Management's Discussion and Analysis
of Financial Condition and Results of Operations

Introduction

This Management's Discussion and Analysis ("MD&A") provides a review of the results of operations, financial condition and cash flows of Aeterna Zentaris Inc. as at September 30, 2019 and for the three-months and nine-months ended September 30, 2019 and 2018. In this MD&A, "Aeterna Zentaris", the "Company", "we", "us" and "our" mean Aeterna Zentaris Inc. and its subsidiaries. This discussion should be read in conjunction with the information contained in our unaudited condensed interim consolidated financial statements and the accompanying notes thereto as at September 30, 2019 and for the three-months and nine-months ended September 30, 2019 and 2018, and the audited consolidated financial statements and MD&A for the years ended December 31, 2018 and 2017, which were prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). All amounts in this MD&A are presented in US dollars, except as otherwise noted.

We have three wholly-owned direct and indirect subsidiaries, Aeterna Zentaris GmbH ("AEZS Germany"), based in Frankfurt, Germany; Zentaris IVF GmbH, a direct wholly-owned subsidiary of AEZS Germany, based in Frankfurt, Germany; and Aeterna Zentaris, Inc., an entity incorporated in the State of Delaware with an office in Summerville, South Carolina in the United States. Our common shares are listed on both the NASDAQ Capital Market and on the Toronto Stock Exchange under the symbol "AEZS".

This MD&A was approved by our Board of Directors on November 7, 2019.

About Forward-Looking Statements

This document contains forward-looking statements (as defined by applicable securities legislation) made pursuant to the safe-harbor provision of the U.S. Securities Litigation Reform Act of 1995, which reflect our current expectations regarding future events. Forward-looking statements may include, but are not limited to statements preceded by, followed by, or that include the words "will," "expects," "believes," "intends," "would," "could," "may," "anticipates," and similar terms that relate to future events, performance, or our results. Forward-looking statements involve known and unknown risks and uncertainties, including those discussed in this press release and in our Annual Report on Form 20-F, under the caption "Key Information - Risk Factors" filed with the relevant Canadian securities regulatory authorities in lieu of an annual information form and with the U.S. Securities and Exchange Commission. Known and unknown risks and uncertainties could cause our actual results to differ materially from those in forward-looking statements. Such risks and uncertainties include, among others, our ability to continue as a going concern dependent, in part, on the ability of Aeterna Zentaris Inc. to transfer cash from AEZS Germany to the Canadian parent and U.S. subsidiary and secure additional financing, our now heavy dependence on the success of Macrilen™ (macimorelin) and related out-licensing arrangements and the continued availability of funds and resources to successfully develop and commercialize the product, our strategic review process, the ability of the Special Committee to carry out its mandate, the ability of the Company to enter into out-licensing, development, manufacturing and marketing and distribution agreements with other pharmaceutical companies and keep such agreements in effect, reliance on third parties for the manufacturing and commercialization of Macrilen™ (macimorelin), potential delay or termination or lack of success of our pediatric clinical trial program, potential disputes with third parties, leading to delays in or termination of the manufacturing, development, out-licensing or commercialization of our product candidates, or resulting in significant litigation or arbitration, and, more generally, uncertainties related to the regulatory process, our ability to efficiently commercialize or out-license Macrilen™ (macimorelin), the degree of market acceptance of Macrilen™ (macimorelin), our ability to obtain necessary approvals from the relevant regulatory authorities to enable us to use the desired brand names for our product, the impact of securities class action litigation or other litigation on our cash flow, results of operations and financial position, our ability to take advantage of business opportunities in the pharmaceutical industry, our ability to protect our intellectual property, the potential of liability arising from shareholder lawsuits and general changes in economic conditions. Investors should consult our quarterly and annual filings with the Canadian and U.S. securities commissions for additional information on risks and uncertainties. Given these uncertainties and risk factors, readers are cautioned not to place undue reliance on these forward-looking statements. We disclaim any obligation to update any such factors or to publicly announce any revisions to any of the forward-looking statements contained herein to reflect future results, events or developments, unless required to do so by a governmental authority or applicable law.

About Material Information

This MD&A includes information that we believe to be material to investors after considering all circumstances. We consider information and disclosures to be material if they result in, or would reasonably be expected to result in, a significant change in the market price or value of our securities, or where it is likely that a reasonable investor would consider the information and disclosures to be important in making an investment decision.

We are a reporting issuer under the securities legislation of all of the provinces of Canada, and our securities are registered with the SEC. We are therefore required to file or furnish continuous disclosure information, such as interim and annual financial statements, MD&A, proxy or information circulars, annual reports on Form 20-F, material change reports and press releases with the appropriate securities regulatory authorities. Copies of these documents may be obtained free of charge upon request from our Corporate Secretary or on the Internet at the following addresses: www.aezsinc.com, www.sedar.com and www.sec.gov.

Company Overview

The Company is a specialty biopharmaceutical company engaged in commercializing novel pharmaceutical therapies, principally through out-licensing arrangements. We are a party to a license and assignment agreement with Novo Nordisk A/S ("Novo") to carry out development, manufacturing, registration, regulatory, supply chain for the commercialization of Macrilen™ (macimorelin), which is to be used in the diagnosis of patients with adult growth hormone deficiency ("AGHD"), in the United States and Canada (the "License and Assignment Agreement"). In addition, we are actively pursuing business development opportunities for macimorelin in the rest of the world and to monetize the value of our non-strategic assets.

Key Developments

Financing activities

On September 20, 2019, the Company entered into a securities purchase agreement with U.S. institutional investors to purchase $5.0 million (before transaction costs of $0.8 million) of its common shares in a registered direct offering and warrants to purchase common shares in a concurrent private placement (together, the "Offering"). The combined purchase price for one common share and one warrant was $1.50. Under the terms of the securities purchase agreement, the Company sold 3,325,000 common shares. In a concurrent private placement, the Company issued warrants to purchase up to an aggregate of 3,325,000 common shares. The warrants are exercisable commencing six months from the date of issuance, have an exercise price of $1.65 per share and expire 5 years following the date of issuance.

Commercialization of Macrilen™ (macimorelin) in US and Canada

On January 16, 2018, the Company through AEZS Germany entered into the "License and Assignment Agreement with Strongbridge Ireland Limited ("Strongbridge") to carry out development, manufacturing, registration, regulatory and supply chain services for the commercialization of Macrilen™ (macimorelin) in the United States and Canada, which provides for (i) the "right to use" license relating to the Adult Indication; (ii) the sale of the right to acquire a license of a future pediatric indication approved by the United States Food and Drug Administration ("FDA"); (iii) the licensee to fund 70% of the costs of a pediatric clinical trial submitted for approval to the EMA and FDA (the "PIP study") to be run by the Company with customary oversight from a joint steering committee (the "JSC"); and (iv) an Interim Supply Arrangement. Product sales of Macrilen™ (macimorelin) began on July 23, 2018 by Strongbridge; effective December 19, 2018, Strongbridge was sold to Novo.

Royalty income earned under the License and Assignment Agreement for the nine-month period ending September 30, 2019 was $0.03 million (2018 - $nil). During the nine-month period ended September 30, 2019, the Company invoiced Novo $0.8 million for its share of PIP study costs (2018 - Strongbridge $0.2 million) and $1.1 million for supply chain costs (2018 -Strongbridge $0.7 million).

During the third quarter of 2019, Novo confirmed that it had initiated a thorough review on support, reimbursement, distribution and marketing arrangements regarding Macrilen™ (macimorelin) in order to identify improvements to the Macrilen™ commercialization plans. We continue to work with Novo on addressing the slower than expected U.S. sales to date.

Also, in the first nine months of 2019, the initial phase of the Macrilen™ macimorelin PIP study (the "P01 Dose Ranging Study") continued to progress with the first two-thirds of subjects having enrolled in the study. We currently expect to complete the P01 Dose Ranging Study in the first quarter of 2020. Thereafter, we plan to initiate the final stage of the pediatric clinical trial in the second or third quarter of 2020.

Rest of world commercialization of macimorelin

On January 16, 2019, we announced that the European Medicines Agency ("EMA") granted marketing authorization for macimorelin for the diagnosis of AGHD. We believe that this marks an important development in our European commercialization strategy based on research evaluating the prevalence of AGHD in adults in Europe. We are in discussions with a variety of companies regarding licensing and/or distribution opportunities in the rest of the world ("ROW").

On March 12, 2019, the Company announced that its board of directors formed a special committee of independent directors (the "Special Committee") to review strategic options available to the Company. The Special Committee approved the engagement by the Company of a financial advisor, Torreya, that was working with management to assist the Special Committee and the board of directors in considering a wide range of transactions, including opportunities for the license of Macrilen™ (macimorelin) outside of the United States and Canada, or other monetization transactions relating to Macrilen™ (macimorelin). In October 2019, the Company ended its arrangement with Torreya, and re-commenced business development activities on its own.

Changes in personnel

On June 6, 2019, the Company announced that it was reducing the size of its German workforce and operations to more closely reflect the Company's ongoing commercial activities in Frankfurt. This restructuring affects 8 employees in Frankfurt, Germany and resulted in $0.8 million of severance costs that are expected to be paid by January 31, 2020.

In July 2019, Michael Ward resigned as managing director of AEZS Germany and Dr. Klaus Paulini assumed this role. In August 2019, Jonathan Pollack resigned as a director of Aeterna Zentaris Inc. and, in September 2019, Brian Garrison, resigned as a Senior Vice President, Global Commercial Operations of Aeterna Zentaris Inc. Subsequent to quarter-end, on October 4, 2019, Dr. Klaus Paulini was announced as President and Chief Executive Officer of the Company, replacing Michael Ward who is entitled to severance of approximately $0.5 million. Dr. Paulini was also appointed as a Director of Aeterna Zentaris Inc. at that time.

Monetization of non-strategic assets

Opportunities for the Company to monetize non-strategic assets include preclinical work done on AEZS-120, a prostate cancer vaccine and preclinical and clinical work done on AEZS-108 (zoptarelin doxorubicin) and AEZS-104 (perifosine).

Outlook for 2019

The following represents forward-looking information and users are cautioned that actual results may vary.

Management has evaluated whether material uncertainties exist relating to events or conditions and believes that the commercial success of Macrilen™ (macimorelin) will depend on several factors, including, but not limited to, the receipt of approvals from foreign regulatory authorities; Novo developing appropriate distribution and marketing infrastructure and arrangements and launching and growing commercial sales of Macrilen™ (macimorelin); and acceptance of Macrilen™ (macimorelin) in the medical community, among patients and with third party payers.

Following Novo's acquisition of the U.S. and Canadian rights to Macrilen™ (macimorelin), the JSC met in January, May and August 2019 to discuss Novo's commercialization plan for the United States and Canada, their supply chain needs and the enrollment of patients and protocols of the PIP study. The Company expects that quarterly meetings will continue as forecasts for sales, inventory build and needs for the PIP study progresses.

In March 2019, the Special Committee approved the engagement of Torreya, a global investment bank specializing in life sciences, as its financial advisor. Torreya was working with management to assist the Special Committee and the board of directors in considering a wide range of transactions, including opportunities for the license of macimorelin outside of the United States and Canada, other monetization transactions relating to macimorelin or the potential sale of the Company, which may create value for our shareholders and other stakeholders. In October 2019, the Company ended its arrangement with Torreya and re-commenced business development activities on its own. Based on the contract with Torreya, should the Company agree to license macimorelin to certain companies in a defined period of time after the cancellation of the contract the Company would owe a fee to Torreya.

The Company believes that the European Commission's January 2019 announcement of marketing authorization for macimorelin for the diagnosis of AGHD has further validated the clinical profile and commercial value of macimorelin. Our priority is in the commercialization of macimorelin; however, we continue to pursue out-licensing opportunities of our non-strategic assets, as they arise.

Summary of key expectations for revenues, operating expenditures and cash flows

The further development and commercialization of Macrilen™ (macimorelin) in 2019 is the Company's primary focus. As the P01 Dose Ranging Study has progressed, we have re-evaluated our budget and extended the timing of its completion to the first quarter of 2020. As such, we expect that research and development costs are expected to be up to $2.5 million for the year ending December 31, 2019 as compared with our earlier forecast of up to $2.0 million for the same period.

We expect our general and administrative expenses to range between $6.5 million and $7.5 million for the year ending December 31, 2019 and to consist primarily of employee, insurance, rent, legal and public company costs.

The June 2019 restructuring to the German operations increased the Company's operating expenses by $0.8 million and led to an additional impairment in the building right of use asset of $0.06 million as office and lab space will become vacant or underutilized. During the third quarter of 2019, a new sub-lessee signed a 6-month lease for certain lab and office space and management accordingly reduced the impairment of its building right of use asset by $0.1 million.

In addition, the Company has incurred $0.5 million in operating expenses relating to its work with Torreya which have been classified as follows:

- $0.3 million as Selling expenses; and
- $0.2 million as General and administrative expenses.

During the third quarter of 2019, in addition to the Offering, we also explored a convertible debenture financing. While such a financing was not completed, the Company incurred $0.1 million in legal and other costs which are presented in net finance costs.

We continue to expect our selling expenses to be up to $2.0 million for the year ending December 31, 2019.

Condensed Interim Consolidated Statements of Comprehensive (Loss) Income

(in thousands, except share and per share data)	Three months ended September 30,		Nine months ended September 30,	
	2019	**2018**	**2019**	**2018**
	$	**$**	**$**	**$**
Revenues				
Royalty income	**8**	—	**29**	—
Product sales	—	663	**129**	721
Sales commission and other	**256**	—	**301**	721
Licensing revenue	**19**	—	**55**	24,657
Total revenues	**283**	663	**514**	24,489
Cost of goods sold	—	494	**101**	691
Gross income	**283**	169	**413**	24,798
Research and development costs	**475**	358	**1,574**	2,165
General and administrative expenses	**1,364**	2,439	**4,924**	7,229
Selling expenses	**377**	383	**1,176**	2,521
Restructuring costs	—	—	**773**	—
Impairment of right of use asset	**(125)**	—	**276**	—
Write-off of other current assets	—	—	**169**	—
Total operating expenses	**2,091**	3,180	**8,892**	11,915
(Loss) income from operations	**(1,808)**	(3,011)	**(8,479)**	12,883
(Loss) gain due to changes in foreign currency exchange rates	**3**	(133)	**61**	592
Change in fair value of warrant liability	**2,120**	58	**3,985**	1,752
Other finance (costs) income	**(646)**	30	**(603)**	174
Net finance (costs) income	**1,477**	(45)	**3,443**	2,518
Income (loss) before income taxes	**(331)**	(3,056)	**(5,036)**	15,401
Income tax recovery (expense)	**—**	547	**—**	(6,088)
Net (loss) income	**(331)**	(2,509)	**(5,036)**	9,313
Other comprehensive (loss) income:				
Foreign currency translation adjustments	**377**	3	**351**	(247)
Actuarial (gain) loss on defined benefit plans	**(536)**	406	**(2,027)**	611
Comprehensive (loss) income	**(490)**	(2,100)	**(6,712)**	9,677
Net (loss) income per share [basic]	**(0.02)**	(0.15)	**(0.31)**	0.57
Net (loss) income per share [diluted]	**(0.02)**	(0.15)	**(0.31)**	0.56
Weighted average number of shares outstanding:				
Basic	**16,887,819**	16,440,760	**16,651,969**	16,440,760
Diluted	**16,887,819**	16,440,760	**16,651,969**	16,655,576

Condensed Interim Consolidated Statement of Financial Position

(in thousands)	As at September 30, 2019	As at December 31, 2018
	$	$
Cash and cash equivalents	**10,862**	14,512
Trade and other receivables and other current assets	**1,349**	1,504
Inventory	**582**	240
Restricted cash equivalents	**356**	418
Property, plant and equipment	**42**	65
Right of use asset	**418**	—
Other non-current assets	**7,893**	8,272
Total assets	**21,502**	25,011
Payables and other current liabilities	**2,908**	2,966
Current portion of deferred revenues	**74**	74
Warrant liability	**2,788**	3,634
Current provision for restructuring costs and other costs	**877**	887
Taxes payable	**1,595**	1,669
Employee future benefits	**14,477**	13,205
Lease liabilities	**408**	—
Non-current portion of restructuring and other costs and deferred revenues	**568**	669
Total liabilities	**23,695**	23,104
Shareholders' (deficiency) equity	**(2,193)**	1,907
Total liabilities and shareholders' (deficiency) equity	**21,502**	25,011

Critical Accounting Policies, Estimates and Judgments

The preparation of condensed interim consolidated financial statements in accordance with IFRS requires management to make judgments, estimates and assumptions that affect the reported amounts of the Company's assets, liabilities, revenues, expenses and related disclosures. Judgments, estimates and assumptions are based on historical experience, expectations, current trends and other factors that management believes to be relevant at the time at which the Company's condensed interim consolidated financial statements are prepared.

Management reviews, on a regular basis, the Company's accounting policies, assumptions, estimates and judgments in order to ensure that the condensed interim consolidated financial statements are presented fairly and in accordance with IFRS. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Critical accounting estimates and assumptions, as well as critical judgments used in applying accounting policies in the preparation of our interim condensed consolidated financial statements were the same as those found in note 4 to our annual consolidated financial statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, and 2017 except for those related to the adoption of IFRS 16, as follows:

Critical judgments in determining the lease term and discount rate

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

In determining the appropriate discount rate, management identified the rate for the building based on the type and location of the Company's office, laboratory and storage facility in Frankfurt and, for vehicle and equipment leases, used the risk-free rate, credit spread and lease specific adjustment for similar assets.

Results of operations for the three-month period ended September 30, 2019

For the three-month period ended September 30, 2019, we reported a consolidated net loss of $0.3 million, or $0.02 loss per common share (basic), as compared with a consolidated net loss of $2.5 million, or $0.15 loss per common share, for the three-month period ended September 30, 2018. The $2.2 million improvement in net results is primarily from a gain in fair value of warrant liability of $2.1 million and a decline in operating expenses of $1.1 million and an increase in gross income of $0.1 million and $0.1 million increase in foreign currency exchange rates, offset by $0.5 million movement in tax recovery and an increase in net finance costs of $0.7 million.

Revenues

Our total revenue for the three-month period ended September 30, 2019 was $0.3 million as compared with $0.7 million for the same period in 2018, representing a decrease of $0.4 million. The 2019 revenue was comprised of $0.01 million in royalty revenue (2018 - $nil), $nil in product sales (2018 - $0.7 million), $0.3 million in sales commission and other (2018 - $nil) and $0.02 million in licensing revenue (2018 - $nil).

Operating expenses

Our total operating expense for the three-month period ended September 30, 2019 was $2.1 million as compared with $3.2 million for the same period in 2018, representing a decrease of $1.1 million. This decrease arises primarily from a $1.1 million decline in general and administrative expenses and $0.1 million reversal of impairment in right of use assets offset by an increase of $0.1 million in research and development costs. The decline in general and administrative expenses reflects the cost control improvements implemented in late 2018 while the increase in research and development costs arise from the impact of the P01 Dose Ranging Study.

Net finance income (loss)

Our net finance income for the three-month period ended September 30, 2019 was $1.5 million as compared with a net finance loss of $0.05 million for the same period in 2018, representing an increase of $1.4 million. This is primarily due to a $2.1 million change in fair value of warrant liability offset by increased finance costs of $0.7 million. Such a non-cash change in fair value results from the periodic "mark-to-market" revaluation, which occurs through the application of our pricing model, to our outstanding share purchase warrants. Increased finance costs results primarily from $0.5 million in transaction costs from the issuance of warrants in the September 2019 financing and $0.1 million in costs from exploring a convertible debt financing.

Results of operations for the nine-month period ended September 30, 2019

For the nine-month period ended September 30, 2019, we reported a consolidated net loss of $5.0 million, or $0.31 loss per common share, as compared with a consolidated net income of $9.3 million, or $0.57 income per common share (basic), for the nine-month period ended September 30, 2018. The $14.3 million decline in net results is primarily from a reduction of $24.3 million in gross income offset by $6.1 million in tax expense, $3.0 million decline in operating expenses and $0.9 million increase in net finance income.

Revenues

Our total revenue for the nine-month period ended September 30, 2019 was $0.5 million as compared with $25.5 million for the same period in 2018, representing a decline of $25.0 million. The 2019 revenue was comprised of $0.03 million in royalty income (2018 - $nil), $0.1 million in product sales (2018 - $0.7 million), $0.3 million in sales commission and other (2018 - $0.1 million) and $0.1 million in licensing revenue (2018 - $24.7 million). The decline in total revenue in 2019 relates primarily to the one-time $24.0 million cash payment received from executing the License and Assignment Agreement in January 2018.

Operating expenses

Our total operating expense for the nine-month period ended September 30, 2019 was $8.9 million as compared with $11.9 million for the same period in 2018, representing a decrease of $3.0 million. This net decline arises primarily from a $2.3 million reduction in general and administration expenses, a $1.3 million reduction in selling costs and a $0.6 million reduction in research and development costs, offset by $0.8 million increase in restructuring costs, $0.3 million impairment in right to use asset and $0.2 million write-off of other current assets.

Net finance income

Our net finance income for the nine-month period ended September 30, 2019 was $3.4 million as compared with $2.5 million for the same period in 2018, representing an increase of $0.9 million. This is primarily due to a $2.2 million increase change in fair value of warrant liability, offset by a reduction in gain due to foreign currency exchange rates of $0.5 million and a $0.8 million increase in other finance costs. Such a non-cash change in fair value results from the periodic "mark-to-market" revaluation, which occurs through the application of our pricing model, to our outstanding share purchase warrants. Increased finance costs results primarily from $0.5 million in transaction costs from the issuance of warrants in the September 2019 financing and $0.1 million in costs from exploring a convertible debt financing.

Quarterly Consolidated Results of Operation

(in thousands, except for per share data)	**Three months ended**			
	September 30, 2019	**June 30, 2019**	**March 31, 2019**	**December 31, 2018**
	$	**$**	**$**	**$**
Revenues	**283**	194	37	1,392
Net (loss) income	**(331)**	206	(4,911)	(5,126)
Net (loss) income per share [basic]*	**(0.02)**	0.01	(0.30)	(0.31)
Net (loss) income per share [diluted]*	**(0.02)**	0.01	(0.30)	(0.31)

(in thousands, except for per share data)	**Three months ended**			
	September 30, 2018	**June 30, 2018**	**March 31, 2018**	**December 31, 2017**
	$	**$**	**$**	**$**
Revenues	663	168	24,658	178
Net (loss) income	(2,509)	(2,602)	14,424	(484)
Net (loss) income per share [basic]*	(0.15)	(0.16)	0.88	(0.03)
Net (loss) income per share [diluted]*	(0.15)	(0.16)	0.87	(0.03)

* Net (loss) income per share is based on the weighted average number of shares outstanding during each reporting period, which may differ on a quarter-to-quarter basis. As such, the sum of the quarterly net loss per share amounts may not equal full-year net loss per share.

Historical quarterly results of operations and net (loss) income cannot be taken as reflective of recurring revenue or expenditure patterns of predictable trends, largely given the non-recurring nature of certain components of our historical revenues, due most notably to unpredictable quarterly variations in net finance income, which are impacted by periodic "mark-to-market" revaluations of our warrant liability and of foreign exchange gains and losses. In addition, we cannot predict what the revenues from royalties will be from the License and Assignment Agreement.

Use of Proceeds

We began 2019 with $14.5 million in cash and cash equivalents. During the nine-month period ended September 30, 2019, our operating activities consumed $8.3 million, our investing activities provided $4.1 million and the effect of exchange rates on cash and cash equivalents of $0.6 million. As at September 30, 2019 we had $10.9 million of cash and cash equivalents.

Liquidity and capital resources

Summary of cash flows:

(in thousands)	Nine months ended September 30,	
	2019	**2018**
Cash and cash equivalents - Beginning of period	**14,512**	7,780
Cash flows from operating activities:		
Net cash (used in) provided by operating activities	**(7,771)**	9,504
Cash flows from financing activities:		
Net cash provided by financing activities	**4,054**	—
Cash flows from investing activities:		
Net cash provided by investing activities	**50**	(39)
Effect of exchange rate changes on cash and cash equivalents	**17**	(445)
Cash and cash equivalents - End of period	**10,862**	16,800

Operating Activities

Cash (used by) operating activities totaled ($7.8) million for the nine months ended September 30, 2019, as compared to $9.5 million provided by operating activities in the same period in 2018. In the nine-month period ended September 30, 2019, the Company had net loss of $5.0 million as compared with net income of $9.3 million in the same period in 2018. In 2019, the Company did not have significant royalty or licensing revenues, while, in the same period in 2018, the Company received a $24.0 million cash payment from executing the License and Assignment Agreement in January 2018.

Financing Activities

Cash provided by financing activities totaled $4.1 million for the nine months ended September 30, 2019, as compared with $nil in the same period in 2018. On September 20, 2019, the Company entered into a securities purchase agreement with U.S. institutional investors to purchase $5.0 million (before transaction costs of $0.8 million) of its common shares in a registered direct offering and warrants to purchase common shares in a concurrent private placement (together, the "Offering"). The combined purchase price for one common share and one warrant was $1.50. Under the terms of the securities purchase agreement, the Company sold 3,325,000 common shares. In a concurrent private placement, the Company issued warrants to purchase up to an aggregate of 3,325,000 common shares. The warrants are exercisable commencing six months from the date of issuance, have an exercise price of $1.65 per share and expire 5 years following the date of issuance. In addition, the Company received $0.3 million from the exercise of warrants, options and deferred share units and paid $0.5 million in lease liabilities subsequent to adoption of IFRS 16 in January 2019.

Investing Activities

Cash provided by investing activities totaled $0.05 million for the nine months ended September 30, 2019, as compared with ($0.04 million) used by investing activities in the same period in 2018. In 2019, the Company received $0.05 million in restricted cash when it closed out certain banking arrangements, while in 2018, the Company sold certain property, plant and equipment for $0.01 million and added $0.5 million in restricted cash.

Common shares

As at September 30, 2019, the Company had 19,994,510 issued and outstanding common shares.

On September 20, 2019, the Company entered into a securities purchase agreement with U.S. institutional investors to purchase $5.0 million (before transaction costs of $0.8 million) of its common shares in a registered direct offering and warrants to purchase common shares in a concurrent private placement (together, the "Offering"). The combined purchase price for one common share and one warrant was $1.50. Under the terms of the securities purchase agreement, the Company sold 3,325,000 common shares.

In April 2019, there were 87,850 stock options, 23,000 deferred share units and 87,700 warrants exercised for gross proceeds of $0.3 million with 191,650 common shares issued. In September 2019, 53,000 deferred share units were exercised with 37,100 common shares being issued.

Warrants as September 30, 2019

	Warrants #	Exercise Price $	Expiry date
March 2015 registered direct offering - Series A	28,144	1.07	March 10, 2020
December 2015 registered direct offering	2,331,000	7.10	December 13, 2020
November 2016 registered direct offering	945,000	4.70	May 1, 2020
September 2019 registered direct offering	3,325,000	1.65	September 24, 2024
	6,629,144		

Long-term incentive and stock option plan

There were 894,835 stock options and deferred share units outstanding at September 30, 2019, with exercise prices denominated in U.S. dollars (December 31, 2018 - 889,685). During the nine-month period ended September 30, 2019, 163,859 of these securities were exercised, 175,000 securities were granted, 6,000 stock options were forfeited or expired (twelve-month period ended December 31, 2018 - none, 426,000 securities and 249,599, respectively).

Liquidity and capital resources

Aeterna Zentaris Inc. ("Aeterna Zentaris" or the "Company") has incurred significant expenses in its efforts to develop and co-promote products. Consequently, the Company has incurred operating losses and negative cash flow from operations historically and in each of the last several years except for the year ended December 31, 2018 when the Company earned revenue from the sale of a license for the adult indication of Macrilen™ (macimorelin) in the United States and Canada. As at September 30, 2019, the Company had an accumulated deficit of $317 million. The Company also had a net loss of $5,0 million for the nine months ended September 30, 2019, and negative cash flow from operations of $8.3 million in this period.

The Company's principal focus is on the licensing and development of Macrilen™ (macimorelin) and it currently does not have any other approved products. Under the terms of License and Assignment Agreement (as defined below), Novo Nordisk A/S ("Novo") is funding 70% of the pediatric clinical trial submitted to the EMA and FDA, the Company's sole development activity.

On March 12, 2019, the Company announced that its board of directors formed a special committee of independent directors (the "Special Committee") to review strategic options available to the Company and the engagement of Torreya, its financial advisor. In October 2019, the Company ended its arrangement with Torreya and re-commenced business development activities on its own. Based on the contract with Torreya, should the Company agree to license macimorelin to certain companies in a defined period of time after the cancellation of the contract the Company would owe a fee to Torreya.

Management has evaluated whether material uncertainties exist relating to events or conditions and has considered the following in making that critical judgment.

The ability of the Company to realize its assets and meet its obligations as they come due is dependent on earning sufficient revenues under the License and Assignment Agreement, developing opportunities for Macrilen™ (macimorelin) in the rest of the world, realizing other monetizing transactions, and raising additional sources of funding, the outcome of which cannot be predicted at this time. The revenue provided under the License and Assignment Agreement was $0.03 million for the nine months ended September 30, 2019 and as at September 30, 2019, the Company had cash of $10.9 million. In September 2019, the Company closed an equity financing which provided $4.2 million in net cash proceeds.

A significant portion of the Company's cash is held in Aeterna Zentaris GmbH ("AEZS Germany"), our wholly owned German subsidiary. AEZS Germany is also the counter-party for revenue earned under the License and Assignment Agreement. If and when current and medium term liabilities of AEZS Germany exceed the values ascribed to AEZS Germany's assets, it may no longer be possible under applicable German solvency laws for AEZS Germany's operations to continue. The Company has some discretion to manage research and development costs, administrative expenses and capital expenditures in order to maintain its cash liquidity; however, the Company will need to conclude agreement(s) for licensing or selling the European or worldwide rights to Macrilen™ (macimorelin) and, if necessary, obtain further financing in order to continue its currently planned operations.

Management has assessed the Company's ability to continue as a going concern and concluded that additional capital will be required. There can be no assurance that the Company will be able to execute license or purchase agreements or to obtain equity or debt financing, or on terms acceptable to it. Factors within and outside the Company's control could have a significant bearing on its ability to obtain additional financing. As a result, management has determined that there are material uncertainties that may cast significant doubt upon the Company's ability to continue as a going concern.

Contractual obligations and contingencies

The Company is committed to various operating leases for its premises which are now accounted with the implementation of IFRS 16. Future payments in connection with service and manufacturing agreements, as at September 30, 2019, are as follows:

(in thousands)	**Service and manufacturing**
	$
Less than 1 year	**2,275**
1 - 3 years	**20**
4 - 5 years	**2**
More than 5 years	—
Total	**2,297**

Contingencies

In the normal course of operations, the Company may become involved in various claims and legal proceedings related to, for example, contract terminations and employee-related and other matters.

Securities class action lawsuit

The Company and certain of its current and former officers are defendants in a class-action lawsuit pending the U.S. District Court for the District of New Jersey, brought on behalf of the shareholders of the Company. The lawsuit alleges violations of the *Securities Exchange Act of 1934* in connection with allegedly false and misleading statements made by the defendants between August 30, 2011, and November 6, 2014 (the "Class Period"), regarding the safety and efficacy of Macrilen™ (macimorelin), and the prospects for the approval of our New Drug Application for the product by the FDA. The plaintiffs represent a class comprised of purchasers of our common shares during the Class Period and seek damages, costs and expenses and such other relief as determined by the Court. We consider the claims that heave been asserted in the lawsuit to be without merit, and we are vigorously defending against them. We cannot, however, predict at this time the outcome or potential losses, if any, with respect to this lawsuit.

Other lawsuits

On December 21, 2018, the Company settled a dispute with its former President and Chief Executive Officer and with its former Senior Vice President, Chief Administrative Officer, General Counsel and Corporate Secretary with the Company agreeing to make a payment in the amount of $0.8 million.

On November 5, 2018, the Company settled a dispute with Cogas Consulting, LLC with the Company agreeing to make a payment of $0.6 million.

Financial Risk Factors and Other Instruments

The nature and extent of our exposure to risks arising from financial instruments, including credit risk, liquidity risk and market risk (share price risk) and how we manage those risks are described in note 15 to our condensed interim consolidated financial statements as at September 30, 2019 and for the three-month and nine-month periods ended September 30, 2019 and 2018.

Related Party Transactions and Off-Balance Sheet Arrangements

As at September 30, 2019, other than employment agreements and indemnification agreements with management, there are no related party transactions, except those eliminated upon consolidation. As at September 30, 2019, we did not have any interests in special purpose entities or any other off-balance sheet arrangements.

Recent accounting pronouncements

The IASB continues to issue new and revised IFRS. A listing of the recent accounting pronouncements promulgated by the IASB and not yet adopted is included in note 5 to our audited annual consolidated financial statements for the year ended December 31, 2018 and in note 4 to our condensed interim consolidated financial statements as at September 30, 2019 and for the three months and nine months ended September 30, 2019 and 2018.

Changes in Internal Controls over Financial Reporting

There have been no changes in our internal control over financial reporting during the three-month or nine-month period ended September 30, 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

The design of any system of controls and procedures is based in part upon certain assumptions about the likelihood of certain events. There can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, including conditions that are remote.

Risk Factors and Uncertainties

An investment in our securities involves a high degree of risk. In addition to the other information included in this MD&A and in the related unaudited condensed interim consolidated financial statements, investors are urged to carefully consider the risks described below and under the caption “Risk Factors and Uncertainties” in our most recent Annual Report on Form 20-F for the year ended December 31, 2018, for a discussion of the various risks that may materially affect our business. The risks and uncertainties not presently known to us or that we currently deem immaterial may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment.

Our most recent Annual Report on Form 20-F was filed with the relevant Canadian securities regulatory authorities in lieu of an annual information form at www.sedar.com and with the SEC at www.sec.gov, and investors are urged to consult such risk factors.