with the provisions of the Plan as the Committee shall determine:
 - (iii) Exercise Price. The purchase price per Share purchasable under an Option shall be determined by the Committee and shall not be less than 100% of the Fair Market Value of a Share on the date of grant of such Option; *provided, however*, that the Committee may designate a purchase price below Fair Market Value on the date of grant if the Option is granted in substitution for a stock option previously granted by an entity that is acquired by or merged with the Company or an Affiliate.
 - (iv) Option Term. The term of each Option shall be fixed by the Committee at the date of grant but shall not be longer than 10 years from the date of grant. Notwithstanding the foregoing, the Committee may provide in the terms of an Option (either at grant or by subsequent modification) that, to the extent consistent with Section 409A, in the event that on the last business day of the term of an Option (other than a U.S. Incentive Stock Option) (i) the exercise of the Option is prohibited by applicable law or (ii) Shares may not be purchased or sold by certain employees or directors of the Company due to the “black-out period” of a Company policy or a “lock-up” agreement undertaken in connection with an issuance of securities by the Company, the term of the Option shall be extended for a period of not more than thirty (30) days following the end of the legal prohibition, black-out period or lock-up agreement.
 - (v) Time and Method of Exercise. The Committee shall determine the time or times at which an Option may be exercised in whole or in part and the method or methods by which, and the form or forms, including, but not limited to, cash, Shares (actually or by attestation), other securities, other Awards or other property, or any combination thereof, having a Fair Market Value on the exercise date equal to the applicable exercise price, in which, payment of the exercise price with respect thereto may be made or deemed to have been made.

- (A) Promissory Notes. Notwithstanding the foregoing, the Committee may not accept a promissory note as consideration.
 - (B) Net Exercises. The Committee may, in its discretion, permit an Option to be exercised by delivering to the Participant a number of Shares having an aggregate Fair Market Value (determined as of the date of exercise) equal to the excess, if positive, of the Fair Market Value of the Shares underlying the Option being exercised on the date of exercise, over the exercise price of the Option for such Shares.
- (vi) U.S. Incentive Stock Options. Notwithstanding anything in the Plan to the contrary, the following additional provisions shall apply to the grant of stock options which are intended to qualify as U.S. Incentive Stock Options:
- (A) The aggregate number of Shares that may be issued under all U.S. Incentive Stock Options under the Plan shall be 5,000,000 Shares.
 - (B) The Committee will not grant U.S. Incentive Stock Options in which the aggregate Fair Market Value (determined as of the time the Option is granted) of the Shares with respect to which U.S. Incentive Stock Options are exercisable for the first time by any Participant during any calendar year (under this Plan and all other plans of the Company and its Affiliates) shall exceed \$100,000.
 - (C) All U.S. Incentive Stock Options must be granted within ten years from the earlier of the date on which this Plan was adopted by the Board or the date this Plan was approved by the shareholders of the Company.
 - (D) Unless sooner exercised, all U.S. Incentive Stock Options shall expire and no longer be exercisable no later than 10 years after the date of grant; *provided, however*, that in the case of a grant of a U.S. Incentive Stock Option to a Participant who, at the time such Option is granted, owns (within the meaning of Section 422 of the U.S. Code) shares possessing more than 10% of the total combined voting power of all classes of shares of the Company or of its Affiliates, such U.S. Incentive Stock Option shall expire and no longer be exercisable no later than five years from the date of grant.
 - (E) The purchase price per Share for a U.S. Incentive Stock Option shall be not less than 100% of the Fair Market Value of a Share on the date of grant of the U.S. Incentive Stock Option; *provided, however*, that, in the case of the grant of a U.S. Incentive Stock

Option to a Participant who, at the time such Option is granted, owns (within the meaning of Section 422 of the U.S. Code) shares possessing more than 10% of the total combined voting power of all classes of shares of the Company or of its Affiliates, the purchase price per Share purchasable under a U.S. Stock Option shall be not less than 110% of the Fair Market Value of a Share on the date of grant of the U.S. Incentive Stock Option.

(F) Any U.S. Incentive Stock Option authorized under the Plan shall contain such other provisions as the Committee shall deem advisable, but shall in all events be consistent with and contain all provisions required in order to qualify the Option as a U.S. Stock Option.

- (b) Stock Appreciation Rights. The Committee is hereby authorized to grant Stock Appreciation Rights to Eligible Persons subject to the terms of the Plan and any applicable Award Agreement. A Stock Appreciation Right granted under the Plan shall confer on the holder thereof a right to receive upon exercise thereof the excess of (i) the Fair Market Value of one Share on the date of exercise over (ii) the grant price of the Stock Appreciation Right as specified by the Committee, which price shall not be less than 100% of the Fair Market Value of one Share on the date of grant of the Stock Appreciation Right; *provided, however*, that the Committee may designate a grant price below Fair Market Value on the date of grant if the Stock Appreciation Right is granted in substitution for a stock appreciation right previously granted by an entity that is acquired by or merged with the Company or an Affiliate. Subject to the terms of the Plan and any applicable Award Agreement, the grant price, term, methods of exercise, dates of exercise, methods of settlement and any other terms and conditions of any Stock Appreciation Right shall be as determined by the Committee (except that the term of each Stock Appreciation Right shall be subject to the same limitations in Section 6(a)(ii) applicable to Options). The Committee may impose such conditions or restrictions on the exercise of any Stock Appreciation Right as it may deem appropriate.
- (c) Restricted Stock and Restricted Stock Units. The Committee is hereby authorized to grant an Award of Restricted Stock and Restricted Stock Units to Eligible Persons with the following terms and conditions and with such additional terms and conditions not inconsistent with the provisions of the Plan as the Committee shall determine:
- (i) Restrictions. Shares of Restricted Stock and Restricted Stock Units shall be subject to such restrictions as the Committee may impose (including, without limitation, any limitation on the right to vote a Share of Restricted Stock or the right to receive any dividend or other right or property with respect thereto), which restrictions may lapse separately or in combination

at such time or times, in such installments or otherwise as the Committee may deem appropriate. Notwithstanding the foregoing, rights to dividend or Dividend Equivalent payments shall be subject to the limitations described in Section 6(e).

- (ii) Issuance and Delivery of Shares. Any Restricted Stock granted under the Plan shall be issued at the time such Awards are granted and may be evidenced in such manner as the Committee may deem appropriate, including book-entry registration or issuance of a share certificate or certificates, which certificate or certificates shall be held by the Company or held in nominee name by the share transfer agent or brokerage service selected by the Company to provide such services for the Plan. Such certificate or certificates shall be registered in the name of the Participant and shall bear an appropriate legend referring to the restrictions applicable to such Restricted Stock. Shares representing Restricted Stock that are no longer subject to restrictions shall be delivered (including by updating the book-entry registration) to the Participant promptly after the applicable restrictions lapse or are waived. In the case of Restricted Stock Units, no Shares shall be issued at the time such Awards are granted. Upon the lapse or waiver of restrictions and the restricted period relating to Restricted Stock Units evidencing the right to receive Shares, such Shares shall be issued and delivered to the holder of the Restricted Stock Units.
- (iii) Forfeiture. Except as otherwise determined by the Committee or as provided in an Award Agreement, upon a Participant's termination of employment or resignation or removal as a Director (in either case, as determined under criteria established by the Committee) during the applicable restriction period, all Shares of Restricted Stock and all Restricted Stock Units held by such Participant at such time shall be forfeited and reacquired by the Company; *provided, however*, that the Committee may waive in whole or in part any or all remaining restrictions with respect to Shares of Restricted Stock or Restricted Stock Units.
- (d) Performance Awards. The Committee is hereby authorized to grant to Eligible Persons Performance Awards that are intended to be "qualified performance-based compensation" within the meaning of Section 162(m). A Performance Award granted under the Plan (i) may be denominated or payable in cash, Shares (including, without limitation, Restricted Stock and Restricted Stock Units), other securities, other Awards or other property and (ii) shall confer on the holder thereof the right to receive payments, in whole or in part, upon the achievement of one or more objective Performance Goals during such performance periods as the Committee shall establish. Subject to the terms of the Plan, the Performance Goals to be achieved during any performance period, the length of any performance period, the amount of any Performance Award granted, the amount of any payment or transfer to be made pursuant to any Performance Award and

any other terms and conditions of any Performance Award shall be determined by the Committee. Performance Awards shall be conditioned solely on the achievement of one or more objective Performance Goals established by the Committee within the time prescribed by Section 162(m), and shall otherwise comply with the requirements of Section 162(m), as described below; provided, however, that to the extent a Performance Goal is based on share price, such Performance Goal shall include a minimum threshold share price of at least \$20.00 per Share (subject to adjustment made under Section 4(c) of the Plan).

- (i) Timing of Designations; Duration of Performance Periods. For each Performance Award, the Committee shall, not later than 90 days after the beginning of each performance period, (i) designate all Participants for such performance period and (ii) establish the objective performance factors for each Participant for that performance period on the basis of one or more of the Performance Goals, the outcome of which is substantially uncertain at the time the Committee actually establishes the Performance Goal. The Committee shall have sole discretion to determine the applicable performance period, provided that in the case of a performance period less than 12 months, in no event shall a performance goal be considered to be pre-established if it is established after 25% of the performance period (as scheduled in good faith at the time the Performance Goal is established) has elapsed. To the extent required under Section 162(m), the terms of the objective performance factors must preclude discretion to increase an amount paid in connection with an Award, but may permit discretion to reduce such amount.
 - (ii) Certification. Following the close of each performance period and prior to payment of any amount to a Participant with respect to a Performance Award, the Committee shall certify in writing as to the attainment of all factors (including the performance factors for a Participant) upon which any payments to a Participant for that performance period are to be based.
- (e) Dividend Equivalents. The Committee is hereby authorized to grant Dividend Equivalents to Eligible Persons under which the Participant shall be entitled to receive payments (in cash, Shares, other securities, other Awards or other property as determined in the discretion of the Committee) equivalent to the amount of cash dividends paid by the Company to holders of Shares with respect to a number of Shares determined by the Committee. Subject to the terms of the Plan and any applicable Award Agreement, such Dividend Equivalents may have such terms and conditions as the Committee shall determine. Notwithstanding the foregoing, (i) the Committee may not grant Dividend Equivalents to Eligible Persons in connection with grants of Options, Stock Appreciation Rights or other Awards the value of which is based solely on an increase in the value of the Shares after the date of grant of such Award, and (ii) no dividend or Dividend Equivalent payments shall be made to a Participant with respect to any

Performance Award or other Award subject to performance-based vesting conditions prior to the date on which all conditions or restrictions relating to such Award (or portion thereof to which the dividend or Dividend Equivalent relates) have been satisfied, waived or lapsed.

- (f) Other Stock-Based Awards. The Committee is hereby authorized to grant to Eligible Persons such other Awards that are denominated or payable in, valued in whole or in part by reference to, or otherwise based on or related to, Shares (including, without limitation, securities convertible into Shares), as are deemed by the Committee to be consistent with the purpose of the Plan. The Committee shall determine the terms and conditions of such Awards, subject to the terms of the Plan and any applicable Award Agreement. No Award issued under this Section 6(f) shall contain a purchase right or an option-like exercise feature.
- (g) General.
- (i) Consideration for Awards. Awards may be granted for no cash consideration or for any cash or other consideration as may be determined by the Committee or required by applicable law.
- (ii) Awards May Be Granted Separately or Together. Awards may, in the discretion of the Committee, be granted either alone or in addition to, in tandem with or in substitution for any other Award or any award granted under any other plan of the Company or any Affiliate. Awards granted in addition to or in tandem with other Awards or in addition to or in tandem with awards granted under any other plan of the Company or any Affiliate may be granted either at the same time as or at a different time from the grant of such other Awards or awards.
- (iii) Forms of Payment under Awards. Subject to the terms of the Plan and of any applicable Award Agreement, payments or transfers to be made by the Company or an Affiliate upon the grant, exercise or payment of an Award may be made in such form or forms as the Committee shall determine (including, without limitation, cash, Shares, other securities (but excluding promissory notes), other Awards or other property or any combination thereof), and may be made in a single payment or transfer, in installments or on a deferred basis, in each case in accordance with rules and procedures established by the Committee. Such rules and procedures may include, without limitation, provisions for the payment or crediting of reasonable interest on installment or deferred payments or the grant or crediting of Dividend Equivalents with respect to installment or deferred payments.
- (iv) Limits on Transfer of Awards. Except as otherwise provided by the Committee in its discretion and subject to such additional terms and conditions as it determines, no Award (other than fully vested and

unrestricted Shares issued pursuant to any Award) and no right under any such Award shall be transferable by a Participant other than by will or by the laws of descent and distribution, and no Award (other than fully vested and unrestricted Shares issued pursuant to any Award) or right under any such Award may be pledged, alienated, attached or otherwise encumbered, and any purported pledge, alienation, attachment or encumbrance thereof shall be void and unenforceable against the Company or any Affiliate. Where the Committee does permit the transfer of an Award other than a fully vested and unrestricted Share, such permitted transfer shall be for no value and in accordance with the rules of Form S-8. The Committee may also establish procedures as it deems appropriate for a Participant to designate a person or persons, as beneficiary or beneficiaries, to exercise the rights of the Participant and receive any property distributable with respect to any Award in the event of the Participant's death.

- (v) Restrictions; Securities Exchange Listing. All Shares or other securities delivered under the Plan pursuant to any Award or the exercise thereof shall be subject to such restrictions as the Committee may deem advisable under the Plan, applicable federal or state securities laws and regulatory requirements, and the Committee may cause appropriate entries to be made with respect to, or legends to be placed on the certificates for, such Shares or other securities to reflect such restrictions. The Company shall not be required to deliver any Shares or other securities covered by an Award unless and until the requirements of any federal or state securities or other laws, rules or regulations (including the rules of any securities exchange) as may be determined by the Company to be applicable are satisfied.
- (vi) Prohibition on Option and Stock Appreciation Right Repricing. Except as provided in Section 4(c) hereof, the Committee may not, without prior approval of the Company's shareholders, seek to effect any re-pricing of any previously granted, "underwater" Option or Stock Appreciation Right by: (i) amending or modifying the terms of the Option or Stock Appreciation Right to lower the exercise price; (ii) canceling the underwater Option or Stock Appreciation Right and granting either (A) replacement Options or Stock Appreciation Rights having a lower exercise price; or (B) Restricted Stock, Restricted Stock Units, Performance Award or Other Stock-Based Award in exchange; or (iii) cancelling or repurchasing the underwater Option or Stock Appreciation Right for cash or other securities. An Option or Stock Appreciation Right will be deemed to be "underwater" at any time when the Fair Market Value of the Shares covered by such Award is less than the exercise price of the Award.
- (vii) Section 409A Provisions. Notwithstanding anything in the Plan or any Award Agreement to the contrary, to the extent that any amount or benefit

that constitutes “deferred compensation” to a Participant under Section 409A and applicable guidance thereunder is otherwise payable or distributable to a Participant under the Plan or any Award Agreement solely by reason of the occurrence of a Change in Control or due to the Participant’s disability or “separation from service” (as such term is defined under Section 409A), such amount or benefit will not be payable or distributable to the Participant by reason of such circumstance unless the Committee determines in good faith that (i) the circumstances giving rise to such Change in Control, disability or separation from service meet the definition of a Change in Control, disability, or separation from service, as the case may be, in Section 409A(a)(2)(A) of the U.S. Code and applicable proposed or final regulations, or (ii) the payment or distribution of such amount or benefit would be exempt from the application of Section 409A by reason of the short-term deferral exemption or otherwise. Any payment or distribution that otherwise would be made to a Participant who is a Specified Employee (as determined by the Committee in good faith) on account of separation from service may not be made before the date which is six months after the date of the Specified Employee’s separation from service (or if earlier, upon the Specified Employee’s death) unless the payment or distribution is exempt from the application of Section 409A by reason of the short-term deferral exemption or otherwise.

- (viii) Acceleration of Vesting or Exercisability. Award Agreements may provide that, in the event a Participant’s employment is terminated without Cause or a Participant resigns for Good Reason at any time during the 12-month period following a Change in Control, all Performance Awards shall be considered to be earned and payable based on implementation, completion or achievement of performance goals or based on target performance (either in full or pro rata based on the portion of Performance Period completed as of the date of the Change in Control), and any limitations or other restrictions shall lapse and such Performance Awards shall be immediately settled or distributed; provided, however that no Award Agreement shall accelerate the exercisability of any Award or result in the lapse of restrictions relating to any Award in connection with a Change in Control unless such acceleration occurs upon the consummation of (or effective immediately prior to the consummation of, provided that the consummation subsequently occurs) such Change in Control.

Section 7. Amendment and Termination; Corrections

- (a) *Amendments to the Plan and Awards.* The Board may from time to time amend, suspend or terminate this Plan, and the Committee may amend the terms of any previously granted Award, provided that no amendment to the terms of any previously granted Award may, (except as expressly provided in the Plan)

materially and adversely alter or impair the terms or conditions of the Award previously granted to a Participant under this Plan without the written consent of the Participant or holder thereof. Any amendment to this Plan, or to the terms of any Award previously granted, is subject to compliance with all applicable laws, rules, regulations and policies of any applicable governmental entity or securities exchange, including receipt of any required approval from the governmental entity or stock exchange. For greater certainty and without limiting the foregoing, the Board may amend, suspend, terminate or discontinue the Plan, and the Committee may amend or alter any previously granted Award, as applicable, without obtaining the approval of shareholders of the Company in order to:

- (vii) amend the eligibility for, and limitations or conditions imposed upon, participation in the Plan;
- (viii) amend any terms relating to the granting or exercise of Awards, including but not limited to terms relating to the amount and payment of the exercise price, or the vesting, expiry, assignment or adjustment of Awards, or otherwise waive any conditions of or rights of the Company under any outstanding Award, prospectively or retroactively;
- (ix) make changes that are necessary or desirable to comply with applicable laws, rules, regulations and policies of any applicable governmental entity or stock exchange (including amendments to Awards necessary or desirable to avoid any adverse tax results under Section 409A), and no action taken to comply shall be deemed to impair or otherwise adversely alter or impair the rights of any holder of an Award or beneficiary thereof; or
- (x) amend any terms relating to the administration of the Plan, including the terms of any administrative guidelines or other rules related to the Plan.

For greater certainty, prior approval of the shareholders of the Company shall be required for any amendment to the Plan or an Award that would:

- (i) require shareholder approval under the rules or regulations of the Securities and Exchange Commission, the National Association of Securities Dealers Inc. Automated Quotation System (NASDAQ) or any other securities exchange that are applicable to the Company;
- (ii) increase the number of shares authorized under the Plan as specified in Section 4(a) of the Plan;
- (iii) increase the number of shares or value subject to the limitations contained in Section 4(d) of the Plan or otherwise cause the Section 162(m)

exemption for qualified performance-based compensation to become unavailable with respect to the Plan;

- (iv) permit repricing of Options or Stock Appreciation Rights, which is currently prohibited by Section 6(g)(vi) of the Plan;
 - (v) permit the award of Options or Stock Appreciation Rights at a price less than 100% of the Fair Market Value of a Share on the date of grant of such Option or Stock Appreciation Right, contrary to the provisions of Section 6(a)(i) and Section 6(b) of the Plan; or
 - (vi) increase the maximum term permitted for Options and Stock Appreciation Rights as specified in Section 6(a)(ii) and Section 6(b).
- (b) Corporate Transactions. In the event of any reorganization, merger, consolidation, split-up, spin-off, combination, plan of arrangement, take-over bid or tender offer, repurchase or exchange of Shares or other securities of the Company or any other similar corporate transaction or event involving the Company (or the Company shall enter into a written agreement to undergo such a transaction or event), the Committee or the Board may, in its sole discretion, provide for any of the following to be effective upon the consummation of the event (or effective immediately prior to the consummation of the event, provided that the consummation of the event subsequently occurs), and no action taken under this Section 7(b) shall be deemed to impair or otherwise adversely alter the rights of any holder of an Award or beneficiary thereof:
- (i) either (A) termination of the Award, whether or not vested, in exchange for an amount of cash and/or other property, if any, equal to the amount that would have been attained upon the exercise of the Award or realization of the Participant's rights (and, for the avoidance of doubt, if, as of the date of the occurrence of the transaction or event described in this Section 7(b)(i)(A), the Committee or the Board determines in good faith that no amount would have been attained upon the exercise of the Award or realization of the Participant's rights, then the Award may be terminated by the Company without any payment) or (B) the replacement of the Award with other rights or property selected by the Committee or the Board, in its sole discretion;
 - (ii) that the Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by similar options, rights or awards covering the shares of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices;
 - (iii) that, subject to Section 6(g)(viii), the Award shall be exercisable or payable or fully vested with respect to all Shares covered thereby,

notwithstanding anything to the contrary in the applicable Award Agreement; or

- (iv) that the Award cannot vest, be exercised or become payable after a date certain in the future, which may be the effective date of the event.
- (c) Correction of Defects, Omissions and Inconsistencies. The Committee may, without prior approval of the shareholders of the Company, correct any defect, supply any omission or reconcile any inconsistency in the Plan or in any Award or Award Agreement in the manner and to the extent it shall deem desirable to implement or maintain the effectiveness of the Plan.

Section 8. Income Tax Withholding

In order to comply with all applicable federal, state, local or foreign income tax laws or regulations, the Company may take such action as it deems appropriate to ensure that all applicable federal, state, local or foreign payroll, withholding, income or other taxes, which are the sole and absolute responsibility of a Participant, are withheld or collected from such Participant. In order to assist a Participant in paying all or a portion of the applicable taxes to be withheld or collected upon exercise or receipt of (or the lapse of restrictions relating to) an Award, the Committee, in its discretion and subject to such additional terms and conditions as it may adopt, may permit the Participant to satisfy such tax obligation by (a) electing to have the Company withhold a portion of the Shares otherwise to be delivered upon exercise or receipt of (or the lapse of restrictions relating to) such Award with a Fair Market Value equal to the amount of such taxes (but only to the extent necessary to satisfy minimum statutory withholding requirements if required by ASC Topic 718 to avoid adverse accounting treatment) or (b) delivering to the Company Shares other than Shares issuable upon exercise or receipt of (or the lapse of restrictions relating to) such Award with a Fair Market Value equal to the amount of such taxes. The election, if any, must be made on or before the date that the amount of tax to be withheld is determined.

Section 9. General Provisions

- (a) Currency. Unless otherwise specified, all currency amounts are stated in United States dollars.
- (b) No Rights to Awards. No Eligible Person, Participant or other Person shall have any claim to be granted any Award under the Plan, and there is no obligation for uniformity of treatment of Eligible Persons, Participants or holders or beneficiaries of Awards under the Plan. The terms and conditions of Awards need not be the same with respect to any Participant or with respect to different Participants.
- (c) Award Agreements. No Participant shall have rights under an Award granted to such Participant unless and until an Award Agreement shall have been signed by the Participant (if requested by the Company), or until such Award Agreement is delivered and accepted through an electronic medium in accordance with

procedures established by the Company. An Award Agreement need not be signed by a representative of the Company unless required by the Committee. Each Award Agreement shall be subject to the applicable terms and conditions of the Plan and any other terms and conditions (not inconsistent with the Plan) determined by the Committee.

- (d) Plan Provisions Prevail. In the event that any provision of an Award Agreement conflicts with or is inconsistent in any respect with the terms of the Plan as set forth herein or subsequently amended, the terms of the Plan shall prevail.
- (e) No Rights of Shareholders. Except with respect to Shares issued under Awards (and subject to such conditions as the Committee may impose on such Awards pursuant to Section 6(c)(i) or Section 6(e)), neither a Participant nor the Participant's legal representative shall be, or have any of the rights and privileges of, a shareholder of the Company with respect to any Shares issuable upon the exercise or payment of any Award, in whole or in part, unless and until such Shares have been issued.
- (f) No Limit on Other Compensation Arrangements. Nothing contained in the Plan shall prevent the Company or any Affiliate from adopting or continuing in effect other or additional compensation plans or arrangements, and such plans or arrangements may be either generally applicable or applicable only in specific cases.
- (g) No Right to Employment. The grant of an Award shall not be construed as giving a Participant the right to be retained as an employee of the Company or any Affiliate, nor will it affect in any way the right of the Company or an Affiliate to terminate a Participant's employment at any time, with or without cause, in accordance with applicable law. In addition, the Company or an Affiliate may at any time dismiss a Participant from employment free from any liability or any claim under the Plan or any Award, unless otherwise expressly provided in the Plan or in any Award Agreement. Nothing in this Plan shall confer on any person any legal or equitable right against the Company or any Affiliate, directly or indirectly, or give rise to any cause of action at law or in equity against the Company or an Affiliate. Under no circumstances shall any person ceasing to be an employee of the Company or any Affiliate be entitled to any compensation for any loss of any right or benefit under the Plan which such employee might otherwise have enjoyed but for termination of employment, whether such compensation is claimed by way of damages for wrongful or unfair dismissal, breach of contract or otherwise. By participating in the Plan, each Participant shall be deemed to have accepted all the conditions of the Plan and the terms and conditions of any rules and regulations adopted by the Committee and shall be fully bound thereby.
- (h) Governing Law. The internal law, and not the law of conflicts, of the Province of British Columbia, Canada shall govern all questions concerning the validity,

construction and effect of the Plan or any Award, and any rules and regulations relating to the Plan or any Award.

- (i) Severability. If any provision of the Plan or any Award is or becomes or is deemed to be invalid, illegal or unenforceable in any jurisdiction or would disqualify the Plan or any Award under any law deemed applicable by the Committee, such provision shall be construed or deemed amended to conform to applicable laws, or if it cannot be so construed or deemed amended without, in the determination of the Committee, materially altering the purpose or intent of the Plan or the Award, such provision shall be stricken as to such jurisdiction or Award, and the remainder of the Plan or any such Award shall remain in full force and effect.
- (j) No Trust or Fund Created. Neither the Plan nor any Award shall create or be construed to create a trust or separate fund of any kind or a fiduciary relationship between the Company or any Affiliate and a Participant or any other Person. To the extent that any Person acquires a right to receive payments from the Company or any Affiliate pursuant to an Award, such right shall be no greater than the right of any unsecured general creditor of the Company or any Affiliate.
- (k) Other Benefits. No compensation or benefit awarded to or realized by any Participant under the Plan shall be included for the purpose of computing such Participant's compensation or benefits under any pension, retirement, savings, profit sharing, group insurance, disability, severance, termination pay, welfare or other benefit plan of the Company, unless required by law or otherwise provided by such other plan.
- (l) No Fractional Shares. No fractional Shares shall be issued or delivered pursuant to the Plan or any Award, and the Committee shall determine whether cash shall be paid in lieu of any fractional Share or whether such fractional Share or any rights thereto shall be canceled, terminated or otherwise eliminated.
- (m) Headings. Headings are given to the sections and subsections of the Plan solely as a convenience to facilitate reference. Such headings shall not be deemed in any way material or relevant to the construction or interpretation of the Plan or any provision thereof.

Section 10. Clawback or Recoupment

All Awards under this Plan shall be subject to any applicable law, rule or regulation or applicable stock exchange rule, including, without limitation, Section 304 of the Sarbanes-Oxley Act of 2002, Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and any applicable stock exchange listing rule adopted pursuant thereto. Awards may be granted with additional clawback or recoupment conditions or provisions as may be determined by the Committee.

Section 11. Effective Date of the Plan

The Plan was adopted by the Board on April 5 2016. The Plan shall be subject to approval by the shareholders of the Company at the annual meeting of shareholders of the Company to be held on May 19, 2016, and the Plan shall be effective as of the date of such shareholder approval (the “**Effective Date**”).

Section 12. Term of the Plan

No Award shall be granted under the Plan, and the Plan shall terminate, on the tenth anniversary of the Effective Date, or any earlier date of discontinuation or termination established pursuant to Section 7(a) of the Plan; provided, however, that no Performance Award shall be granted under the Plan after the first shareholder meeting to occur in the fifth year following the year in which shareholders approved the Performance Goals unless and until the Performance Goals or the Plan is re-approved by the shareholders. Unless otherwise expressly provided in the Plan or in an applicable Award Agreement, any Award theretofore granted may extend beyond such dates, and the authority of the Committee provided for hereunder with respect to the Plan and any Awards, and the authority of the Board to amend the Plan, shall extend beyond the termination of the Plan.

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.

AMENDED AND RESTATED
RESEARCH COLLABORATION and FUNDING AGREEMENT

This Amended and Restated Research Collaboration and Funding Agreement (this "Agreement"), is entered into by and between **Arbutus Biopharma, Inc.**, a Delaware corporation ("Company"), and the **Baruch S. Blumberg Institute**, a Pennsylvania not-for-profit company ("Institution"), as of June 5, 2016 (the "Effective Date"). Each of Company and Institution may be referred to herein individually as a "Party" and jointly as the "Parties".

WHEREAS, Institution and its employees have expertise and experience in the research of hepatitis B virus ("HBV") and liver cancer including, but not limited to, drug discovery and assay development.

WHEREAS, Company and its employees have expertise discovering, developing and commercializing therapies for liver and viral diseases.

WHEREAS, Company and Institution believe that the technologies researched and/or discovered by Institution may have the potential to be utilized or further developed by Company to achieve the goal of delivering curative therapies for HBV and liver cancer to patients.

WHEREAS, the parties hereto entered into that certain Research Collaboration and Funding Agreement dated October 29, 2014 (the "Original Agreement") pursuant to which, among other things, Institution and Company agreed that Institution would conduct certain research in the fields of HBV and liver cancer in collaboration with the Company (the "Collaboration") and that Company would fund such research in consideration for, among other things, an option to license Institution's rights in intellectual property generated by such research.

WHEREAS, the parties hereto now desire to amend and restate in its entirety the Original Agreement as set forth herein for the purposes of, among others, increasing the funding amount provided by Company to Institution for its research hereunder and expanding the Company's option to license Institution's rights in certain intellectual property to generally include inventions that result from research conducted by Institution in the Field (as defined below), regardless of the funding source.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, Company and Institution hereby agree to be legally bound as follows:

1. **Performance of the Research Collaboration.**

1.1 **Definition of Field.** As used in this Agreement, “Field” shall mean the field of hepatitis B virus including, but not limited to, detection, prevention, treatment, drug discovery and antiviral screening assay development, but specifically excluding liver cancer therapeutics, liver cancer diagnostic assay development, liver cancer biomarker research and all research involving the Natural Products Library that the Institute owns and operates.

1.2 **Research Program.** Institution and Company shall jointly determine the research to be conducted by the Institute in the Field, with funding and direction provided by the Company, pursuant to the terms of this Agreement (collectively the “Research”), where such Research shall refer to and consist of one or more individual research projects (each a “Project”).

1.3 **Project Plans.** Each Project shall be memorialized in a plan (each, a “Project Plan”), which shall specify the personnel assigned to conduct the Project, all Research Milestones (as defined below) to be achieved during the course of the Project, and a detailed budget specific to the Project. Each Project Plan shall be jointly developed by the parties and shall be agreed upon and executed by the Parties prior to the commencement of any Research under such Project. Upon execution of each Project Plan, it shall become an integral part, and shall be governed by the terms, of this Agreement. The Company shall have the on-going right to review each Project and Institution’s progress against the Research Milestones of the relevant Project Plan. Except as otherwise provided for herein, the Company may, as a part of such review, propose modifications or alterations to such Project Plan, which modification or alteration shall be consented to by the Institution in writing before becoming effective, such consent not to be unreasonably withheld or delayed. The Parties acknowledge and agree that the data produced pursuant to the Research may be used in regulatory submissions to the FDA or other governmental or regulatory authorities.

1.4 **Research Milestones.** Each Project Plan shall contain specific goals and objectives, which shall be reasonably designated by Company in consultation with Institution (“Research Milestones”). Ongoing funding of a research project or program shall be dependent upon achievement of such Research Milestones and Institution or the Principal Investigator shall provide to Company regular reports detailing the progress of the Research against such Research Milestones. In the event the Company reasonably determines that Institution has materially failed to achieve one or more of the Research Milestones of a given Project, the Chief Scientific Officer (CSO) of Company and the President of Institution (collectively, the “Executives”) shall meet and confer, as soon as possible, to determine the proper corrective steps to be taken by the Parties. In the event the Executives are unable to agree, Company’s CSO shall have the authority to reallocate funds to one or more other Projects; Company shall not, however, reduce the aggregate amount of funding to Institution provided for in Section 2.2 below.

1.5 **Principal Investigator.** A “Principal Investigator” shall be designated in each Project Plan and shall be responsible for the administration and supervision of the Research. Only members of the Principal Investigator’s lab, or other representatives of Institution or Company, may assist the Principal Investigator in conducting the Research (each, a “Lab Affiliate”). Each Principal Investigator and Lab Affiliate shall be bound by the terms set forth in

this Agreement, shall be an employee of the Institution or Company and shall have an agreement with Institution or Company (as the case may be) to assign his/her intellectual property rights to Institution or Company (as the case may be). If the designated Principal Investigator becomes unable or unwilling to continue the Research for any reason, Institution shall propose a substitute Principal Investigator with comparable qualifications. If the proposed candidate is not available or is not acceptable to Company, Company may propose a substitute Principal Investigator or reallocate funds to an alternate Project by giving written notice thereof to Institution.

1.6 Facilities. Institution shall cause Principal Investigators to perform the Research only at Institution's facility(ies) or such other facilities as may be identified in the relevant Project Plan (the "Facility(ies)"). Institution may not utilize any facility, other than the Facility(ies), for performing any portion of the Research without obtaining Company's prior written consent, such consent not to be unreasonably withheld or delayed. Institution shall maintain, or cause to be maintained, the Facility(ies), all personal property, equipment, machinery, excipients, materials, systems, intangibles, intellectual property and contract rights in use at the Facility(ies) free of defects, except for defects attributable to wear and tear consistent with the age and usage of such assets, and except for such defects as do not and will not, in the aggregate, materially impair the ability to use such assets in connection with the Research.

2. Funding.

2.1 Budget. Institution shall use its best efforts to comply with the budget set forth in each Project Plan. In the event that the relevant Principal Investigator reasonably believes that additional funds will be required to reach the goals of a Project Plan, written notice shall be provided to the Company and the parties shall meet to discuss amending such Project Plan or its budget. Company shall have final decision-making authority for any such amendment, which shall not be unreasonably withheld.

2.2 Funding and Payment. Subject to the terms and conditions of this Agreement and for the duration of the Term (as defined below), Company shall provide funding under this Agreement in the amount of \$1,100,000 per year; payments made through April 29, 2018, shall be in accordance with the following schedule, each payment being due and payable [***] of the date set forth below:

[***]

2.3 Third Party Funding.

(a) Funding of Research. Institution represents, warrants and covenants to Company that no third party, other than the United States government or an agency thereof (the "US Government") or the Commonwealth of Pennsylvania, has funded or will fund any part of the Research. In the event that the US Government has funded any portion of any research program that Company also funds, at any time, pursuant to this Agreement, Institution agrees to promptly notify Company of this fact and provide additional details as reasonably requested by the Company. Institution covenants and agrees, during the Term, not to seek US Government funding for any research within the

scope of that which is funded by the Company under any then-current Project Plan without the prior written consent of Company, such consent not to be unreasonably delayed or withheld. Institution shall be free to seek direct US Government funding (other than a sub-award) for research in the field of HBV but outside the scope of that which is funded by the Company under any then-current Project Plan (“Other Research”) provided that: (i) at least [***] prior to the submission of any application or similar document to be submitted in support of Institution’s efforts to seek such funding (each a “Grant Application”), Institution shall provide Company with substantially complete copies or experimental plans, whether final or draft, of each Grant Application; (ii) Institution hereby agrees to remove from any Grant Application any information Company and Institution jointly determine is Confidential Information (as defined below); and (iii) in the event that Company, after review of a Grant Application, determines that it wishes to fund such Other Research on the same financial terms as would be provided under the Grant Application if funded, Institution shall not submit such Grant Application to the US Government and shall instead, within [***] from submission of the Grant Application to Company, enter into a separate agreement with Company for the funding of such Other Research on terms not less favorable to the Company than those contained herein with respect to the Research. Upon failure of the parties to enter into a separate agreement in the specified timeframe, Institution shall be permitted to file its grant application with the US Government.

(b) Exclusivity. Institution covenants and agrees, during the Term, not to accept funding from any third party, other than directly from the US Government (other than an SBIR or STTR sub-award) or the Commonwealth of Pennsylvania, to conduct research in the field of HBV. Notwithstanding anything to the contrary in the foregoing, Institution may continue to conduct “fee-for-service” activities in the Field limited to the testing, screening and/or characterization of third party compounds for HBV antiviral activity, provided that such activities do not overlap or conflict in any way with the Research then being conducted under this Agreement.

3. Records, Conferences and Reports.

3.1 Records. Institution shall require the Principal Investigators and the Lab Affiliates to keep appropriate records of the Research, including laboratory notebooks, in accordance with Institution policies, sufficient to properly document the results of the Research and otherwise sufficient to determine identity and dates of inventorship of Inventions. Institution shall make such records available to Company upon no less than two week’s notice during Institution’s normal business hours.

3.2 Conferences. During the term of this Agreement, the Institution shall cause the Principal Investigators and the Lab Affiliates to meet with representatives of Company at least monthly (or at such other times as may be agreed among them) to discuss the progress and results of the Research, as well as the direction of the Projects and any suggested changes thereto.

3.3 Reports. In addition to such conferences, Institution or Principal Investigators shall provide to Company (a) interim written reports no less than once per calendar quarter, (b) a draft final written report within [***] after completion (or earlier termination) of the Research and (c) a final written report within [***] after receipt of Company's comments to the draft final report, which shall be given by Company not later than [***] after Company's receipt of the draft final report (collectively, the "Reports"); if this schedule of reports differs from the final version of the relevant Project Plan, the schedule listed in such Project Plan shall be followed. During the performance of the Research, Institution shall also notify Company promptly if the Research reveals any unexpected result or any accident or harm occurs. Company shall own all Reports and data compilations resulting from the Research.

4. Confidentiality and Publications.

4.1 Company Confidential Information. Institution warrants that it shall not reveal, publish or otherwise disclose Confidential Information (as defined below) to any third party without the prior written consent of Company as described in Section 4.4 below, however, Institution is permitted to disclose Confidential Information obtained under the terms of this Agreement to Principal Investigators and Lab Affiliates on a need-to-know basis related to the performance of its obligations under this Agreement and only if Principal Investigators and Lab Affiliates are informed by Institution of the confidential nature of such information and of the confidentiality undertakings of Institution contained herein and are bound by confidentiality obligations consistent with those set forth in this Section 4.1. Institution shall require that Principal Investigators and any and all Lab Affiliates having a need-to-know observe these obligations of confidentiality. These obligations of confidentiality and nondisclosure shall remain in effect after the termination or expiration of this Agreement. "Confidential Information" means (a) the results of the Research and (b) any proprietary or confidential information, technical data, trade secrets or know-how, including research, product plans, products, services, customer lists and customers, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, marketing, distribution and sales methods and systems, sales and profit figures, finances and other business information disclosed to Institution, the Principal Investigators or any Lab Affiliate by or on behalf of Company, either directly or indirectly, whether in writing, orally or by drawings or inspection of documents or other tangible property; provided, that Confidential Information shall not include any of the foregoing items to the extent (i) they are or have become publicly known and made generally available through no wrongful act of Institution, any Principal Investigator or Lab Affiliate, or any other employee or agent of Institution, (ii) was known to Institution prior to disclosure by Company, as evidenced by pre-existing written records promptly provided to Company by Institution or (iii) was disclosed to Institution without an obligation of confidentiality by a third party having a lawful right to make such disclosure.

4.2 Third Party Information Held by Institution. Institution shall not improperly use or disclose to Company or any of its directors, officers, employees or agents, any confidential information of any current or former client or other person or entity with whom Institution has an agreement or duty to keep such information confidential, and Institution shall not bring onto the

premises of Company any such information in any medium unless consented to in writing by such client, person or entity.

4.3 Required Disclosure of Confidential Information. If Institution is required by applicable law or court order to disclose Confidential Information, Institution shall, if permitted by law, give Company prompt written notice of such requirement such that Company shall have the opportunity to apply for a protective order, injunction or for confidential treatment of such Confidential Information. Notwithstanding the forgoing, any information disclosed by Institution pursuant to applicable law or a court order shall remain Confidential Information hereunder, and may not be disclosed under any other circumstances unless and until the Confidential Information so disclosed becomes publicly known and generally available through no wrongful act of Institution.

4.4 Publications. Before Institution, any Principal Investigator or Lab Affiliate shall be permitted to publish or present at symposia, at professional meetings or in any other setting any information resulting from or related to the Research or Other Research, Institution shall furnish to Company a copy of any proposed publication or presentation at least forty-five (45) days in advance of the submission of such proposed publication or presentation. At Company's request, Institution will arrange for an additional delay in publication or presentation, not to exceed forty-five (45) days, to enable Company to arrange for, or to assist Institution in arranging for, evaluation and/or filing of patent applications or other intellectual property protection of information proposed to be disclosed. If the publication or presentation would reveal trade secrets or other Confidential Information that is not patentable, the Parties will cooperate to modify the disclosure as appropriate, taking into account the Institution's interests in research collaboration and the Company's commercial interests in the information. For publications or presentations related to the Research, Institution shall identify Company as a sponsor of the Research in any publication or presentation, unless the Company otherwise instructs Institution. It is understood by Institution that nothing in this Section 4.4 shall grant to Institution the right to publish any Confidential Information of Company or any derivation thereof, even if such information was furnished to Institution for purposes of the Research.

4.5 Unauthorized Disclosure. Institution shall be responsible for any breach of this Article 4 by any Principal Investigator or Lab Affiliate. Institution shall take reasonable steps to ensure that unauthorized persons do not gain access to Confidential Information. Institution shall promptly notify Company of any unauthorized release of or access to Confidential Information. For clarity, such notice shall not remedy any breach of this Agreement resulting from such unauthorized release or access.

5. Inventions.

5.1 Inventions. "Invention" means any idea, invention or discovery, whether or not patented or patentable, that is first conceived, discovered, developed or reduced to practice in the conduct of the activities conducted under this Agreement, including but not limited to developments, discoveries, compositions, know-how, procedures, technical information, processes, methods, devices, formulae, protocols, techniques, designs, drawings, methodologies,

and biological or chemical material. An “Other Invention” means any idea, invention or discovery, whether or not patented or patentable, in the Field that is first conceived, discovered, developed or reduced to practice by one or more Institution employees either before or after the Effective Date, either alone or with others, other than in the course of conducting activities under this Agreement but otherwise regardless of the source of funding, including but not limited to developments, discoveries, compositions, know-how, procedures, technical information, processes, methods, devices, formulae, protocols, techniques, designs, drawings, methodologies, and biological or chemical material, but specifically excluding any invention that has arisen or may arise as a result of research conducted pursuant to a pre-existing third party agreement set forth on Schedule 5.1 attached hereto. Institution represents, warrants and covenants that, with respect to Institution Inventions (as defined below) and Institution’s interest in Joint Inventions (as defined below), (a) it owns and controls any Invention made by any Principal Investigators and Lab Affiliates or that otherwise arises from the activities conducted under this Agreement or that any Invention will become the sole property of Institution and (b) Institution has the sole right and authority to assign and grant the rights described below.

5.2 Ownership of Inventions. Inventorship of Inventions and Other Inventions will be determined in accordance with U.S. Patent Law.

- (a) All rights to Inventions made solely by employees of Institution shall belong solely to Institution (“Institution Inventions”).
- (b) All rights to Inventions made solely by employees of Company shall belong solely to Company (“Company Inventions”).
- (c) All rights to Inventions made jointly by employees of Institution and employees of Company shall belong jointly to Institution and Company (“Joint Inventions”).

5.3 Handling of Inventions. Institution shall, and shall require the Principal Investigators and Lab Affiliate’s who are Institution employees to, fully disclose to Company any Inventions and Other Inventions in which Institution has rights within [***] after initial conception, including providing to Company the Institution’s invention disclosure form along with all supporting information. Company will hold such disclosure in confidence and will not disclose the information to any third party without the consent of Institution. Institution shall have the right to file and prosecute patent applications covering Institution Inventions; provided, however, that Company shall assume control of filing and prosecution of such patent applications upon execution by Company and Institution of a definitive exclusive license agreement for the underlying technology, subject to the terms of any such license agreement. Company shall have the right to file and prosecute patent applications covering Company Inventions and Joint Inventions. In the event Company fails to file and prosecute patent applications covering any Joint Invention or advises Institution in writing that it has no interest in a Joint Invention, Institution shall have the right to file and prosecute patent applications covering such Joint Invention and Company shall thereafter forfeit its rights to file and prosecute such patent applications.

6. **Company's Rights to License.**

6.1 **Inventions and Joint Inventions.**

- (a) **Right to License.** During the Term and for a period of [***] thereafter, Institution hereby grants Company the sole and exclusive right to obtain an exclusive, royalty-bearing, worldwide and all-fields license under Institution's rights in any Institution Invention and Institution's undivided interest in any Joint Invention. Institution shall notify Company in writing promptly after the conception of any Institution Invention or Joint Invention.
- (b) **Invention Election Period.** Company will advise the Institution in writing within [***] after Institution notifies Company of the existence of any Invention or Joint Invention as provided in Section 5.3, together with any supporting data Company may reasonably request (which may include [***]), whether or not it wishes to license such Invention ("**Invention Election Period**"); provided that, in Company's reasonable determination, there is enough data and information concerning such Invention available to enable Company to make a decision whether or not it wishes to license such Invention and, if not, the Invention Election Period shall be reasonably extended to enable Company to make such decision.
- (c) **Invention Negotiation Period.** Company will have [***] from the date of a decision to license any Invention described in Section 5.1 above to conclude a license agreement with Institution ("**Invention Negotiation Period**"); provided that, at all times during the Invention Negotiation Period, Institution responds in a timely fashion and, if not, the Invention Negotiation Period shall be reasonably extended to accommodate any delays.
- (d) **License Terms.** Any license agreement negotiated pursuant to this Section 6.1 will contain commercially reasonable terms ([***]), will require diligent performance by Company for the timely development and marketing of the licensed Invention, and will include Company's obligation to reimburse Institution's reasonable patent costs for all Inventions subject to the license.
- (e) **Institution's Right to License.** [***].

6.2 **Other Inventions.**

- (a) **Right to License.** During the Term, Institution hereby grants Company the sole and exclusive right to obtain an exclusive, royalty-bearing, worldwide and all-fields license under Institution's rights in any Other Invention.

- (b) Other Invention Election Period. Company will advise the Institution in writing within [***] after Institution notifies Company of the existence of any Other Invention as provided in Section 5.3, together with any supporting data Company may reasonably request (which may include [***]), whether or not it wishes to license such Other Invention (“Other Invention Election Period”); provided that, in Company’s reasonable determination, there is enough data and information concerning such Other Invention available to enable Company to make a decision whether or not it wishes to license such Other Invention and, if not, the Other Invention Election Period shall be reasonably extended to enable Company to make such decision.
- (c) Other Invention Negotiation Period. Company will have [***] from the date of a decision to license any Other Invention to conclude a definitive license agreement with Institution (“Other Invention Negotiation Period”); provided that, at all times during the Other Invention Negotiation Period, Institution responds in a timely fashion and, if not, the Other Invention Negotiation Period shall be reasonably extended to accommodate any delays.
- (d) License Terms. Any license agreement negotiated pursuant to this Section 6.2 will contain commercially-reasonable terms, appropriate as to stage of development and type of patent claims, will require diligent performance by Company for the timely commercial development and marketing of the licensed Other Invention, and include Company's obligation to reimburse Institution's reasonable patent costs for all Other Inventions subject to the license.

6.3 Exclusivity. Until the earlier of (i) [***], or (ii) [***], ending without an executed license, Institution shall not directly or indirectly, through any officer, employee, agent, representative, advisor, director or otherwise, take any action to solicit, initiate, seek, encourage or support any inquiry, proposal or offer from, or furnish any information to, or participate in any negotiations with, any person, corporation, or other entity or group (other than Company and its affiliates) regarding any transaction involving such Invention or Other Invention.

6.4 Right of Refusal. If the Invention Negotiation Period for a given Invention, or Other Invention Negotiation Period for a given Other Invention, ends without an agreement being entered into between Institution and Company regarding such Invention or Other Invention, then, during the Term and for a period of [***] thereafter, Institution hereby grants to Company a right of refusal that grants Company the right to match any definitive offer from a third party for a license under Institution’s rights in such Invention or Other Invention and, if Company agrees to match all financial and other material terms of such definitive offer within [***] of Institution providing such definitive offer to Company, then Institution shall proceed with such definitive offer only with Company and not any third party.

7. **Inspections; Remedy.**

7.1 **Inspections by Governmental Authority.** If any governmental or regulatory authority conducts or gives notice to Institution of its intent to conduct an inspection or audit at Institution's facility or to take any other regulatory action with respect to any of Institution's activities hereunder, Institution shall promptly notify Company of such a demand or request. Company shall have the right to consult with Institution regarding the inspection or audit by any such governmental or regulatory authority and, if permitted by law, to be present at any such inspections and to review in advance any responses to be given by Institution to such governmental or regulatory authority. Institution agrees to promptly inform Company of the issuance of any FDA Form 483 or any equivalent regulatory action by any other regulatory authority concerning any aspect of any the Research.

7.2 **Inspection by Company.** During the term of this Agreement, for the purpose of permitting a quality and compliance audit, including, without limitation, to ascertain compliance with this Agreement, Institution shall grant to authorized representatives of Company upon reasonable notice, access to facilities, personnel and records being used, or relating to, activities hereunder. During such examination or audit, Company representatives may examine documents, facilities, records and any other relevant items relating to the Research and the procedures and methodology followed in the performance of the Research. If any audit, inspection, or other regulatory action reveals a deficiency in Institution's performance of the Research that causes all or any part of the Research to be invalid, Institution shall immediately repeat such Research at Institution's sole cost.

8. **Term and Termination.**

8.1 **Term.** The term of this Agreement (the "**Term**") commences on the Effective Date and shall continue in effect until October 29, 2018, unless sooner terminated in accordance with the provisions of Section 8.2. Notwithstanding the foregoing, Company shall have the option to extend the Term for two (2) additional one (1) year terms at a funding level of \$1,100,000 per year, with payments due biannually in a manner similar to that set forth in Section 2.2 above. Company shall provide notice of its decision to extend or not extend the Term at least [***] prior to the end of the then-current Term. Any further extensions of the Term shall be at the mutual option of Company and Institution.

8.2 **Termination.** Either party may terminate this Agreement for the material breach or default of any of the terms or conditions of this Agreement by the other party upon [***] written notice and opportunity to cure; and such termination shall be in addition to any other remedies that either Party may have at law or in equity.

8.3 **Obligations upon Termination.** Upon expiration or termination of this Agreement, in addition to its other obligations hereunder, Institution shall return to Company all Confidential Information that was provided or generated by Company during the Term or which Company may otherwise own or control by operation of this Agreement, or destroy or completely delete such Confidential Information, at Company's option. With respect to each item of Confidential

Information destroyed or completely deleted, such destruction or complete deletion shall be certified in writing to Company.

8.4 Effects of Termination. Termination of this Agreement by either party shall not affect the rights and obligations of the parties accrued prior to the effective date of termination. No termination of this Agreement, however effectuated, shall release the parties, the Principal Investigators, or any Lab Affiliate having access to Confidential Information from their respective rights and obligations under Article 4. Notwithstanding the foregoing, upon the expiration of the Term or upon termination of this Agreement for breach by Company, Institution shall be released from all further obligations to Company, other than Confidentiality, specifically including any obligations under sections 2.3, 5.3, 6.2, 6.3 and 6.4 above.

9. **Regulatory; Compliance.**

9.1 Compliance with Law. Institution and Principal Investigators shall conduct the Research, or cause the same to be done, in accordance with all applicable laws, rules, regulations and guidelines (including good laboratory practices in accordance with 21 CFR Part 58) and the provisions of this Agreement (including the Project Plans), as well as Institution's internal policies and procedures to the extent they do not conflict with the foregoing. In particular, any animals used in the Research shall be handled, housed and, if applicable, disposed of in accordance with all applicable national, regional and local laws, rules, regulations and guidelines.

9.2 Anti-Kickback, Anti-fraud and Anti-bribery. Each Party intends for this Agreement to comply with the federal Anti-Kickback Statute, as set forth in 42 U.S.C. 1320a-7b or the regulations promulgated thereunder. The Parties each agree that:

- (a) Company's decision regarding the selection or retention of Institution was based on defined criteria, such as area expertise, ability and reputation, or knowledge and experience regarding a particular field;
- (b) The fees included in this Agreement are consistent with the fair market value of the services to be provided and rights conferred in an arm-length transaction and do not exceed those reasonably necessary to accomplish the commercially reasonable business purpose of this Agreement; and
- (c) No compensation is being paid to Institution for the purpose of influencing Institution's opinion, inducing Institution to promote Company's product(s) or causing Institution to assist Company in securing any improper advantage.

9.3 Debarment. Each Party confirms that neither it nor its personnel performing the terms of this Agreement is subject to any restrictions or sanctions by the FDA, is a debarred person as described or ineligible to participate, in a "Federal health care program" as defined in 42 U.S.C. § 1320a-7b(f), or in any other government payment program. In the event either Party or any of its employees becomes a Debarred Person (as defined therein), it shall immediately notify the other Party and upon the occurrence of such event, whether or not such notice is given

by the debarred Party, the other Party may immediately terminate this Agreement upon written notice to the debarred party.

9.4 Insider Trading. Institution acknowledges that it and its representatives may, in connection with this Agreement, become aware of material non-public information regarding Company and that federal and state securities laws prohibit Institution and its representatives and their families from purchasing or selling any securities on the basis of such material non-public information and from assisting any others to do so. Institution agrees that it shall not and shall use reasonable efforts to assure that its representatives and their family members do not violate any applicable law or regulation bearing on trading in Company securities.

9.5 Reporting of Compensation. Notwithstanding any confidentiality obligations in this Agreement, Company reserves the right to make reports to applicable government agencies disclosing information associated with the fees paid under this Agreement in order to comply with applicable laws, which information may be published on government records available to the public, and Company is not required to provide Institution advanced notice prior to making any such disclosures.

9.6 Code of Conduct. Institution acknowledges that it has received a copy of Company's code of conduct, has read and understood the terms of such code of conduct, and will substantially comply and will cause its representatives to substantially comply with the terms of such code of conduct as they may apply to Institution and its representatives.

10. **Miscellaneous**.

10.1 Governance. In furtherance of the Collaboration, during the Term the Company shall have the right to receive notice of and attend meetings of the Board of Directors of the Institution.

10.2 Mutual Representations. Each party hereto hereby represents, warrants and covenants to the other that: (a) it is a corporation duly incorporated, validly existing and in good standing; (b) it has taken all necessary actions on its part to authorize the execution, delivery and performance of the obligations undertaken in this Agreement, and no other corporate actions are necessary with respect thereto; (c) it is not a party to any agreement or understanding and knows of no law or regulation that would prohibit it from entering into and performing this Agreement, or that would conflict with this Agreement; (d) when executed and delivered by it, this Agreement will constitute a legal, valid and binding obligation of it, enforceable against it in accordance with this Agreement's terms; and (e) it is duly licensed, authorized or qualified to do business and is in good standing in every jurisdiction in which a license, authorization or qualification is required for it to perform its obligations under this Agreement.

10.3 Indemnification. Institution shall indemnify, defend and hold-harmless Company for, from and against all costs, fees (including reasonable attorney's fees), expenses, losses and other damages arising from (a) any injury to person or damage to property caused by acts or failure to act on the part of Institution, Principal Investigators or Lab Affiliates, (b) any breach of

this Agreement by Institution, Principal Investigators or Lab Affiliates, or (c) Institution's, any Principal Investigators' or any Lab Affiliate's negligence or willful misconduct. Company shall indemnify, defend and hold-harmless Institution for, from and against all costs, fees (including reasonable attorney's fees), expenses, losses and other damages arising from (a) any injury to person or damage to property caused by Company, (b) any breach of this Agreement by Company, or (c) Company's negligence or willful misconduct.

10.4 **Insurance.** During the term of this Agreement and for [***] thereafter, Institution shall maintain insurance with a reputable insurance provider in the amount of [***] dollars per occurrence/[***] dollars in the aggregate with a [***] dollar umbrella, to cover its indemnification obligations hereunder. Upon Company's request, Institution shall provide to Company a certificate of insurance showing that such insurance is in place. Institution shall not cancel or amend its insurance policies without Company's prior consent.

10.5 **Independent Status.** Institution shall not be considered a partner, co-venturer, agent, employee, or representative of Company by reason of this Agreement, but shall remain in all respects an independent contractor, and neither party shall have any right or authority to make or undertake any promise, warranty or representation, to execute any contract or otherwise to assume any obligation in the name of or on behalf of the other party. Institution's employees, including the Principal Investigators and the Lab Affiliates, are not and shall not be deemed to be employees of Company, and Institution shall indemnify and hold harmless Company from all liabilities arising from any allegation or determination to the contrary.

10.6 **Notices.** All notices and other communications required or permitted hereunder shall be in writing and deemed to have been given when hand delivered, sent by facsimile or mailed by registered or certified mail or overnight courier with tracking capabilities, as follows or as a party may otherwise notify to the other in accordance with this Section 9.6 (provided that such notice of change of address or recipient shall be deemed given only when received):

If to Company, to: If to Institution:

Arbutus Biopharma, Inc. Baruch S. Blumberg Institute
PA Biotechnology Center of Bucks County 3805 Old Easton Road
3805 Old Easton Road Doylestown, PA 18902
Doylestown, PA 18902 Attention: Timothy Block, President
Attention: Legal Affairs

10.7 **Assignment; No Third Party Beneficiaries.** Company may assign this Agreement without the prior written consent of Institution in the event of an acquisition or other business combination or a sale of all or substantially all of Company's assets to which this Agreement relates. Institution hereby acknowledges and agrees that the duties and responsibilities hereunder are of a personal nature and, therefore, neither this Agreement nor any right or obligation hereunder shall be assignable or delegable in whole or in part by Institution. All of the terms and provisions of this Agreement shall be binding upon, and inure to the benefit of and be enforceable by, the respective successors and permitted assigns of the parties. Nothing in this

Agreement, express or implied, is intended to confer on any person or entity, other than the parties or their respective successors and permitted assigns, any benefits, rights or remedies.

10.8 Construction. This Agreement shall be construed, governed, interpreted, and applied in accordance with the laws of the Commonwealth of Pennsylvania exclusive of its conflicts of laws provisions. The failure to enforce any right or provision herein shall not constitute a waiver of that right or provision. If any provisions herein are found to be unenforceable on the grounds that they are overly broad or in conflict with applicable laws, it is the intent of the parties that such provisions be replaced, reformed or narrowed so that their original business purpose can be accomplished to the extent permitted by law, and that the remaining provisions shall not in any way be affected or impaired thereby.

10.9 Dispute Resolution. If a dispute arises between the parties concerning any right or duty under this Agreement, then the parties will confer, as soon as practicable, in an attempt to resolve the dispute. If the parties are unable to resolve the dispute amicably, then the parties will submit to the exclusive jurisdiction of, and venue in, the state and Federal courts located in the Eastern District of Pennsylvania with respect to all disputes arising under this Agreement.

10.10 Equitable Relief. Institution agrees that it would be impossible or inadequate to measure and calculate Company's damages from any breach of the covenants set forth in Articles 4 and 5, and that a breach of such covenants could cause serious and irreparable injury to Company. Accordingly, Company shall have available, in addition to any other right or remedy available to it, the right to obtain an injunction from a court of competent jurisdiction restraining such a breach (or threatened breach) and to specific performance of any such Section.

10.11 Entire Agreement, Amendment and Waiver. This Agreement contains the entire understandings of the parties and supersedes all previous agreements (oral and written), negotiations and discussions with respect to the subject matter herein. The parties may modify any of the provisions hereof only by an instrument in writing duly executed by the parties. No waiver of any rights under this Agreement shall be effective unless in writing signed by the party to be charged.

10.12 Severability. In the event of the invalidity of any provisions of this Agreement containing any gaps, the parties agree that such invalidity or gap shall not affect the validity of the remaining provisions of this Agreement. The parties will replace an invalid provision or fill any gaps with valid provisions, which most closely approximate the purpose and economic effect of the invalid provision or, in the case of a gap, the parties' presumable intentions.

10.13 Further Assurances. Each party shall, as and when reasonably requested by the other party, do all acts and execute all documents as may be reasonably necessary to give effect to the provisions of this Agreement.

10.14 Interpretation. The headings in this Agreement are intended solely for convenience or reference and shall be given no effect in the construction or interpretation of this

Agreement. This Agreement shall be construed as if both parties drafted it jointly, and shall not be construed against either party as principal drafter.

10.15 Counterparts. This Agreement may be executed in two or more counterparts, including by facsimile, each of which shall be deemed to be an original as against any party whose signature appears thereon, but all of which together shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the undersigned, intending to be legally bound, have duly executed this Agreement as of the Effective Date.

ARBUTUS BIOPHARMA, INC.

BARUCH S. BLUMBERG INSTITUTE

/s/ Michael J. Sofia
Authorized Signature

/s/ Timothy Block
Authorized Signature

Name: Michael J. Sofia, Ph.D. Name: Timothy Block, Ph.D.
Title: Chief Scientific Officer Title: President

Date: June 5, 2016

Date: June 5, 2016

EXHIBIT A
LICENSE TERMS

Compound Series with Composition of Matter Claims:

- Upfront Payment: [***] upon execution of a License Agreement.
- Development Milestone Payments:
[***]
- Sales Performance Milestone Payments:

[***]
- Royalty Payment: [***] on Net Sales

Method of Use Claims Only:

- Development Milestone Payments:
[***]
- Royalty Payment: [***] on Net Sales

**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: August 4, 2016

/s/ Mark Murray

Name: Mark Murray

Title: President and Chief Executive Officer

**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: August 4, 2016

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

**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 June 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: August 4, 2016

/s/ Mark Murray

Name: Mark Murray

Title: President and Chief Executive Officer

**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 June 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: August 4, 2016

/s/ Bruce Cousins

Name: Bruce Cousins

Title: Executive Vice President, Finance and
Chief Financial Officer