UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended **March 31, 2020**

OR

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

For the Transition Period from to

Commission File Number: **001-34949**

ARBUTUS BIOPHARMA CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

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

701 Veterans Circle, Warminster, PA 18974

(Address of Principal Executive Offices and Zip Code)

267-469-0914

(Registrant's Telephone Number, Including Area Code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares, without par value	ABUS	The Nasdaq Stock Market LLC

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes [X] No [ ]

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

Large accelerated filer [ ]	Accelerated filer [X]	Non-accelerated filer [ ]	Smaller reporting company [X]	Emerging growth company [ ]

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

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

Yes [ ] No [X]

As of May 8, 2020, the registrant had 68,961,395 common shares, without par value, outstanding.

ARBUTUS BIOPHARMA CORPORATION

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (UNAUDITED)

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Balance Sheets
(Unaudited)
(In thousands of U.S. Dollars, except share and per share amounts)

	March 31, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 26,416	$ 31,799
Investments in marketable securities, current	58,475	59,035
Accounts receivable	1,072	1,204
Prepaid expenses and other current assets	2,370	1,790
Total current assets	88,333	93,828
Property and equipment, net of accumulated depreciation of $6,142 (December 31, 2019: $5,642)	8,176	8,676
Investments in marketable securities, non-current	3,215	—
Right of use asset	2,657	2,738
Other non-current assets	233	293
Total assets	$ 102,614	$ 105,535
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable and accrued liabilities	$ 3,565	$ 7,235
Liability-classified options	58	253
Lease liability, current	408	340
Total current liabilities	4,031	7,828
Liability related to sale of future royalties	19,375	18,992
Contingent consideration	3,065	2,953
Lease liability, non-current	2,887	3,018
Total liabilities	29,358	32,791
Stockholders' equity:		
Preferred shares		
Authorized: unlimited number without par value		
Issued and outstanding: 1,164,000 (December 31, 2019: 1,164,000)	140,263	137,285
Common shares		
Authorized: unlimited number without par value		
Issued and outstanding: 68,961,395 (December 31, 2019: 64,780,314)	911,099	898,535
Additional paid-in capital	56,803	55,246
Deficit	(986,932)	(970,093)
Accumulated other comprehensive loss	(47,977)	(48,229)
Total stockholders' equity	73,256	72,744
Total liabilities and stockholders' equity	$ 102,614	$ 105,535

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(In thousands of U.S. Dollars, except share and per share amounts)

	Three Months Ended March 31,	
	2020	**2019**
Revenue		
Revenue from collaborations and licenses	$ 835	$ 508
Non-cash royalty revenue	656	171
Total Revenue	1,491	679
Operating expenses		
Research and development	10,416	14,712
General and administrative	3,553	4,412
Depreciation	500	509
Change in fair value of contingent consideration	112	125
Site consolidation	57	117
Total operating expenses	14,638	19,875
Loss from operations	(13,147)	(19,196)
Other income (loss)		
Interest income	345	600
Interest expense	(1,041)	(12)
Foreign exchange (losses) / gains	(18)	8
Net equity investment loss	—	(4,651)
Total other loss	(714)	(4,055)
Loss before income taxes	(13,861)	(23,251)
Income tax benefit	—	—
Net loss	(13,861)	(23,251)
Items applicable to preferred shares:		
Dividend accretion of convertible preferred shares	(2,978)	(2,715)
Net loss attributable to common shares	$ (16,839)	$ (25,966)
Net loss per common share		
Basic and diluted	$ (0.25)	$ (0.47)
Weighted average number of common shares		
Basic and diluted	67,683,586	55,740,121
Comprehensive income (loss)		
Unrealized gain on available-for-sale securities	251	—
Currency translation adjustment	—	(22)
Comprehensive loss	$ (13,610)	$ (23,273)

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)
(In thousands of U.S. Dollars, except share and per share amounts)

	Convertible Preferred Shares		Common Shares					
	Number of Shares	Share Capital	Number of Shares	Share Capital	Additional Paid-In Capital	Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
Balance, December 31, 2019	1,164,000	$ 137,285	64,780,314	$ 898,535	$ 55,246	$ (970,093)	$ (48,229)	$ 72,744
Accretion of accumulated dividends on Preferred Shares	—	2,978	—	—	—	(2,978)	—	—
Stock-based compensation	—	—	—	—	1,460	—	—	1,460
Certain fair value adjustments to liability stock option awards	—	—	—	—	180	—	—	180
Issuance of common shares pursuant to the Open Market Sales Agreement	—	—	4,147,081	12,315	—	—	—	12,315
Issuance of common shares pursuant to exercise of options	—	—	34,000	249	(83)	—	—	166
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	252	252
Net loss	—	—	—	—	—	(13,861)	—	(13,861)
Balance, March 31, 2020	1,164,000	$ 140,263	68,961,395	$ 911,099	$ 56,803	$ (986,932)	$ (47,977)	$ 73,256

	Convertible Preferred Shares		Common Shares					
	Number of Shares	Share Capital	Number of Shares	Share Capital	Additional Paid-In Capital	Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
Balance, December 31, 2018	1,164,000	126,136	55,518,800	$ 879,405	$ 48,084	$ (805,221)	$ (48,170)	$ 200,234
Accretion of accumulated dividends on Preferred Shares	—	2,715	—	—	—	(2,715)	—	—
Stock-based compensation	—	—	—	—	1,665	—	—	1,665
Certain fair value adjustments to liability stock option awards	—	—	—	—	47	—	—	47
Issuance of common shares pursuant to the Open Market Sales Agreement	—	—	614,401	2,248	—	—	—	2,248
Issuance of common shares pursuant to exercise of options	—	—	122,603	490	(202)	—	—	288
Currency translation adjustment	—	—	—	—	—	—	(22)	(22)
Net loss	—	—	—	—	—	(23,251)	—	(23,251)
Balance, March 31, 2019	1,164,000	$ 128,851	56,255,804	$ 882,143	$ 49,594	$ (831,187)	$ (48,192)	$ 181,209

See accompanying notes to the condensed consolidated financial statements.

ARBUTUS BIOPHARMA CORPORATION

Condensed Consolidated Statements of Cash Flow
(Unaudited)
(In thousands of U.S. Dollars)

	Three Months Ended March 31,	
	2020	**2019**
OPERATING ACTIVITIES		
Net loss	$ (13,861)	$ (23,251)
Items not involving cash:		
Depreciation	500	509
Gain on sale of property and equipment	—	(9)
Stock-based compensation expense	1,445	1,522
Unrealized foreign exchange losses (gains)	10	(38)
Change in fair value of contingent consideration	112	125
Net equity investment gain (loss)	—	4,651
Non-cash royalty revenue	(656)	(171)
Non-cash interest expense	1,039	—
Net accretion and amortization of investments in marketable securities	(2)	—
Net change in operating items:		
Accounts receivable	132	777
Prepaid expenses and other assets	(439)	2,277
Accounts payable and accrued liabilities	(3,602)	(2,885)
Other liabilities	(131)	(87)
Net cash used in operating activities	(15,453)	(16,580)
INVESTING ACTIVITIES		
Purchase of investments	(24,369)	(334)
Disposition of investments	21,968	61,389
Proceeds from sale of property and equipment	—	9
Acquisition of property and equipment	—	(31)
Net cash provided by / (used in) investing activities	(2,401)	61,033
FINANCING ACTIVITIES		
Issuance of common shares pursuant to the Open Market Sale agreement	12,315	2,248
Issuance of common shares pursuant to exercise of options	166	288
Net cash provided by financing activities	12,481	2,536
Effect of foreign exchange rate changes on cash and cash equivalents	(10)	38
Increase / (decrease) in cash and cash equivalents	(5,383)	47,027
Cash and cash equivalents, beginning of period	31,799	36,942
Cash and cash equivalents, end of period	$ 26,416	$ 83,969
Supplemental cash flow information		
Preferred shares dividends accrued	(2,978)	(2,715)

See accompanying notes to the condensed consolidated financial statements.

1. Nature of business and future operations

Arbutus Biopharma Corporation (the "Company" or "Arbutus") is a clinical-stage biopharmaceutical company dedicated to discovering, developing and commercializing a cure for people with chronic hepatitis B virus ("HBV") infection. The Company is advancing multiple drug product candidates that may be combined into a potentially curative regimen for chronic HBV infection.

The Company's pipeline includes:

- AB-729, a subcutaneously-delivered RNA interference ("RNAi") product candidate currently in a Phase 1a/1b clinical trial with preliminary results announced in March 2020. Additional Week 12 single-dose results for the 60 mg dose cohort are expected in the second quarter of 2020. Results from a single-dose 90 mg cohort and a multi-dose 60 mg cohort are expected in the second half of 2020;
- AB-836, a next-generation capsid inhibitor product candidate currently advancing through IND-enabling studies; and
- other compounds early in the development process, including oral compounds that inhibit PD-L1 and next-generation oral HBV RNA destabilizers.

The success of the Company is dependent on obtaining the necessary regulatory approvals to bring its products to market and achieving profitable operations. The Company's research and development activities and commercialization of its products are dependent on its 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 the Company's existing or future research and development programs or the Company's ability to continue to fund these programs in the future.

COVID-19

In December 2019, an outbreak of a novel strain of coronavirus (COVID-19) was identified in Wuhan, China. This virus continues to spread globally, has been declared a pandemic by the World Health Organization and has spread to nearly every country in the world. The impact of this pandemic has been, and will likely continue to be, extensive in many aspects of society. The pandemic has resulted in and will likely continue to result in significant disruptions to businesses. A number of countries and other jurisdictions around the world have implemented extreme measures to try and slow the spread of the virus. These measures include the closing of businesses and requiring people to stay in their homes, the latter of which raises uncertainty regarding the ability to travel to hospitals in order to participate in clinical trials. Additional measures that have had, and will likely continue to have, a major impact on clinical development, at least in the near-term, include shortages and delays in the supply chain, and prohibitions in certain countries on enrolling subjects in new clinical trials. Despite the challenges of COVID-19, we have not had to alter our objectives for 2020. However, future disruptions related to the COVID-19 pandemic could negatively impact our plans and timelines, including enrolling and monitoring subjects in the trial.

While Arbutus' core mission is to find a cure for hepatitis B, the magnitude of the coronavirus pandemic is undeniable. Given the Company's proven expertise in the discovery of new antiviral therapies, Arbutus feels compelled to work towards the discovery of a new treatment. To that end, the Company has assembled an internal team of expert scientists under the direction of Arbutus' Chief Scientific Officer, Dr. Michael Sofia, to identify novel small molecule therapies to treat COVID-19 and future coronavirus outbreaks. Dr. Sofia, who was awarded the Lasker-DeBakey Award for his discovery of sofosbuvir, brings extensive antiviral drug discovery experience to this new program. The Company has also recently joined forces with the COVID R&D consortium to further support and expedite efforts to address the SARS-CoV-2 pandemic and any future coronavirus outbreaks. At this time, Arbutus' COVID-19 research program will focus on the discovery and development of new molecular entities that address specific viral targets including the nsp12 viral polymerase and the viral protease. These targets are essential viral proteins which Arbutus has experience in targeting. The establishment of the COVID-19 effort does not impact the Company's belief that its cash, cash equivalents and investments as of March 31, 2020 are sufficient to fund its operations into the middle of 2021.

2. Significant accounting policies

Basis of presentation

These unaudited condensed consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles 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, 2019 included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (the "2019 Form 10-K"). These unaudited condensed consolidated financial statements reflect, in the opinion of management, all adjustments and reclassifications necessary to fairly present the Company's financial position as of March 31, 2020 and the Company's results of operations and cash flows for the three months ended March 31, 2020 and 2019. The results of operations for the three months ended March 31, 2020 and 2019 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, 2019, except as described below under Recent Accounting Pronouncements.

Principles of consolidation

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

Net loss attributable to common shareholders per share

The Company follows the two-class method when computing net loss attributable to common shareholders per share as the Company has issued Series A participating convertible preferred shares (the "Preferred Shares"), as further described in note 11, that meet the definition of participating securities. The Preferred Shares entitle the holders to participate in dividends but do not require the holders to participate in losses of the Company. Accordingly, if the Company reports a net loss attributable to holders of the Company's common shares, net losses are not allocated to holders of the Preferred Shares.

Net loss attributable to common shareholders per share is calculated based on the weighted average number of common shares outstanding. The calculation of diluted net loss attributable to common shareholders per share does not differ from the calculation of basic net loss attributable to common shareholders per share, as the effect of the Company's dilutive potential common shares was anti-dilutive. During the three months ended March 31, 2020 and 2019, potential common shares of 30.4 million and 26.0 million, respectively, consisting of the "if-converted" number of Preferred Shares and outstanding stock options, were excluded from the calculation of diluted net loss per common share because their inclusion would be anti-dilutive.

Revenue recognition

The Company recognizes revenue in accordance with ASC 606, *Revenue from Contracts with Customers* ("ASC 606"), which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers under a five-step model: (i) identify contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when or as a performance obligation is satisfied.

The Company generates revenue primarily through collaboration agreements and license agreements. Such agreements may require the Company to deliver various rights and/or services, including intellectual property rights or licenses and research and development services. Under such agreements, the Company is generally eligible to receive non-refundable upfront payments, funding for research and development services, milestone payments, and royalties.

In contracts where the Company has more than one performance obligation to provide its customer with goods or services, each performance obligation is evaluated to determine whether it is distinct based on whether (i) the customer can benefit from the good or service either on its own or together with other resources that are readily available and (ii) the good or service is separately identifiable from other promises in the contract. The consideration under the contract is then allocated between the distinct performance obligations based on their respective relative stand-alone selling prices. The estimated stand-alone selling price of each deliverable reflects the Company's best estimate of what the selling price would be if the deliverable was regularly sold on

a stand-alone basis and is determined by reference to market rates for the good or service when sold to others or by using an adjusted market assessment approach if the selling price on a stand-alone basis is not available.

The consideration allocated to each distinct performance obligation is recognized as revenue when control is transferred to the customer for the related goods or services. Consideration associated with at-risk substantive performance milestones, including sales-based milestones, is recognized as revenue when it is probable that a significant reversal of the cumulative revenue recognized will not occur. Sales-based royalties received in connection with licenses of intellectual property are subject to a specific exception in the revenue standards, whereby the consideration is not included in the transaction price and recognized in revenue until the customer's subsequent sales or usages occur.

Segment information

The Company operates as a single segment.

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 the Company's financial position or results of operations upon adoption.

In June 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments* (ASC 326). The guidance is effective for the Company beginning January 1, 2023 and it changes how entities account for credit losses on financial assets and other instruments that are not measured at fair value through net income, including available-for-sale debt securities. The Company is currently evaluating the impact of the new standard on its consolidated financial statements.

3. 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.

Assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurements. Changes in the observability of valuation inputs may result in a reclassification of levels for certain securities within the fair value hierarchy.

The carrying values of cash and cash equivalents, investments in marketable securities, accounts receivable, accounts payable and accrued liabilities approximate their fair values due to the immediate or short-term maturity of these financial instruments.

To determine the fair value of the contingent consideration (note 8), 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. The Company determined the fair value of the

contingent consideration was $3.1 million as of March 31, 2020 and the increase of $0.1 million has been recorded as a component of total operating expenses in the statement of operations and comprehensive loss for the three months ended March 31, 2020. The assumptions used in the discounted cash flow model are level 3 inputs as defined above. The Company assessed the sensitivity of the fair value measurement to changes in these unobservable inputs, and determined that changes within a reasonable range would not result in a materially different assessment of fair value.

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

As of March 31, 2020	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash and cash equivalents	$ 26,416	$ —	$ —	$ 26,416
Short-term investments	58,475	—	—	58,475
Long-term investments	3,215	—	—	3,215
Total	88,106	—	—	88,106
Liabilities				
Liability-classified options	—	—	58	58
Contingent consideration	—	—	3,065	3,065
Total	$ —	$ —	$ 3,123	$ 3,123

As of December 31, 2019	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash and cash equivalents	$ 31,799	$ —	$ —	$ 31,799
Short-term investments	59,035	—	—	59,035
Total	90,834	—	—	90,834
Liabilities				
Liability-classified stock option awards	—	—	253	253
Contingent consideration	—	—	2,953	2,953
Total	$ —	$ —	$ 3,206	$ 3,206

The following table presents the changes in fair value of the Company's liability-classified stock option awards:

	Liability at beginning of the period	Fair value of liability-classified options exercised in the period	Increase (decrease) in fair value of liability	Liability at end of the period
	(in thousands)			
Three months ended March 31, 2019	$ 479	$ —	$ (65)	$ 414
Three months ended March 31, 2020	$ 253	$ (9)	$ (186)	$ 58

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

	Liability at beginning of the period	Increase (decrease) in fair value of liability	Liability at end of the period
	(in thousands)		
Three months ended March 31, 2019	$ 3,126	$ 125	$ 3,251
Three months ended March 31, 2020	$ 2,953	$ 112	$ 3,065

4. Investments in marketable securities

Investments in marketable securities consisted of the following:

As of March 31, 2020	Amortized Cost	Gross Unrealized Gain[1]	Gross Unrealized Loss[1]	Fair Value
	(in thousands)			
Cash equivalents				
Money market fund	$ 4,961	$ —	$ —	$ 4,961
US government agency bonds	—	—	—	—
US treasury bills	—	—	—	—
Total	$ 4,961	$ —	$ —	$ 4,961
Investments in marketable securities				
US government agency bonds	$ 25,214	$ 88	$ —	$ 25,302
US treasury bills	9,974	24	—	9,998
US government bonds	26,249	141	—	26,390
Total	$ 61,437	$ 253	$ —	$ 61,690

[1] Gross unrealized gain (loss) is pre-tax and is reported in other comprehensive loss.

As of December 31, 2019	Amortized Cost	Gross Unrealized Gain[1]	Gross Unrealized Loss[1]	Fair Value
	(in thousands)			
Cash equivalents				
Money market fund	$ 4,106	$ —	$ —	$ 4,106
US government agency bonds	1,511	—	—	1,511
US treasury bills	1,499	—	—	1,499
Total	$ 7,116	$ —	$ —	$ 7,116
Investments in marketable securities				
US government agency bonds	$ 19,863	$ 2	$ (1)	$ 19,864
US treasury bills	15,926	2	(1)	15,927
US government bonds	23,246	—	(2)	23,244
Total	$ 59,035	$ 4	$ (4)	$ 59,035

[1] Gross unrealized gain (loss) is pre-tax and is reported in other comprehensive loss.

The contractual term to maturity of the $58.5 million of short-term marketable securities held by the Company as of March 31, 2020 is less than one year. As of March 31, 2020, the Company held $3.2 million of long-term marketable securities with contractual maturities of more than one year, but less than five years. As of December 31, 2019, the Company's $59.0 million of marketable securities had contractual maturities of less than one year

There were no realized gains or losses for the three months ended March 31, 2020 or 2019.

5. Equity method investment

In April 2018, the Company entered into an agreement with Roivant Sciences Ltd. ("Roivant"), its largest shareholder, to launch Genevant Sciences Ltd. ("Genevant"), a company focused on the discovery, development, and commercialization of a broad range of RNA-based therapeutics enabled by the Company's lipid nanoparticle ("LNP") and ligand conjugate delivery technologies. The Company licensed exclusive rights to its LNP and ligand conjugate delivery platforms to Genevant for RNA-based applications outside of HBV. The Company retained all rights to its LNP and conjugate delivery platforms for HBV.

As of March 31, 2020, the carrying value of the Company's investment in Genevant was zero and the Company owned approximately 40% of the common equity of Genevant. Genevant has issued convertible debt securities to other investors. If those securities are converted to common shares, the Company's ownership interest in Genevant may be significantly diluted.

6. Accounts payable and accrued liabilities

Accounts payable and accrued liabilities are comprised of the following:

	March 31, 2020	December 31, 2019
	(in thousands)	
Trade accounts payable	$ 519	$ 2,398
Research and development accruals	1,796	1,433
Professional fee accruals	360	809
Payroll accruals	867	2,314
Site consolidation accrual	19	137
Other accrued liabilities	4	144
	$ 3,565	$ 7,235

7. Sale of future royalties

On July 2, 2019, the Company entered into a Purchase and Sale Agreement (the "Agreement") with the Ontario Municipal Employees Retirement System (or "OMERS"), pursuant to which the Company sold to OMERS part of its royalty interest on future global net sales of ONPATTRO™ (Patisiran) ("ONPATTRO"), an RNAi therapeutic currently being sold by Alnylam Pharmaceuticals, Inc. ("Alnylam").

ONPATTRO utilizes Arbutus' LNP technology, which was licensed to Alnylam pursuant to the Cross-License Agreement, dated November 12, 2012, by and between the Company and Alnylam (the "LNP License Agreement"). Under the terms of the LNP License Agreement, the Company is entitled to tiered royalty payments on global net sales of ONPATTRO ranging from 1.00% to 2.33% after offsets, with the highest tier applicable to annual net sales above $500 million. This royalty interest was sold to OMERS, effective as of January 1, 2019, for $20 million in gross proceeds before advisory fees. OMERS will retain this entitlement until it has received $30 million in royalties, at which point 100% of such royalty interest on future global net sales of ONPATTRO will revert to the Company. OMERS has assumed the risk of collecting up to $30 million of future royalty payments from Alnylam and Arbutus is not obligated to reimburse OMERS if they fail to collect any such future royalties.

The $30 million in royalties to be collected by OMERS is accounted for as a liability, with the difference between the liability and the gross proceeds received accounted for as a discount. The discount, as well as $1.5 million of transaction costs, will be amortized as interest expense based on the projected balance of the liability as of the beginning of each period. Over the course of the Agreement, the actual interest rate will be affected by the amount and timing of royalty revenue recognized and changes in the timing of forecasted royalty revenue. On a quarterly basis, the Company will reassess the expected timing of the royalty revenue, recalculate the amortization and effective interest rate and adjust the accounting prospectively as needed. As of March 31, 2020, the effective annual interest rate was approximately 22%.

The Company will recognize non-cash royalty revenue related to the sales of ONPATTRO during the term of the Agreement. As royalties are remitted to OMERS from Alnylam, the balance of the recognized liability will be effectively repaid over the life of the Agreement. From the inception of the royalty sale through March 31, 2020, the Company has recorded an aggregate of $2.5 million of non-cash royalty revenue for royalties earned by OMERS. There are a number of factors that could materially affect the amount and timing of royalty payments from Alnylam, none of which are within the Company's control.

During the three months ended March 31, 2020, the Company recognized non-cash royalty revenue of $0.7 million and $1.0 million of related non-cash interest expense.

The table below shows the activity related to the net liability for 2020:

	Three Months Ended March 31, 2020
	(in thousands)
Net liability related to sale of future royalties - beginning balance	$ 18,992
Non-cash royalty revenue	(656)
Non-cash interest expense	1,039
Net liability related to sale of future royalties - ending balance	$ 19,375

In addition to the royalty from the LNP License Agreement, the Company is also receiving a second, lower royalty interest on global net sales of ONPATTRO originating from a settlement agreement and subsequent license agreement with Acuitas Therapeutics, Inc. (“Acuitas”). The royalty from Acuitas has been retained by the Company and was not part of the royalty sale to OMERS.

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 $7.2 million (C$9.3 million). The Company received a cumulative contribution of $2.7 million (C$3.7 million). 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-RNAi 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 on sales of Acrotech Biopharma LLC’s Marqibo® (formerly Spectrum Pharmaceuticals, Inc.). For the three months ended March 31, 2020 and 2019, the Company earned royalties on Marqibo sales in the amounts of $83 thousand and $41 thousand, respectively. The resulting royalties payable by the Company to TPC were not material in either period. The cumulative amount paid or accrued up to March 31, 2020 was less than $0.1 million, resulting in the contingent amount due to TPC being $2.7 million (C$3.7 million).

Arbitration with the University of British Columbia

Certain early work on lipid nanoparticle delivery systems and related inventions was undertaken at the University of British Columbia (“UBC”), as well as by us that was subsequently assigned to UBC. These inventions are licensed to the Company by UBC under a license agreement, initially entered into in 1998 and amended in 2001, 2006 and 2007. The Company has granted sublicenses under the UBC license to certain third parties, including Alnylam. In November 2014, UBC filed a demand for arbitration against the Company and in January 2015, filed a Statement of Claim, which alleged entitlement to $3.5 million in allegedly unpaid royalties based on publicly available information, and an unspecified amount based on non-public information. UBC also sought interest and costs, including legal fees. The Company filed its Statement of Defense to UBC’s Statement of Claims, as well as a Counterclaim involving a patent application that the Company alleged UBC wrongly licensed to a third party. The proceedings were divided into three phases, with the first hearing taking place in June 2017. In the first phase, the arbitrator determined which agreements are sublicense agreements within UBC’s claim. Also in the first phase, UBC updated its alleged entitlement from $3.5 million originally claimed to seek $10.9 million in alleged unpaid royalties, plus interest arising from payments as early as 2008. The arbitrator also held in the first phase of the arbitration that the patent application that is the subject of the Counterclaim was not required to be licensed to the Company. The second phase of the arbitration took place in the second quarter of 2019. In August 2019, the arbitrator issued his decision for the second phase of the arbitration, awarding UBC $5.9 million, which includes interest of approximately $2.6 million. The Company paid the $5.9 million award to UBC in September 2019. The arbitrator also held that the third phase of the arbitration, which would address patent validity, should the Company choose to pursue a third phase, would not provide a defense to the award. An award for costs and attorneys’ fees is still to be determined. The Company has accrued $0.4 million for an estimate of a potential award for costs and attorneys’ fees as of March 31, 2020.

Stock Purchase Agreement with Enantigen

In October 2014, Arbutus Inc., our wholly-owned subsidiary, acquired all of the outstanding shares of Enantigen Therapeutics, Inc. ("Enantigen") pursuant to a stock purchase agreement. Through this transaction, Arbutus Inc. acquired an HBV surface antigen secretion inhibitor program and a capsid assembly inhibitor program.

Under the stock purchase agreement, Arbutus Inc. agreed to pay up to a total of $21.0 million to Enantigen's selling stockholders upon the achievement of specified development and regulatory milestones for (a) the first two products that contain either a capsid compound or an HBV surface antigen compound that is covered by a patent acquired under this agreement, or (b) a capsid compound from an agreed upon list of compounds. The development milestones are tied to programs which are no longer under development by the Company, and therefore the contingency related to these milestones has been reduced to zero.

An additional $102.5 million may also be paid to Enantigen's selling stockholders related to the achievement of certain sales performance milestones in connection with the sale of the first commercialized product by Arbutus Inc. for the treatment of HBV, regardless of whether such product is based upon assets acquired under this agreement, and a low single-digit royalty on net sales of such first commercialized HBV product, up to a maximum royalty payment of $1.0 million that, if paid, would be offset against Arbutus Inc.'s milestone payment obligations.

The contingent consideration for this acquisition is 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 statements of operations and comprehensive loss (see note 3). The fair value of the contingent consideration was $3.1 million as of March 31, 2020.

9. Collaborations, contracts and licensing agreements

Revenue contracts are described in detail in the Overview section of Part II, Item 8, "Financial Statements and Supplementary Data" in the Company's 2019 Form 10-K.

Alnylam Pharmaceuticals, Inc. and Acuitas Therapeutics, Inc.

The Company has two royalty entitlements to Alnylam's global net sales of ONPATTRO®.

In 2012, the Company entered into a license agreement with Alnylam that entitles Alnylam to develop and commercialize products with the Company's LNP technology. During the third quarter of 2018, Alnylam's ONPATTRO, which utilizes the Company's LNP technology, was approved by the U.S. Food and Drug Administration ("FDA") and the European Medicines Agency. The Company is entitled to tiered low to mid single-digit royalty payments on global net sales of ONPATTRO. In July 2019, the Company sold this portion of its royalty entitlement for Alnylam's ONPATTRO to OMERS. The Company recognizes non-cash royalty revenue for royalties on global net sales of ONPATTRO collected by OMERS. See note 7 for further details.

The Company also has rights to a second royalty interest on global net sales of ONPATTRO originating from a settlement agreement and subsequent license agreement with Acuitas Therapeutics, Inc. ("Acuitas"). This royalty entitlement from Acuitas has been retained by us and was not part of the royalty entitlement sale to OMERS.

Revenues are summarized in the following table:

	Three Months Ended March 31,	
	2020	2019
	(in thousands)	
Revenue from collaborations and licenses		
Acuitas Therapeutics, Inc.	$ 753	$ 252
Other milestone and royalty payments	82	256
Non-cash royalty revenue		
Alnylam Pharmaceuticals, Inc.	656	171
Total revenue	$ 1,491	$ 679

10. Stockholders' equity

Open Market Sales Agreement

In December 2018, the Company entered into an Open Market Sale Agreement with Jefferies LLC ("Jefferies") (the "Sale Agreement"), under which it could issue and sell common shares, from time to time, for an aggregate sales price of up to $50.0 million. For the three months ended March 31, 2019, the Company issued 614,401 common shares pursuant to the Sale Agreement resulting in net proceeds of approximately $2.7 million.

In December 2019, the Company entered into an amendment to the Sale Agreement with Jefferies (the "Amended Sale Agreement") in connection with the filing of a new shelf registration statement on Form S-3 (File No. 333-235674), filed with the SEC on December 23, 2019 (the "New Shelf Registration Statement"). The amendment revised the original Sale Agreement to reflect that the Company may sell its common shares, without par value, from time to time, for an aggregate sales price of up to $50.0 million, under the New Shelf Registration Statement. During the three months ended March 31, 2020, the Company issued 4,147,081 common shares pursuant to the Sale Agreement and the Amended Sale Agreement, resulting in net proceeds of approximately $12.3 million. As of March 31, 2020, the Company had approximately $42.7 million remaining available under the Amended Sale Agreement.

Stock-based compensation

The table below summarizes information about the Company's stock based compensation for the three months ended March 31, 2020 and 2019 and the expense recognized in the condensed consolidated statements of operations:

	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019
	(in thousands, except share and per share data)	
Options granted during period	2,097,237	1,604,500
Weighted average exercise price	$ 3.35	$ 4.57
Research and development	$ 853	$ 727
General and administrative	592	795
Total stock compensation expense	$ 1,445	$ 1,522

Series A Preferred Shares

In October 2017, the Company entered into a subscription agreement with Roivant for the sale of 1,164,000 Preferred Shares for gross proceeds of $116.4 million. These Preferred Shares are non-voting and accrue an 8.75% per annum coupon in the form of additional Preferred Shares, compounded annually, until October 16, 2021, at which time all the Preferred Shares will be subject to mandatory conversion into common shares (subject to limited exceptions in the event of certain fundamental corporate transactions relating to Arbutus's capital structure or assets, which would permit earlier conversion at Roivant's option). The conversion price is $7.13 per share, which will result in the Preferred Shares being converted into approximately 23 million common shares. After conversion of the Preferred Shares into common shares, based on the number of common shares outstanding as of March 31, 2020, Roivant would hold approximately 42% of the Company's common shares. Roivant agreed to a four year lock-up period for this investment and its existing holdings in the Company. Roivant also agreed to a four year standstill whereby Roivant will not acquire greater than 49.99% of the Company's common shares or securities convertible into common shares. The initial investment of $50.0 million closed in October 2017, and the remaining amount of $66.4 million closed in January 2018 following regulatory and shareholder approvals.

The Company records the Preferred Shares wholly as equity under ASC 480, *Distinguishing Liabilities From Equity,* with no bifurcation of conversion feature from the host contract, given that the Preferred Shares cannot be cash settled and the redemption features are within the Company's control, which include a fixed conversion ratio with predetermined timing and proceeds. The Company accrues for the 8.75% per annum compounding coupon at each reporting period end date as an increase to preferred share capital, and an increase to deficit (see Condensed Consolidated Statement of Stockholders' Equity).

11. Related Party Transactions

Through the first quarter of 2019, the Company purchased certain research and development services from Genevant. These services were billed at agreed hourly rates and were reflective of market rates for such services. The total cost of these services for the three months ended March 31, 2019 was $33 thousand, which was included in the Condensed Consolidated Statement of Operations under research and development. There were no such costs incurred during 2020.

Conversely, Genevant purchased certain administrative and transitional services from the Company totaling $19 thousand and $164 thousand for the three months ended March 31, 2020 and 2019, respectively, which were netted against research and development expenses in the condensed consolidated statements of operations.

In addition, during 2019 Genevant had a sublease for 17,900 square feet in the Company's Burnaby facility. Sublease income from Genevant was $0.1 million for the three months ended March 31, 2019, and was netted against site consolidation costs and lease liability. The Company's Burnaby facility lease and the corresponding sublease to Genevant expired on July 31, 2019.

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, 2019 and our unaudited condensed consolidated financial statements for the three months ended March 31, 2020. Our consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles and are presented in U.S. dollars.

REFERENCES TO ARBUTUS BIOPHARMA CORPORATION.

Throughout this Quarterly Report on Form 10-Q ("Form 10-Q") , the "Company," "Arbutus," "we," "us," and "our," except where the context requires otherwise, refer to Arbutus Biopharma Corporation and its consolidated subsidiaries, and "our board of directors" refers to the board of directors of Arbutus Biopharma Corporation.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Form 10-Q contains "forward-looking statements" or "forward-looking information" within the meaning of applicable United States and Canadian securities laws (we collectively refer to these items as "forward-looking statements"). Forward-looking statements are generally identifiable by use of the words "believes," "may," "plans," "will," "anticipates," "intends," "budgets," "could," "estimates," "expects," "forecasts," "projects" and similar expressions that are not based on historical fact or that are predictions of or indicate future events and trends, and the negative of such expressions. Forward-looking statements in this Form 10-Q, including the documents incorporated by reference, include statements about, among other things:

- our strategy, future operations, pre-clinical research, pre-clinical studies, clinical trials, prospects and the plans of management;
- the potential impact of the COVID-19 pandemic on our business;
- the discovery, development and commercialization of a curative combination regimen for chronic hepatitis B infection, a disease of the liver caused by the hepatitis B virus ("HBV");
- our beliefs and development path and strategy to achieve a curative combination regimen for HBV;
- obtaining necessary regulatory approvals;
- obtaining adequate financing through a combination of financing activities and operations;
- using the results from our HBV studies to adaptively design additional clinical trials to test the efficacy of the combination therapy and the duration of the result in patients;
- the expected timing of and amount for payments related to the Enantigen Therapeutics, Inc.'s transaction and its programs;
- the potential of our drug candidates to improve upon the standard of care and contribute to a curative combination treatment regimen;
- the potential benefits of the reversion of the Ontario Municipal Employees Retirement System ("OMERS") royalty monetization transaction for our ONPATTRO™ (Patisiran) ("ONPATTRO") royalty interest;
- developing a suite of products that intervene at different points in the viral life cycle, with the potential to reactivate the host immune system;
- using pre-clinical results to adaptively design clinical trials for additional cohorts of patients, testing the combination and the duration of therapy;
- selecting combination therapy regimens and treatment durations to conduct Phase 3 clinical trials intended to ultimately support regulatory filings for marketing approval;
- expanding our HBV drug candidate pipeline through internal development, acquisitions and in-licenses;
- our expectation for AB-729 for additional results for the 12 week portion of the 60 mg single-dose cohort to be available in the second quarter of 2020
- our expectation for AB-729 for preliminary results from a single-dose 90 mg cohort and a multi-dose 60 mg cohort Phase 1a/1b trial to be available in the second half of 2020;
- our expectation that AB-729 could be combined with our lead capsid inhibitor candidate, AB-836, and approved NAs, in our first combination therapy for HBV patients;
- the potential for an oral HBsAg-reducing agent and potential all-oral combination therapy;
- our objective to complete IND/CTA-enabling studies for AB-836 by the end of 2020;
- the potential for AB-836 to be low-dose with a wide therapeutic window and to address known capsid resistant variants T33N and I105T;
- the potential for AB-836 to have increased potency and an enhanced resistance profile, compared to our previous capsid inhibitor candidate, AB-506;

- the potential for AB-836 to be once-daily dosing;
- our expectation to pursue development of a next generation oral HBV RNA-destabilizer;
- payments from our licensed agreement with Gritstone Oncology, Inc.;
- the expected return from strategic alliances, licensing agreements, and research collaborations;
- statements with respect to revenue and expense fluctuation and guidance;
- having sufficient cash resources to fund our operations into mid-2021; and
- obtaining 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, other non-dilutive commercial arrangements and government grants and contracts;

as well as other statements relating to our future operations, financial performance or financial condition, prospects or other future events. Forward-looking statements appear primarily in the sections of this Form 10-Q entitled “Part I, Item 1- Financial Statements (Unaudited),” and “Part I, Item 2-Management’s Discussion and Analysis of Financial Condition and Results of Operations”.

Forward-looking statements are based upon current expectations and assumptions and are subject to a number of known and unknown risks, uncertainties and other factors that could cause actual results to differ materially and adversely from those expressed or implied by such statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2019 (the “Form 10-K”), and in particular the risks and uncertainties discussed under “Item 1A-Risk Factors” of this Form 10-Q and the Form 10-K. As a result, you should not place undue reliance on forward-looking statements.

Additionally, the forward-looking statements contained in this Form 10-Q represent our views only as of the date of this Form 10-Q (or any earlier date indicated in such statement). While we may update certain forward-looking statements from time to time, we specifically disclaim any obligation to do so, even if new information becomes available in the future. However, you are advised to consult any further disclosures we make on related subjects in the periodic and current reports that we file with the Securities and Exchange Commission.

The foregoing cautionary statements are intended to qualify all forward-looking statements wherever they may appear in this Form 10-Q. For all forward-looking statements, we claim protection of the safe harbor for the forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

This Form 10-Q also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources.

OVERVIEW

Arbutus is a clinical-stage biopharmaceutical company dedicated to discovering, developing and commercializing a cure for people with chronic hepatitis B virus ("HBV") infection. We are advancing multiple drug product candidates that may be combined into a potentially curative regimen for chronic HBV infection.

Hepatitis B is a potentially life-threatening liver infection caused by HBV. HBV can cause chronic infection which leads to a higher risk of death from cirrhosis and liver cancer. Chronic HBV infection represents a significant unmet medical need. The World Health Organization estimates that over 250 million people worldwide suffer from chronic HBV infection, while other estimates indicate that approximately 2 million people in the United States suffer from chronic HBV infection. Approximately 900,000 people die every year from complications related to chronic HBV infection despite the availability of effective vaccines and current treatment options.

Today's current treatment options include nucleos(t)ide analogs ("NA") and pegylated interferon regimens ("Peg-IFN"). However, less than 5% of patients are cured by these current treatment options after a finite treatment duration. With such low cure rates, most patients with chronic HBV infection are required to take NA therapy daily for the rest of their lives.

Our focus is on developing new HBV treatment regimens with finite treatment durations and higher cure rates. We define a cure as a functional cure where HBV DNA replication and hepatitis B surface antigen ("HBsAg") expression are reduced to undetectable levels and sustained six months after a finite duration of therapy. Our HBV product pipeline includes RNA interference ("RNAi") therapeutics, oral capsid inhibitors, oral compounds that inhibit PD-L1 and oral HBV RNA destabilizers. We believe a combination of these product candidates could lead to a curative treatment regimen with a finite duration for patients with chronic HBV infection.

There is a compelling market opportunity for an HBV curative regimen. Currently, an estimated 27 million (10.5%) of a total of over 250 million people worldwide with chronic HBV infection are diagnosed and approximately 4.5 million (1.8%) are on treatment. We believe that the introduction of an HBV curative regimen with a finite duration would substantially increase diagnosis and treatment rates for patients with chronic HBV.

Strategy

Our business strategy is to develop a curative combination regimen for patients with chronic HBV infection. We believe this can best be achieved by:

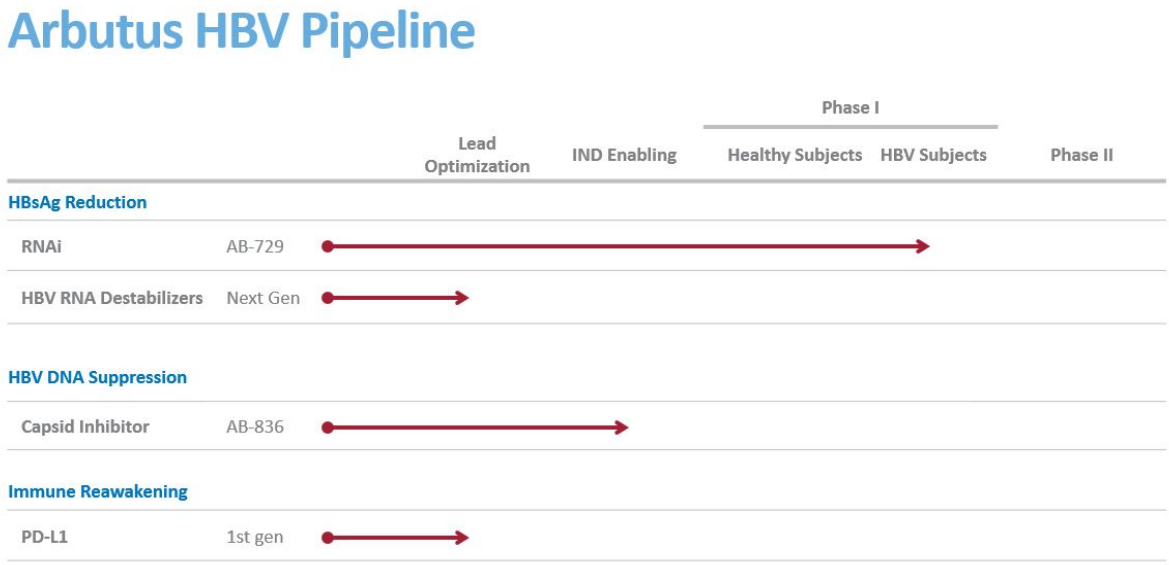
- developing a broad portfolio of proprietary therapeutic assets that target multiple elements of the HBV viral lifecycle, most importantly suppressing HBV replication and HBsAg expression;
- developing compounds that reawaken the host immune response;
- identifying a combination of therapeutic assets with complementary mechanisms of action that can deliver higher cure rates with a finite treatment duration; and
- advancing a curative combination regimen through clinical development, regulatory approval and commercial launch.

Our product candidates are first evaluated in Phase 1 clinical trials as a monotherapy or in combination with other currently-marketed therapies to assess patient safety and antiviral activity. We are currently conducting a Phase 1a/1b clinical trial and performing pre-clinical and investigational new drug ("IND")-enabling studies for our product candidates. Results from our Phase 1 clinical trials and other studies will inform the design of future Phase 2 and Phase 3 clinical trials that will evaluate a combination of our therapeutic agents in a potentially curative combination regimen.

Our Product Candidates

Given the biology of HBV, we believe therapeutic success will require a combination of agents with complementary mechanisms of action. We are developing product candidates that have the potential to reduce HBsAg expression, suppress HBV DNA replication and reawaken the immune response in patients with chronic HBV.

Our HBV product pipeline consists of the following programs:



We believe that AB-729, our subcutaneously administered RNAi product candidate, may be combinable with AB-836, our lead capsid inhibitor product candidate, and other currently-marketed or investigational therapies, in our first combination therapy for chronic HBV patients. In parallel, we are in lead optimization with several oral compounds for our PD-L1 program and our next-generation HBV RNA destabilizer program. We continue to explore expansion of our HBV pipeline through internal discovery and development activities and through potential strategic alliances.

GalNAc RNAi (AB-729)

RNAi therapeutics represent a recent significant advancement in drug development. RNAi therapeutics utilize a natural pathway within cells to silence genes by eliminating the disease-causing proteins that they code for. We are developing RNAi therapeutics that are designed to reduce HBsAg expression and other HBV antigens in patients chronically infected with HBV. Reducing HBsAg is widely believed to be a key prerequisite to enable a patient's immune system to reawaken and respond against the virus.

AB-729 is a subcutaneously-delivered RNAi therapeutic targeted to hepatocytes using our novel covalently conjugated GalNAc delivery technology. AB-729 inhibits viral replication and reduces all HBV antigens. In July 2019, we initiated a single- and multi-dose Phase 1a/1b clinical trial for AB-729, designed to investigate the safety, tolerability, pharmacokinetics, and pharmacodynamics of AB-729 in healthy volunteers and in chronic HBV subjects.

The ongoing first-in-human clinical trial of AB-729 consists of three parts:

- In Part 1, three cohorts of healthy subjects were randomized 4:2 to receive single doses (60 mg, 180 mg or 360 mg) of AB-729 or placebo.
- In Part 2, non-cirrhotic, HBeAg positive or negative, chronic hepatitis B subjects (n="6") currently taking nucleos(t)ide antiviral therapy with HBV DNA below the limit of quantitation received single doses (60 mg, 90 mg or 180 mg) of AB-729. All subjects continued their nucleos(t)ide antiviral therapy throughout the trial. Part 2 may also include dosing of AB-729 in HBV DNA positive chronic hepatitis B subjects.
- In Part 3, chronic hepatitis B subjects, HBV DNA negative first and HBV DNA positive later, will receive multiple doses of AB-729 for up to six months.

In March 2020, we announced positive preliminary results in the three cohorts of healthy subjects, all of whom received a single subcutaneous injection of AB-729 with no serious adverse events (SAEs) observed and most adverse events (AEs) were mild and considered unrelated to AB-729. Two subjects in the 360 mg cohort had asymptomatic, reversible Grade 3 ALT elevations assessed as related to AB-729. Neither subject had meaningful changes in any other laboratory parameter excepting Grade 1 or 2 AST elevation. There were no other clinically relevant abnormalities in laboratory tests, ECGs, or vital signs.

In March 2020, we also announced positive preliminary results in two cohorts (60 mg and 180 mg dose groups) of chronic hepatitis B subjects. All chronic hepatitis B subjects were on nucleos(t)ide antiviral therapy and received a single subcutaneous injection of AB-729. The Day 29 mean log10 (SE) HBsAg decline was -0.24 (0.13) for the 60 mg single-dose cohort and -0.81 (0.38) for the 180 mg single-dose cohort. In the 60 mg cohort, the maximum Day 29 decline was -0.62 log10. Subjects in the 60 mg cohort will continue to be followed for up to twelve weeks post-dose. The Week 12 mean log10 (SE) HBsAg decline was -0.98 (0.22) for the 180 mg single-dose cohort. Additionally, after a single 180 mg dose, HBsAg levels continued to decline well beyond Week 12 three out of four subjects, suggesting that AB-729 has the potential to be dosed less frequently than every four weeks. AB-729 dosed at either 60 mg or 180 mg in chronic hepatitis B subjects was generally safe and well tolerated and there were no SAEs. Most AEs were mild (13/15) and considered unrelated (12/15) to AB-729. One subject receiving the 180 mg dose who experienced the highest HBsAg decline also experienced a Grade 3 ALT/AST flare. Notably, this subject experienced an unrelated gastroenteritis and self-medicated. Additional Week 12 single-dose results for the 60 mg dose cohort are expected in the second quarter of 2020. Results from a single-dose 90 mg cohort and a multi-dose 60 mg cohort are expected in the second half of 2020. While we have been able to progress with our clinical and pre-clinical activities to date, it is not possible to predict if the COVID-19 pandemic will negatively impact our plans and timelines, including enrolling and monitoring subjects in the trial.

HBV RNA Destabilizers

HBV RNA destabilizers are small molecule orally active agents that cause the destabilization and ultimate degradation of HBV RNAs. These agents result in the reduction of HBsAg and other viral proteins in both whole cell systems and animal models. They have the potential to selectively impact HBV versus other RNA or DNA viruses and demonstrate pangenotypic characteristics. HBV RNA destabilizers have demonstrated additive effects in combination with other anti-HBV mechanisms of action. HBV RNA destabilizers have the potential to complement or replace subcutaneously delivered RNAi agents with an oral therapy in combination with a capsid inhibitor and an approved NA.

In February 2020, we discontinued the development of AB-452, our first-generation oral HBV RNA destabilizer product candidate following extensive preclinical evaluations. However, oral HBV RNA destabilizers have shown compelling anti-viral effects in multiple HBV pre-clinical models and we believe this target offers potential for an oral HBsAg reducing agent and potentially an all oral combination HBV therapy. Given this, we continue to advance next-generation oral HBV RNA-destabilizers with chemical scaffolds distinct from AB-452 through lead optimization.

Capsid Inhibitors (AB-836)

HBV core protein assembles into a capsid structure, which is required for viral replication. The current commercially available therapies (NAs or Peg-IFN) significantly reduce HBV DNA levels in the serum, but HBV replication continues in the liver, thereby enabling HBV infection to persist. More effective therapies for patients require new agents which will further block viral replication. We are developing capsid inhibitors (also known as core protein inhibitors) as oral therapeutics which, in combination with NAs, could further reduce HBV replication. By inhibiting assembly of functional viral capsids, the ability of HBV to replicate is impaired. Capsid inhibitor molecules also inhibit the uncoating step of the viral life cycle and thus reduce the formation of cccDNA, the viral reservoir which resides in the cell nucleus, and is believed to play a role in viral persistence.

Our oral capsid inhibitor discovery effort generated promising next-generation compounds, which led to the nomination of AB-836 in January 2020. AB-836 has the potential for increased potency and an enhanced resistance profile compared to our previous capsid inhibitor product candidates, including AB-506. AB-836 is a novel chemical series differentiated from AB-506 and other competitor compounds in the capsid inhibitor space. AB-836 leverages a novel binding site within the core protein dimer-dimer interface, has shown to be active against NA resistant variants and has the potential to address certain known capsid resistant variants. AB-836 is anticipated to be combinable with other mechanisms of action and is also anticipated to be dosed once daily. We anticipate completing IND/CTA-enabling studies for AB-836 by the end of 2020.

Immune Reawakening

We are in lead optimization with oral compounds potentially capable of reawakening patients' HBV-specific immune response by inhibiting PD-L1. These compounds complement our pipeline of agents and could potentially be an important part of a combination therapy for the treatment of HBV.

COVID-19

In December 2019, an outbreak of a novel strain of coronavirus (COVID-19) was identified in Wuhan, China. This virus continues to spread globally, has been declared a pandemic by the World Health Organization and has spread to nearly every country in the world. The impact of this pandemic has been, and will likely continue to be, extensive in many aspects of society. The pandemic has resulted in and will likely continue to result in significant disruptions to businesses. A number of countries and other jurisdictions around the world have implemented extreme measures to try and slow the spread of the virus. These measures include the closing of businesses and requiring people to stay in their homes, the latter of which raises uncertainty regarding the ability to travel to hospitals in order to participate in clinical trials. Additional measures that have had, and will likely continue to have, a major impact on clinical development, at least in the near-term, include shortages and delays in the supply chain, and prohibitions in certain countries on enrolling subjects in new clinical trials. Despite the challenges of COVID-19, we have not had to alter our objectives for 2020. However, future disruptions related to the COVID-19 pandemic could negatively impact our plans and timelines, including enrolling and monitoring subjects in the trial.

While our core mission is to find a cure for hepatitis B, the magnitude of the coronavirus pandemic is undeniable. Given our proven expertise in the discovery of new antiviral therapies, we feel compelled to work towards the discovery of a new treatment. To that end, we have assembled an internal team of expert scientists under the direction of our Chief Scientific Officer, Dr. Michael Sofia, to identify novel small molecule therapies to treat COVID-19 and future coronavirus outbreaks. Dr. Sofia, who was awarded the Lasker-DeBakey Award for his discovery of sofosbuvir, brings extensive antiviral drug discovery experience to this new program. We have also recently joined forces with the COVID R&D consortium to further support and expedite efforts to address the SARS-CoV-2 pandemic and any future coronavirus outbreaks. At this time, our COVID-19 research program will focus on the discovery and development of new molecular entities that address specific viral targets including the nsp12 viral polymerase and the viral protease. These targets are essential viral proteins which we have experience in targeting. The establishment of the COVID-19 effort does not impact our belief that our cash, cash equivalents and investments as of March 31, 2020 are sufficient to fund our operations into the middle of 2021.

Royalty Entitlements

Alnylam Pharmaceuticals, Inc. and Acuitas Therapeutics, Inc.

The Company has two royalty entitlements to Alnylam's global net sales of ONPATTRO®.

In 2012, we entered into a license agreement with Alnylam Pharmaceuticals, Inc. ("Alnylam") that entitles Alnylam to develop and commercialize products with our lipid nanoparticle delivery ("LNP") technology. Alnylam's ONPATTRO, which represents the first approved application of our LNP technology, was approved by the United States Food and Drug Administration ("FDA") and the European Medicines Agency ("EMA") during the third quarter of 2018 and was launched by Alnylam immediately upon approval in the United States. Under the terms of this license agreement, we are entitled to tiered royalty payments on global net sales of ONPATTRO ranging from 1.00% - 2.33% after offsets, with the highest tier applicable to annual net sales above $500 million. This royalty interest was sold to OMERS, effective as of January 1, 2019, for $20 million in gross proceeds before advisory fees. OMERS will retain this entitlement until it has received $30 million in royalties, at which point 100% of this royalty entitlement on future global net sales of ONPATTRO will revert to us. OMERS has assumed the risk of collecting up to $30 million of future royalty payments from Alnylam and we are not obligated to reimburse OMERS if they fail to collect any such future royalties. If this royalty entitlement reverts to us, it has the potential to provide an active royalty stream or to be otherwise monetized again in full or in part.

We also have rights to a second royalty interest on global net sales of ONPATTRO originating from a settlement agreement and subsequent license agreement with Acuitas. This royalty entitlement from Acuitas has been retained by us and was not part of the royalty entitlement sale to OMERS.

CRITICAL ACCOUNTING POLICIES AND SIGNIFICANT JUDGEMENTS AND ESTIMATES

This management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with United States generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of

assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe there have been no significant changes in our critical accounting policies and estimates as discussed in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our Annual Report on Form 10-K for the year ended December 31, 2019.

RECENT ACCOUNTING PRONOUNCEMENTS

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

Please refer to note 2 to our condensed consolidated financial statements included in Part I, Item 1, “Financial Statements (Unaudited)” of this Quarterly Report on Form 10-Q for a description of recent accounting pronouncements applicable to our business.

RESULTS OF OPERATIONS

The following summarizes the results of our operations for the periods shown:

	Three Months Ended March 31,	
	2020	2019
	(in thousands except per share amounts)	
Total revenue	$ 1,491	$ 679
Operating expenses	14,638	19,875
Loss from operations	(13,147)	(19,196)
Other income (loss)	(714)	(4,055)
Net loss	$ (13,861)	$ (23,251)
Dividend accretion of convertible preferred shares	(2,978)	(2,715)
Net loss attributable to common shares	$ (16,839)	$ (25,966)

Revenue

Revenues are summarized in the following table:

	Three Months Ended March 31,			
	2020	% of Total	2019	% of Total
	(in thousands, except percentages)			
Revenue from collaborations and licenses				
Acuitas Therapeutics, Inc.	$ 753	51%	$ 252	37%
Other milestone and royalty payments	82	5%	256	38%
Non-cash royalty revenue				
Alnylam Pharmaceuticals, Inc.	656	44%	171	25%
Total revenue	$ 1,491	100%	$ 679	100%

Revenue contracts are addressed in detail in the Overview section of Part I, Item 2, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our 2019 Form 10-K.

Revenue increased $0.8 million for the three months ended March 31, 2020, as compared to the same period in 2019, due primarily to an increase in royalties from the growth of Alnylam’s sales of Onpattro™. Revenue for the three months ended March 31, 2020 and 2019 consisted primarily of royalties on net sales of Alnylam's Onpattro™ and royalties on net sales of Acrotech Biopharma LLC’s Marqibo® (formerly Spectrum Pharmaceuticals, Inc.).

Operating expenses

Operating expenses are summarized in the following tables:

	Three Months Ended March 31,			
	2020	% of Total	2019	% of Total
	(in thousands, except percentages)			
Research and development	$ 10,416	71%	$ 14,712	74%
General and administrative	3,553	24%	4,412	22%
Depreciation	500	3%	509	3%
Change in fair value of contingent consideration	112	1%	125	1%
Site consolidation	57	—%	117	1%
Total operating expenses	$ 14,638	100%	$ 19,875	100%

Research and development

Research and development 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.

Research and development expenses decreased $4.3 million for the three months ended March 31, 2020, as compared to the same period in 2019. The decrease in research and development expenses for the three months ended March 31, 2020 versus 2019 was due primarily to the decision in October 2019 to discontinue development of AB-506, our prior generation capsid inhibitor product candidate, as well as higher spend on AB-729 during the first quarter of 2019 for preclinical studies and drug product supply in preparation for the Phase 1a/1b clinical trial which commenced in the second quarter of 2019.

A significant portion of our research and development 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.

General and administrative

General and administrative expenses decreased $0.9 million for the three months ended March 31, 2020, as compared to the same period in 2019, due primarily to lower legal fees and non-cash stock based compensation expense.

Change in fair value of contingent consideration

Contingent consideration is a liability we assumed from our acquisition of Arbutus, Inc. in March 2015. In general, as time passes and assuming no changes to the assumptions related to the contingency, the fair value of the contingent consideration increases as the progress of our programs get closer to triggering contingent payments.

Site consolidation

As of March 31, 2020, we have recognized substantially all of the expense related to our site consolidation.

Other income (loss)

Other income (loss) is summarized in the following table:

	Three Months Ended March 31,	
	2020	2019
	(in thousands)	
Interest income	$ 345	$ 600
Interest expense	(1,041)	(12)
Foreign exchange (losses) / gains	(18)	8
Net equity investment loss	—	(4,651)
Total other loss	$ (714)	$ (4,055)

Interest income

The $0.3 million decrease in interest income for the three months ended March 31, 2020, compared to the same period in 2019 was due primarily to lower average cash and investment balances.

Interest expense

Interest expense for the three months ended March 31, 2020 consisted primarily of non-cash amortization of the liability related to the sale of future royalties, which occurred in July 2019.

Foreign exchange gains (losses)

In connection with our site consolidation to Warminster, PA, our Canadian dollar denominated expenses and cash balances have decreased significantly now that a majority of our business transactions are based in the United States. We continue to incur expenses and hold some cash balances in Canadian dollars, and as such, will remain subject to risks associated with foreign currency fluctuations. In the future, we expect that the proportion of cash balances and expenses incurred in Canadian dollars, relative to U.S. dollars, will continue to decrease as a result of the site consolidation.

Gain on investment and equity investment losses

In the second quarter of 2018, together with Roivant, we launched Genevant Sciences Ltd. (“Genevant”), a company focused on the discovery, development, and commercialization of a broad range of RNA-based therapeutics enabled by our LNP Delivery Technologies. We account for our 40% ownership interest in Genevant using the equity method of accounting. As of March 31, 2020, the carrying value of our investment in Genevant was zero and we did not record equity losses during the three months ended March 31, 2020. For the three months ended March 31, 2019, we recorded $4.7 million of equity investment losses, reflecting our proportionate share of Genevant’s net results on a one-quarter lag basis.

LIQUIDITY AND CAPITAL RESOURCES

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

	Three Months Ended March 31,	
	2020	2019
	(in thousands)	
Net loss	$ (13,861)	$ (23,251)
Items not involving cash:	2,448	6,589
Net change in operating items:	(4,040)	82
Net cash used in operating activities	(15,453)	(16,580)
Net cash provided by / (used in) investing activities	(2,401)	61,033
Net cash provided by financing activities	12,481	2,536
Effect of foreign exchange rate changes on cash and cash equivalents	(10)	38
Increase / (decrease) in cash and cash equivalents	(5,383)	47,027
Cash and cash equivalents, beginning of period	31,799	36,942
Cash and cash equivalents, end of period	$ 26,416	$ 83,969

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

For the three months ended March 31, 2020, $15.5 million of cash was used in operating activities compared to $16.6 million of cash used in the three months ended March 31, 2019. The decrease in net cash used in operating activities was due primarily to a reduction in expenses associated with our AB-506 development program that was discontinued in October 2019.

For the three months ended March 31, 2020, net cash used in investing activities was $2.4 million as we purchased additional investments in marketable securities. For the three months ended March 31, 2019, net cash provided by investing activities was $61.0 million as certain short-term investments matured.

For the three months ended March 31, 2020, net cash provided by financing activities was $12.5 million due primarily to proceeds from sales of common shares under our open market sale agreement, as amended, with Jefferies LLC (“Jefferies”). For the three months ended March 31, 2019, net cash provided by financing activities was $2.5 million due primarily to $2.2 million of proceeds from sales of common stock under such sales agreement.

Sources of Liquidity

As of March 31, 2020, we had cash, cash equivalents and investments of $88.1 million. We had no outstanding debt at March 31, 2020.

In December 2018, we entered into an Open Market Sale Agreement with Jefferies (the “Sale Agreement”), under which we could issue and sell common shares, from time to time, for an aggregate sales price of up to $50.0 million. In December 2019, we entered into an amendment to the Sale Agreement with Jefferies (the “Amended Sale Agreement”) in connection with the filing of a new shelf registration statement on Form S-3 (File No. 333-235674), filed with the SEC on December 23, 2019 (the “New Shelf Registration Statement”). The Amended Sale Agreement revised the original Sale Agreement to reflect that we may sell our common shares, from time to time, for an aggregate sales price of up to $50.0 million, under the New Shelf Registration Statement. For the three months ended March 31, 2020, we issued 4,147,081 common shares pursuant to the Sale Agreement and the Amended Sale Agreement, resulting in net proceeds of approximately $12.3 million. As of March 31, 2020, we had approximately $42.7 million remaining available under the Amended Sale Agreement.

Additionally, we have a royalty entitlement on ONPATTRO, a drug developed by Alnylam that incorporates our LNP technology and was approved by the FDA and the EMA during the third quarter of 2018 and was launched immediately upon approval in the US. In July 2019, we sold a portion of this royalty interest to OMERS, effective as of January 1, 2019, for $20 million in gross proceeds before advisory fees. OMERS will retain this entitlement until it has received $30 million in royalties, at which point 100% of such royalty interest on future global net sales of ONPATTRO will revert to us. OMERS has assumed the risk of collecting up to $30 million of future royalty payments from Alnylam and Arbutus is not obligated to reimburse OMERS if they fail to collect

any such future royalties. If this royalty entitlement reverts to us, it has the potential to provide an active royalty stream or to be otherwise monetized again in full or in part. In addition to the royalty from the Alnylam LNP license agreement, we are also receiving a second, lower royalty interest on global net sales of ONPATTRO originating from a settlement agreement and subsequent license agreement with Acuitas. The royalty from Acuitas has been retained by us and was not part of the royalty sale to OMERS.

In October 2017, we closed the sale of 500,000 Preferred Shares to Roivant for gross proceeds of $50.0 million. A second tranche of 664,000 Preferred Shares for gross proceeds of $66.4 million closed in January 2018, following receipt of the approval of our shareholders. 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 March 31, 2020, we held an aggregate of $88.1 million in cash, cash equivalents and investments. We believe that our cash, cash equivalents and investments as of March 31, 2020 are sufficient to fund our operations into the middle of 2021. 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 effects of the COVID-19 pandemic on our business, the medical community and the global economy;
- revenue earned from our legacy collaborative partnerships and licensing agreements, including potential royalty payments from Alnylam's ONPATTRO;
- revenue earned from ongoing collaborative partnerships, including milestone and royalty payments;
- 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 product candidates;
- delays in the development of our product candidates due to pre-clinical and clinical findings;
- our decisions to in-license or acquire additional products, product candidates 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 intend to seek funding to maintain and advance our business from a variety of sources including public or private equity or debt financing, potential monetization transactions, collaborative or licensing 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 research and development programs. Further, the continued spread of COVID-19 has also led to severe disruption and volatility in the global capital markets, which could increase our cost of capital and adversely affect our ability to access the capital markets in the future.

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 our 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.

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.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes in our quantitative and qualitative disclosures about market risk from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2019.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2020. The term “disclosure controls and procedures”, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure, particularly during the period in which this Quarterly Report on Form 10-Q was being prepared. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their desired objectives, and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2020, our principal executive officer and principal financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as defined in Rules 13a–15(f) and 15d–15(f) under the Exchange Act) during the three months ended March 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For information regarding legal matters, please refer to note 10. Contingencies and Commitments to the condensed consolidated financial statements contained in Part I of this Quarterly Report on Form 10-Q, which is incorporated herein by reference.

ITEM 1A. RISK FACTORS

The COVID-19 coronavirus could adversely impact our business, including our clinical development plans.

In December 2019, a novel strain of coronavirus, COVID-19, was reported to have surfaced in Wuhan, China. Since then, the COVID-19 coronavirus has spread to multiple countries, including the United States, and has caused significant disruptions around the world. We may experience other disruptions as a result of the COVID-19 pandemic that could severely impact our business, including:

- interruption of key manufacturing, research and clinical development activities due to limitations on work and travel imposed or recommended by federal or state governments, employers and others;
- delays or difficulties in clinical trial site operations, including difficulties in recruiting clinical site investigators and clinical site staff and difficulties in enrolling patients or treating patients in active trials;
- interruption of key business activities due to illness and/or quarantine of key individuals and delays associated with recruiting, hiring and training new temporary or permanent replacements for such key individuals, both internally and at our third party service providers;
- delays in research and clinical trial sites receiving the supplies and materials needed to conduct preclinical studies and clinical trials, due to work stoppages, travel and shipping interruptions or restrictions or other reasons;
- difficulties in raising additional capital needed to pursue the development of our programs due to the slowing of our economy and near term and/or long term negative effects of the pandemic on the financial, banking and capital markets;
- changes in local regulations as part of a response to the COVID-19 coronavirus outbreak that may require us to change the ways in which research, including clinical development, is conducted, which may result in unexpected costs; and
- delays in necessary interactions with regulators and other important agencies and contractors due to limitations in employee resources, travel restrictions or forced furlough of government employees.

The global outbreak of the COVID-19 coronavirus continues to rapidly evolve. The extent to which the COVID-19 coronavirus may impact our business will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions and the effectiveness of actions taken in the United States and other countries to contain and treat the virus.

There have been no other material changes in our risk factors from those disclosed in our Annual Report on Form 10-K for the fiscal year-ended December 31, 2019.

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

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

EXHIBIT INDEX

Number	Description
3.1	Notice of Articles and Articles of the Company, as amended.(incorporated herein by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on March 16, 2018)
3.2	Amendment to Articles of the Company (incorporated herein by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, filed with the SEC on November 7, 2018)
4.1	Governance Agreement between the Company and Roivant Sciences Ltd., a Bermuda exempted company, dated January 11, 2015 (incorporated herein by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K/A filed with the SEC on January 26, 2015)
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2**	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following materials from Arbutus Biopharma Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets; (ii) Condensed Consolidated Statements of Operations; (iii) Condensed Consolidated Statements of Comprehensive Loss; (iv) Condensed Consolidated Statements of Stockholders' Equity; (v) Condensed Consolidated Statements of Cash Flows; and (vi) Notes to Condensed Consolidated Financial Statements

* Filed herewith.

** Furnished herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on May 11, 2020.

ARBUTUS BIOPHARMA CORPORATION

By: /s/ William H Collier

William H Collier

President and Chief Executive Officer

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES

EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE

SARBANES-OXLEY ACT OF 2002

I, William Collier, 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: May 11, 2020

/s/ William Collier
Name: William Collier
Title: President and Chief Executive Officer

Exhibit 31.2

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

I, David Hastings, 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: May 11, 2020

/s/ David Hastings
Name: David Hastings
Title: Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO SECTION 906

OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Arbutus Biopharma Corporation (the "Company") for the quarter ended March 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I William Collier, 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: May 11, 2020

/s/ William Collier
Name: William Collier
Title: President and Chief Executive Officer

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO SECTION 906

OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Arbutus Biopharma Corporation (the "Company") for the quarter ended March 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I David Hastings, 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: May 11, 2020

/s/ David Hastings
Name: David Hastings
Title: Chief Financial Officer