



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. for the three- and nine- months ended September 30, 2021. 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 the Company's unaudited condensed consolidated financial statements and the accompanying notes thereto as at September 30, 2021 and for the three- and nine-months ended September 30, 2021 and 2020 and the audited consolidated financial statements and MD&A for the years ended December 31, 2020 and 2019. The unaudited condensed interim consolidated financial statements as at September 30, 2021 and for the three- and nine-months ended September 30, 2021 and 2020 were prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS") applicable to the preparation of interim financial statements, including IAS 34, Interim Financial Reporting. The Company's common shares are listed on both The Nasdaq Capital Market ("Nasdaq") and on the Toronto Stock Exchange under the symbol "AEZS".

All amounts in this MD&A are presented in United States ("U.S.") dollars, except as otherwise noted.

This MD&A was approved by the Company's Board of Directors on November 4, 2021. This MD&A is dated November 4, 2021.

Company Overview

Aeterna Zentaris is a specialty biopharmaceutical company commercializing and developing therapeutics and diagnostic tests. The Company's lead product, Macrilen™ (macimorelin), is the first and only U.S. Food and Drug Administration and European Commission approved oral test indicated for the diagnosis of patients with adult growth hormone deficiency ("AGHD"). Macimorelin is currently marketed in the U.S. under the tradename Macrilen™ through the license agreement and the amended license agreement (collectively the "Novo Amended License Agreement") with Novo Nordisk Healthcare AG ("Novo Nordisk" or "Novo") under which Aeterna Zentaris receives royalties on net sales. According to a commercialization and supply agreement, MegaPharm Ltd. is seeking regulatory approval and plans to subsequently commercialize macimorelin in Israel and the Palestinian Authority. Additionally, upon receipt of pricing and reimbursement approvals, Aeterna Zentaris expects that macimorelin will be marketed in Europe and the United Kingdom through a recently established license agreement with Consilient Health Ltd. ("Consilient Health") under which Aeterna Zentaris will receive regulatory milestone payments related to agreed-upon pricing and reimbursement parameters; net sales milestone payments; and royalties, ranging from 10%-20% of net sales, subject to reduction in certain cases, or sublicense income recorded by Consilient Health. The Company is also leveraging the clinical success and compelling safety profile of macimorelin to develop it for the diagnosis of childhood-onset growth hormone deficiency ("CGHD"), an area of significant unmet need. The Company is actively pursuing business development opportunities for the commercialization of macimorelin in Asia and the rest of the world.

Aeterna Zentaris intends to balance risks and secure growth opportunities by re-establishing a diversified, yet focused, development pipeline to which the Company can best leverage its expertise and experience. The Company is focused on opportunistically utilizing its network with universities in Europe and the U.S. which provides, what the Company believes will be, vital access to innovative development candidates in different indications, with a focus on rare or orphan indications and potential for pediatric use. To date, we have signed agreements to establish this growing pipeline across a number of indications, including neuromyelitis optica spectrum disorder (NMOSD) and Parkinson's disease (PD), primary hypoparathyroidism and amyotrophic lateral sclerosis (ALS, Lou Gehrig's disease). Additionally, the Company is developing oral prophylactic bacterial vaccines against each of SARS-CoV-2, the virus that causes COVID-19, and chlamydia.



About Forward-Looking Statements

This document contains statements that may constitute forward-looking statements within the meaning of U.S. and Canadian securities legislation and regulations and such statements are made pursuant to the safe-harbor provision of the U.S. Private Securities Litigation Reform Act of 1995. 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 MD&A and in our Annual Report on Form 40-F and annual information form, under the caption “Risk Factors” filed with the relevant Canadian securities regulatory authorities and with the U.S. Securities and Exchange Commission (“SEC”). Forward-looking statements in this MD&A include, but are not limited to, those relating to: Aeterna’s expectation with respect to the DETECT trial (as defined below) (including the ability to enroll subjects in the U.S. or elsewhere, and expectations that the DETECT trial will be suitable to support a claim (regulatory approval) for potential stand-alone testing with macimorelin), Aeterna’s expectations with respect to the marketing of macimorelin in Europe and the United Kingdom and with respect to the approvals and commercialization of macimorelin in Israel and the Palestinian Authority, the aims and details of the pre-clinical and potential clinical studies involving the use of macimorelin as potential treatment of ALS (Lou Gehrig’s disease) being conducted by The University of Queensland in Australia (“Queensland University”), the potential of the vaccine platform technology licensed from the Julius Maximilians University of Wuerzburg (the “University of Wuerzburg”) (and any vaccine candidates using that technology) to be effective as a vaccine against COVID-19 (SARS-CoV-2) or any other coronavirus disease or to offer an alternative to other approved vaccines against COVID-19 or to be effective as a vaccine against chlamydia, the ability to obtain approval to commence any clinical trial or the timeline to develop any potential vaccine and the characteristics of any potential vaccine, plans regarding the delayed clearance PTH (as defined below) fusion polypeptides licensed from The University of Sheffield and the AEZS-150 candidate and the related potential IND filing, plans regarding AIM-Biologicals (as defined below) in-licensed from the University of Wuerzburg in Germany and the potential to treat NMOSD (as defined below) and Parkinson’s Disease (“PD”), and Aeterna’s intentions with respect to growth opportunities and its business focus, including with respect to its cash position and development pipeline (including the ability to accelerate its development pipeline).

Forward-looking statements involve known and unknown risks and uncertainties, and other factors which may cause the actual results, performance or achievements stated herein to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Such risks and uncertainties include, among others: the completion of the DETECT trial may be delayed, we may be unable to enroll the expected number of subjects in the DETECT trial and the result of the DETECT trial may not support receipt of regulatory approval in CGHD, that the University of Wuerzburg’s vaccine platform technology (and any vaccine candidates using that technology) has never been tested in humans and so further pre-clinical or clinical studies of that technology and any vaccine developed using that technology may not be effective as a vaccine against COVID-19 (SARS-CoV-2) or any other coronavirus disease or against chlamydia, that such technology or vaccines may not receive the necessary approvals to be studied in human clinical trials, that the timeline to develop a vaccine may be longer than expected, that such technology or vaccines may not be capable of being used orally, may not have the same characteristics (including storage temperatures) as vaccines previously approved using the Salmonella Typhi Ty21a carrier strain, any such vaccine developed using the University of Wuerzburg’s technology may not be efficacious against resistant viral mutants or may not be competitive with vaccines developed by third parties against COVID-19, the risk that the pre-clinical research licensed from our partners, including that done with the University of Wuerzburg for autoimmunity modifying biologicals for the potential treatment of NMOSD or PD, does not lead to clinical trials in humans, our ability to raise capital and obtain financing to continue our currently planned operations, our ability to continue to list our common shares on the Nasdaq, results from ongoing or planned pre-clinical studies of macimorelin by Queensland University or for our other products under development may not be successful or may not support advancing the product to human clinical trials, our ability to raise capital and obtain financing to continue our currently planned operations, our dependence on the success of Macrilen™ (macimorelin) and related out-licensing arrangements and the continued availability of funds and resources to successfully commercialize the product, including our heavy reliance on the success of the Novo Amended License Agreement, the global instability due to the global pandemic of COVID-19, and its unknown potential effect on our planned operations, including studies, our ability to enter into out-licensing, development, manufacturing, marketing and distribution agreements with other pharmaceutical companies and keep such agreements in effect, our reliance on third parties for the manufacturing and commercialization of Macrilen™ (macimorelin), 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, uncertainties related to the regulatory process, unforeseen global instability, including the instability due to the global pandemic of the novel coronavirus, our ability to efficiently commercialize or out-license Macrilen™ (macimorelin), our reliance on the success of the pediatric clinical trial in the European Union (“E.U.”) and the U.S. for 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, our ability to successfully negotiate pricing and reimbursement in key markets in the E.U. for macimorelin, any evaluation of potential strategic alternatives to maximize potential future growth and shareholder value may not result in any such alternative being pursued, and even if pursued, may not result in the anticipated benefits, our ability to take advantage of business opportunities in the pharmaceutical industry, our ability to protect our intellectual property, and 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, including those risks discussed in our Annual Report on Form 40-F and annual information form, under the caption “Risk Factors”. 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, management's discussion and analysis, proxy or information circulars, annual reports on Form 40-F, material change reports and press releases with the appropriate securities regulatory authorities. Additional information about the Company and 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.zentaris.com, www.sedar.com and www.sec.gov.

Diagnostic Commercial and Development Pipeline

Diagnostic Commercial and Development Pipeline



Macimorelin Commercialization Program

On December 7, 2020, the Company entered into exclusive licensing and supply agreements with Consilient Health for the commercialization in the European Union and the United Kingdom of macimorelin in any diagnostic application. As per the agreements’ terms, the Company received a cash payment of €1 million in January 2021. This cash payment has been recognized in the consolidated statement of financial position as long-term deferred revenue as it will be recognized over the supply of the licensed product that is expected to start in the first quarter of 2022. Effective April 19, 2021 the Company received the European Medicines Agency’s approval to amend the marketing authorization to allow Consilient Health to market macimorelin in the EU and effective May 14, 2021, the Company received similar approvals in the United Kingdom. Negotiations on regional licensing or commercialization of macimorelin in the rest of the world are ongoing.

Macimorelin Clinical Program

As previously disclosed, Aeterna Zentaris, in collaboration with Novo Nordisk, is currently developing the expanded use of macimorelin for the diagnosis of CGHD, an area of significant unmet need. In late 2020, Aeterna Zentaris entered into the start-up phase for the clinical safety and efficacy study, AEZS-130-P02 (the “DETECT” trial), evaluating macimorelin for the diagnosis of CGHD. The DETECT trial is an open-label, single dose, multicenter and multinational pivotal study evaluating safety and efficacy of macimorelin for the diagnosis of CGHD. Children and adolescents from two to less than 18 years of age with suspected GHD are to be included. The study is expected to include approximately 100 subjects worldwide, with at least 40 subjects in pre-pubertal and 40 subjects in pubertal status. Macimorelin growth hormone stimulation test (GHST) will be performed twice for repeatability data and two standard GHSTs will be used as controls: arginine (i.v.) and clonidine (p.o.). On April 22, 2021, the U.S. FDA Investigational New Drug Application associated with this clinical trial became active, see: <https://clinicaltrials.gov/ct2/show/NCT04786873>. On May 13, 2021, we announced the opening of the first clinical site in the U.S. Clinical trial approval procedures in the E.U. and the rest of the world as well as site initiation activities are ongoing.

Therapeutic and Vaccine Development Pipeline

	Program	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Program Highlights
Therapeutics	AIM Biologicals	Neuromyelitis Optica Spectrum Disorder (NMOSD)	█				In-licensed program in January 2021
		Parkinson's Disease (PD)	█				In-licensed program in September 2021
	Macimorelin	Amyotrophic Lateral Sclerosis (ALS, Lou Gehrig's disease)	█				Entered material transfer agreement and option to in-license in January 2021
	AEZS-150 (Delayed clearance parathyroid hormone)	Primary Hypoparathyroidism	█				In-licensed program in March 2021
Vaccine	Vaccine Platform	COVID-19 (SARS-CoV-2)	█				In-licensed program in March 2021
		Chlamydia	█				In-licensed program in September 2021

Key Developments

AIM Biologicals

On January 28, 2021, the Company announced that it had licensed the exclusive worldwide rights to develop, manufacture and commercialize targeted, highly specific, autoimmunity modifying proteins (“AIM-Biologicals”), currently in early preclinical development, for the potential treatment of neuromyelitis optica spectrum disorder (“NMOSD”) from the University of Wuerzburg and made a payment of \$0.1 million (€100,000) to the University of Wuerzburg. On June 7, 2021, we engaged neuroimmunologist, Michael Levy, MD, PhD, Research Director of the Division of Neuroimmunology & Neuroinfectious Disease at Massachusetts General Hospital as a scientific consultant to support the development of the Company’s AIM Biologicals for the potential treatment of NMOSD. Dr. Levy will provide scientific support and advice to Aeterna Zentaris in the field of inflammatory central nervous system disorders, autoimmune diseases of the nervous system, and NMOSD. In 2021, we expect to conduct *in-vitro* and *in-vivo* assessments to select an AIM Biologicals-based development candidate and developing the manufacturing process for the selected candidate.

In September 2021, the Company entered into an additional exclusive license with the University of Wuerzburg for early preclinical development for the potential treatment of Parkinson’s Disease and agreed to a payment of \$0.1 million (€100,000) to the University of Wuerzburg. PD is a neurodegenerative movement disorder affecting over 7 million people worldwide and there is growing evidence suggesting that PD could be considered an autoimmune disease. For its next steps, the Company expects to design and produce antigen-specific AIM Biologics molecules for the potential treatment of PD and to conduct *in-vitro* and *in-vivo* assessments in relevant PD models.

Macimorelin Pre-clinical Program

On January 13, 2021, we entered into a material transfer agreement with Queensland University to provide macimorelin for the conduct of preclinical and clinical studies evaluating macimorelin as a therapeutic for the treatment of amyotrophic lateral sclerosis (“ALS” and commonly known as Lou Gehrig’s disease). Queensland University researchers have filed funding applications to dedicated organizations in Australia to finance parts of the abbreviated preclinical development program and to conduct a subsequent investigator-initiated clinical trial to evaluate the safety, tolerability and efficacy of macimorelin as a potential new treatment option for ALS patients. The Company expects to continue work with Queensland University to conduct proof-of-concept studies with macimorelin in disease specific animal models, assess alternative formulations and formalize a preclinical development plan. Our next steps include working with Queensland University to conduct proof-of-concept studies with macimorelin in disease-specific animal models, assess alternative formulations and formalize our pre-clinical development plan.



AEZS- 150 (Delayed clearance parathyroid hormone)

On March 11, 2021, the Company announced that it had received an exclusive license from The University of Sheffield, United Kingdom, for the intellectual property relating to parathyroid hormone (“PTH”) fusion polypeptides covering the field of human use which will initially be studied by Aeterna Zentaris for the potential therapeutic treatment of primary hypoparathyroidism and agreed to a payment of \$0.1 million (£100,000) to the University of Sheffield. Under the terms of the exclusive patent and know-how license agreement entered into with The University of Sheffield, Aeterna Zentaris obtained worldwide rights to develop, manufacture and commercialize PTH fusion polypeptides covered by the licensed patents for all human uses for an up-front cash payment and milestone payments to be paid upon the achievement of certain development, regulatory and sales milestones, as well as low single digit royalty payments on net sales of those products and certain fees payable in connection with sublicensing. Aeterna Zentaris is responsible for the further development, manufacturing, approval and commercialization of the licensed products. Aeterna Zentaris has also engaged The University of Sheffield under a research contract to conduct certain research activities to be funded by Aeterna Zentaris, the results of which will be included within the scope of the license granted to Aeterna Zentaris. On May 6, 2021, Aeterna Zentaris selected AEZS-150 as the lead candidate in the Company’s delayed clearance parathyroid hormone fusion polypeptides (DC-PTH) program. The Company expects to work with The University of Sheffield to conduct in depth characterization of the development candidate (*in-vitro* and *in-vivo*), develop the manufacturing process and formalize the preclinical development of AEZS-150 in preparation for a potential IND filing for conducting the first in human clinical study.

Oral Coronavirus Vaccine

On February 2, 2021, the Company announced that it had entered into an exclusive option agreement (the “Option Agreement”) to evaluate a preclinical potential COVID-19 vaccine developed at the University of Wuerzburg and made a payment of \$0.1 million (€110,000) to the University of Wuerzburg. The vaccine technology developed at the University of Wuerzburg uses a typhoid fever vaccine as a carrier strain and has the potential to be an orally active COVID-19 (SARS-CoV-2) live-attenuated bacterial vaccine. Under the Option Agreement entered into with the University of Wuerzburg, we have the right to negotiate an exclusive worldwide license to develop this technology for the prevention of coronavirus diseases, including COVID-19. We believe that, if it is determined that there is sufficient data to advance into human clinical trials, the development program for this particular COVID-19 vaccine is expected to be abbreviated because extensive clinical safety data is already available for the underlying vaccine strain, Salmonella Typhi Ty21a.

On March 14, 2021, the Company exercised the option under the Option Agreement and entered into a License Agreement with the University of Wuerzburg (the “Wuerzburg License Agreement”). Pursuant to the terms of the Wuerzburg License Agreement, the Company has been granted an exclusive, world-wide, license to certain patents and know-how owned by the University of Wuerzburg to research and develop, manufacture, and sell a potential COVID-19 vaccine using the University of Wuerzburg’s bacterial vaccine platform technology (the “Licensed Rights”). The Company paid an up-front payment under the Wuerzburg License Agreement of \$0.2 million (€140,000) and has agreed to make certain milestones payments to be paid upon the achievement of certain development, and regulatory and sales milestones as well as a percentage of any sub-licensing revenue received by the Company and royalty payments on net sales of the licensed vaccine products (including by the Company or its sub-licensees). The Wuerzburg License Agreement will expire upon the latter of (i) the existence of a valid patent claim of a Licensed Right or (ii) 10 years after the first commercial sale of a product that was developed, manufactured, marketed, and sold using a least one Licensed Right. The Wuerzburg License Agreement may be terminated by the Company by providing six months’ notice to the University of Wuerzburg. Pursuant to the Wuerzburg License Agreement, the University of Wuerzburg also granted the Company an exclusive option for the exclusive use of the Licensed Rights in a then undisclosed field, the Oral Chlamydia Vaccine, as discussed below. Additionally, the Company has entered into a Research Agreement under which the Company has engaged the University of Wuerzburg on a fee-for-service basis to conduct supplementary research activities and preclinical development studies on the potential vaccine. Our next steps include evaluating the administration route, dose and immunization scheme, conducting *in-vivo* immunology experiments with antigen variant candidates in relevant mice models, conducting virus challenge experiments in immunized transgenic animals, start the manufacturing process assessment and development, and conducting pre-clinical safety and toxicology assessments.



Chlamydia Vaccine

In September 2021, the Company exercised its option on a then undisclosed field, and paid an up-front payment under the Wuerzburg License Agreement of \$0.1 million (€100,000) and has agreed to make certain further payments as discussed above. Additionally, the Company has entered into a Research Agreement under which the Company has engaged the University of Wuerzburg on a fee-for-service basis to conduct supplementary research activities and preclinical development studies on the potential chlamydia vaccine. Our next steps include the design and preparation of candidate vaccine strains, the evaluation of the administration route, dose and immunization scheme, and the conduct of *in-vivo* immunology experiments with candidate strains in relevant mouse models.

Financing activities

During the period between January 1, 2021 and September 30, 2021, holders have exercised certain of our outstanding warrants to purchase 35,011,187 of our common shares for gross proceeds of approximately \$20.0 million (such exercises, the "Warrant Exercises"). On October 1, 2021, the Company received notice of exercise of 100,000 warrants at \$0.45 per common share for the issuance of 100,000 common shares of the Company; such exercise was completed on October 4, 2021.

On February 19, 2021, the Company closed a public offering of 20,509,746 common shares at a price to the public of \$1.45 per common share, for gross proceeds of \$29.7 million, before deducting underwriting discounts, commissions and offering expenses payable by the Company, in the amount of \$2.8 million. Aeterna also granted the underwriter, which was also the placement agent, a 30-day overallotment option (the "Underwriter Option") to purchase up to 3,076,461 additional common shares at the public offering price, less underwriting discounts and commissions, and 1,435,682 placement agent warrants with an exercise price of \$1.8125 and expiring on February 17, 2026. The net cash proceeds to the Company from the offering totaled \$26.9 million. On February 22, 2021, the underwriter exercised the Underwriter Option in full and received 3,076,461 common shares for gross proceeds to the Company of \$4.5 million. In connection with the public offering and the exercise of the Underwriter Option, the Company paid commissions and other expenses of \$0.4 million and issued 215,352 placement agent warrants priced at \$1.8125 and expiring on February 17, 2026. Collectively, this financing is referred to as the "February 2021 Financing".

The Company previously disclosed that it would use the gross proceeds from the February 2021 Financing for general corporate purposes, including, among other purposes, the investigation of further therapeutic uses of Macrilen™ (macimorelin), the expansion of pipeline development activities, the further expansion of commercialization of macimorelin in available territories and the potential funding of a pediatric clinical trial in the E.U. and U.S. for macimorelin.

Nasdaq Letters

On July 28, 2021, we received a letter from the Listing Qualifications Staff of the Nasdaq, notifying us that for the last 30 consecutive business days prior to the date of the letter, the closing bid price of our common shares was below \$1.00 per share and, therefore, we did not meet the requirement for continued listing on Nasdaq as required by Nasdaq Listing Rule 5550(a)(2) (the "Bid Price Rule"). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were granted a grace period of 180 calendar days, through January 24, 2022. Nasdaq's notice has no immediate effect on the listing of our common shares on the Nasdaq and does not otherwise impact our listing on the TSX. We are considering the options available to us to evidence compliance with the Bid Price Rule prior to the expiration of the grace period. There is no assurance that we will regain compliance with the Bid Price Rule in the future, and therefore there can be no assurance that our common shares will remain listed on Nasdaq.

Changes in personnel and advisors

On May 3, 2021, the Company announced the addition of Michael Teifel, Ph.D. as Senior Vice President, Non-Clinical Development and Chief Scientific Officer to drive forward our pre-clinical research initiatives. Alongside Prof. Dr. Joerg Wischhusen (Wuerzburg University) in May 2021, in June 2021, Dr. Michael Levy, MD, PhD was engaged by the Company as a scientific consultant to support the development of the AIM Biologicals in NMOSD. Dr. Thomas Rudel (Wuerzburg University) was engaged by the Company in September 2021 as a scientific consultant to support development of the salmonella-based vaccine platform for coronavirus and chlamydia vaccines.

Extension of German building lease

Effective August 25, 2021, the Company and its landlord mutually agreed to a one year extension to its existing building lease agreement for its German subsidiary, continuing such terms until March 31, 2023.



Securities class action lawsuit

On March 9, 2020, the Company settled the previously disclosed class-action lawsuit against it pending in the U.S. District Court for the District of New Jersey. This settlement was approved by the U.S. District Court for the District of New Jersey on June 3, 2021. The settlement payment was funded entirely by the Company's insurers. As no appeals were filed within the 30-day appeal period, this matter is fully and finally settled.

Exposure to epidemic or pandemic outbreak

As of November 4, 2021, coronavirus or COVID-19, a contagious disease that was characterized by the World Health Organization as a pandemic in early 2020, continues to affect the global community. To date, the Company has not experienced significant business disruption from COVID-19. Given this rapidly evolving situation, the duration, scope and impact on our business operations, clinical studies and financial results cannot at this time be fully determined or quantified. Aeterna Zentaris has developed protocols and procedures should they be required to deal with any potential epidemics and pandemics and has implemented these protocols and procedures to address the current COVID-19 pandemic. Despite appropriate steps being taken to mitigate such risks, there can be no assurance that existing policies and procedures will ensure that the Company's operations will not be adversely affected. The COVID-19 pandemic has resulted in a widespread health crisis that has adversely affected the economies and financial markets of many regions and countries. There can be no assurance that a disruption in financial markets, regional economies and the world economy would not negatively affect Aeterna Zentaris' access to capital or its financial performance.

Uncertain factors, including the duration of the outbreak, the severity of the disease and the actions to contain or treat its impact, could impair our operations including, among other things, employee mobility and productivity, availability of our facilities, conduct of our clinical trials and the availability and the productivity of third-party product and service suppliers. Please see the Risk Factor entitled "The economic effects of a pandemic, epidemic or outbreak of an infectious disease could adversely affect our operations or the market price of our common shares" in our Annual Report on Form 40-F for the year ended December 31, 2020.



Condensed Interim Consolidated Statements of Comprehensive Loss Data

(in thousands, except share and per share data)

	Three months ended September 30		Nine months ended September 30	
	2021 \$	2020 \$	2021 \$	2020 \$
Revenues				
Royalty income	20	23	47	47
Product sales	—	—	—	1,016
Supply chain	55	87	139	168
Licensing revenue	527	18	1,601	55
Total revenues	602	128	1,787	1,286
Operating expenses				
Cost of sales	31	33	72	907
Research and development expenses	801	372	1,902	880
General and administrative expenses	1,228	1,180	4,137	3,445
Selling expenses	360	283	924	730
Gain on modification of building lease	—	—	—	(219)
Total operating expenses	2,420	1,868	7,035	5,743
Loss from operations	(1,818)	(1,740)	(5,248)	(4,457)
Gain (loss) due to changes in foreign currency exchange rates	124	211	(42)	237
Change in fair value of warrant liability	—	816	—	1,147
Other finance costs	(4)	(423)	(21)	(734)
Net finance income (costs)	120	604	(63)	650
Loss before income taxes	(1,698)	(1,136)	(5,311)	(3,807)
Income tax recovery	—	—	129	—
Net loss	(1,698)	(1,136)	(5,182)	(3,807)
Other comprehensive loss:				
Items that may be reclassified subsequently to profit or loss:				
Foreign currency translation adjustments	39	(483)	460	(482)
Items that will not be reclassified to profit or loss:				
Actuarial gain (loss) on defined benefit plans	219	(635)	133	(665)
Comprehensive loss	(1,440)	(2,554)	(4,589)	(4,954)
Net loss per share [basic and diluted]	(0.01)	(0.02)	(0.05)	(0.11)
Weighted average number of shares outstanding:				
Basic	121,297,007	56,211,486	112,743,285	33,832,136
Diluted	121,297,007	56,211,486	112,743,285	33,832,136



Condensed Interim Consolidated Statements of Financial Position Data

<i>(in thousands)</i>	As at September 30, 2021	As at December 31, 2020
	\$	\$
Cash and cash equivalents	68,002	24,271
Trade and other receivables and other current assets	4,341	3,594
Inventory	57	21
Restricted cash equivalents	342	338
Property, plant and equipment	40	22
Right of use assets	185	157
Other non-current assets	9,075	8,874
Total assets	82,042	37,277
Payables and accrued liabilities and income taxes payable	2,486	2,594
Current portion of provisions	81	92
Current portion of deferred revenues	2,075	2,193
Lease liabilities	200	184
Non-financial non-current liabilities ⁽¹⁾	17,274	19,003
Total liabilities	22,116	24,066
Shareholders' equity	59,926	13,211
Total liabilities and shareholders' equity	82,042	37,277

(1) Comprised mainly of employee future benefits, provisions and non-current portion of deferred revenues.

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 consolidated financial statements are presented fairly and in accordance with IFRS applicable to interim financial statements. Any changes in the judgments or assumptions applied to account for the Novo Amended License Agreement could result in a significant impact on the Company's revenue and deferred revenue. 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 the Company's condensed interim consolidated financial statements, were the same as those applied to the Company's annual consolidated financial statements as of December 31, 2020 and 2019 and for the years then ended except for the following:

Intangible assets

Separately acquired intangible assets are recognized at the price paid in cash, less amortization and impairments. All intangible assets are tested for impairment when there are indications that the carrying value may not be recoverable, or, at a minimum, annually. The recoverable amount is determined as the higher of value in use or fair value less costs to sell using a discounted cash flow calculation, where the products' expected cash flows are risk-adjusted over their estimated remaining useful economic life. Any impairment losses are recognized immediately in the consolidated statements of comprehensive (loss) income. Intangible assets relating to products which fail during development (or for which development ceases for other reasons) are also tested for impairment and are written down to their recoverable amount (which is usually nil). If, subsequent to an impairment loss being recognized, development restarts or other facts and circumstances change indicating that the impairment is less or no longer exists, the value of the asset is re-estimated and its carrying value is increased to the recoverable amount, but not exceeding the original value, by recognizing an impairment reversal in the consolidated statements of comprehensive (loss) income. Amortization of such intangible assets begins once such assets are ready for their intended use.

Contingent payments

The Company accounts for contingent variable payments for separately acquired intangible assets with the cost accumulation approach. Contingent consideration is not considered on initial recognition of the asset but is added to the cost of the asset initially recorded, when incurred.

Recent accounting pronouncements issued but not yet effective

The recent accounting pronouncements issued but not yet effective included in note 4 to the Company's annual audited consolidated financial statements as at December 31, 2020 and 2019 and for the years then ended are unchanged.

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 and how we manage those risks are described in note 25 to the Company's annual audited consolidated financial statements as at December 31, 2020 and 2019 and for the years then ended. There were no significant changes in the nine months of 2021 as compared with the December 31, 2020 disclosure.



Results of operations for the three-month period ended September 30, 2021

For the three-month period ended September 30, 2021, we reported a consolidated net loss of \$1.7 million, or \$0.01 loss per common share (basic), as compared with a consolidated net loss of \$1.1 million, or \$0.02 loss per common share (basic) for the three-month period ended September 30, 2020. The \$0.6 million increase in net loss is primarily from an increase in total operating expenses of \$0.6 million and a decline in net finance income of \$0.5 million, partially offset by an increase of \$0.5 million in total revenues.

Revenues

Our total revenue for the three-month period ended September 30, 2021 was \$0.6 million as compared with \$0.1 million for the same period in 2020, representing an increase of \$0.5 million. The 2021 revenue was comprised of \$0.52 million in licensing revenue (2020 - \$0.02 million), \$0.06 million in supply chain revenue (2020 - \$0.09 million) and \$0.02 million in royalty income (2020 - \$0.02 million). The licensing revenue was earned from the recognition of a portion of the deferred €5 million payment from Novo Nordisk received with the amendment to the Novo License agreement in the fourth quarter of 2020.

Operating expenses

Our total operating expenses for the three-month period ended September 30, 2021 was \$2.4 million as compared with \$1.9 million for the same period in 2020, representing an increase of \$0.5 million. This increase arose primarily from a \$0.4 million increase in research and development costs and an increase of \$0.1 million in selling expenses. This increase in total operating expenses is due to the impact of the initiation of research and development projects as announced in the first quarter of 2021, and a one-time market study incurred in the quarter.

Net finance income

Our net finance income for the three-month period ended September 30, 2021 was \$0.1 million as compared with net finance income of \$0.6 million for the same period in 2020, representing a decrease in net finance income of \$0.5 million. This is primarily due to the \$0.8 million decrease in the change in fair value of the warrant liability and a \$0.1 million decline in the gain from changes in foreign currency exchange rates partially offset by a \$0.4 million reduction in other finance costs. During the prior year's third quarter, the Company registered the common shares underlying the warrants which allowed the Company to reclassify certain warrants from liability to shareholders' equity in the condensed interim consolidated statements of financial position. As such the change in fair value of such warrants liabilities was classified as a finance cost in the consolidated statements of loss and comprehensive loss in 2020.

Results of operations for the nine-month period ended September 30, 2021

For the nine-month period ended September 30, 2021, we reported a consolidated net loss of \$5.2 million, or \$0.05 loss per common share (basic), as compared with a consolidated net loss of \$3.8 million, or \$0.11 loss per common share (basic) for the nine-month period ended September 30, 2020. The \$1.4 million increase in net loss is primarily from an increase in total operating expenses of \$1.3 million and an increase of \$0.7 million in net finance costs, partially offset by an increase of \$0.5 million in revenue and a \$0.1 million in income tax recovery.

Revenues

Our total revenue for the nine-month period ended September 30, 2021 increased by \$0.5 million to \$1.8 million as compared with \$1.3 million during the same period in 2020. The 2021 revenue was comprised of \$1.6 million in licensing revenue (2020 - \$0.06 million), \$0.1 million in supply chain revenue (2020 - \$0.2 million), \$0.05 million in royalty income (2020 - \$0.05 million) and \$nil in product sales (2020 - \$1.0 million). The main driver of revenue in the first nine months of 2021 was the licensing revenue earned primarily from the recognition of a portion of the deferred €5 million payment from Novo Nordisk received with the amendment to the Novo License agreement in the fourth quarter of 2020 while product sales to Novo Nordisk drove the revenue earned in the first nine months of 2020.



Operating expenses

Our total operating expenses for the nine-month period ended September 30, 2021 was \$7.0 million as compared with \$5.7 million for the same period in 2020, representing an increase of \$1.3 million. This increase arose primarily from a \$1.0 million increase in research and development costs and \$0.7 million increase in general and administrative expenses and \$0.2 million increase in selling expenses and a \$0.2 million in one-time gain on modification of a lease that was incurred in 2020 only, offset by a decrease of \$0.8 million in cost of sales, as there have been no product sales in 2021. This increase in total operating expenses is due to the initiation of research and development projects as announced in the first quarter of 2021, and higher public company costs incurred holding our annual shareholders meeting in May 2021, subsequent to our issuance of common shares in the February 2021 financing and the 2021 warrant exercises, in addition to higher professional fees.

Net finance (costs) income

Our net finance (costs) for the nine-month period ended September 30, 2021 was (\$0.1) million as compared with net finance income of \$0.7 million for the same period in 2020, representing a decrease in net finance income of \$0.8 million. This is primarily due to the \$1.1 million decrease in the change in fair value of the warrant liability a \$0.3 million decline in the gain from changes in foreign currency exchange rates partially offset by a \$0.7 million improvement in other finance costs. During the prior year, the Company registered the common shares underlying certain warrants which allowed the Company to reclassify such warrants from liability to shareholders' equity in the condensed interim consolidated statements of financial position. As such the change in fair value of such warrants liabilities was classified as a finance cost in the consolidated statements of loss and comprehensive loss in 2020; there was no such change in fair value in 2021.

Selected quarterly financial data

<i>(in thousands, except for per share data)</i>	Three months ended			
	September 30, 2021	June 30, 2021	March 31, 2021	December 31, 2020
			\$	\$
Revenues	602	599	586	2,366
Net loss	(1,698)	(2,039)	(1,445)	(1,311)
Net loss per share [basic and diluted]*	(0.01)	(0.02)	(0.02)	(0.02)

<i>(in thousands, except for per share data)</i>	Three months ended			
	September 30, 2020	June 30, 2020	March 31, 2020	December 31, 2019
			\$	\$
Revenues	128	68	1,090	18
Net (loss) income	(1,136)	(3,450)	779	(1,006)
Net (loss) income per share [basic and diluted]*	(0.02)	(0.15)	0.04	(0.05)

* Net loss 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, the impact of costs associated with launching a number of significant preclinical research and development programs in 2021, and of foreign exchange gains and losses. In addition, we cannot predict what the revenues from royalties will be earned from the Novo Amended License Agreement.



Use of cash and cash equivalents

We began 2021 with \$24.3 million in cash and cash equivalents. During the nine-month period ended September 30, 2021, our operating activities consumed \$6.4 million, our financing activities provided \$50.9 million and our investing activities used \$0.7 million. As at September 30, 2021 we had \$68.0 million of cash and cash equivalents.

Liquidity and capital reserves

Our operations and capital expenditures have generally been financed from operating activities, public equity offerings, registered direct offerings and issuances under various “at-the-market” offering programs. A portion of the Company’s cash is held in AEZS Germany, which is the counter-party to various license and distribution agreements for the Company’s only approved product and to research and development agreements. The majority of the funds are held by the Canadian parent company and are transferred to AEZS Germany when needed.

<i>(in thousands)</i>	Nine months ended September 30,	
	2021	2020
Cash and cash equivalents - Beginning of period	24,271	7,838
Cash used in operating activities	(6,168)	(6,647)
Cash flows provided by financing activities	50,926	20,485
Cash flows (used in) provided by investing activities	(534)	56
Effect of exchange rate changes on cash and cash equivalents	(493)	14
Cash and cash equivalents - End of period	68,002	21,746

Operating Activities

Cash used by operating activities totaled \$6.2 million for the nine months ended September 30, 2021, as compared to \$6.6 million in the same period in 2020. This \$0.4 million improvement in operating activities is attributed primarily to the net change in operating assets which included the receipt of the cash payment of €1 million in January 2021 from Consilient Health and recognized as deferred revenue and increases in accrued research and development costs, offset by installment payments of income taxes.

Financing Activities

Cash provided by financing activities totaled \$50.9 million for the nine months ended September 30, 2021, as compared with cash provided by financing activities of \$20.5 million in the same period in 2020. On February 21, 2021, the Company completed the February 2021 Financing with net cash proceeds of \$31.0 million and, throughout the first nine months of 2021, the Warrant Exercises contributed cash of approximately \$20.0 million. In 2020, the Company completed the February 2020 Financing with net proceeds of \$3.9 million, the July 2020 financing with net proceeds of \$10.6 million and the August 2020 Financing with net proceeds of \$6.3 million.



Investing Activities

Cash used by investing activities totaled \$0.5 million for the nine months ended September 30, 2021, as compared to cash provided by investing activities of \$0.06 in the same period in 2020. During the first nine months of 2021, the Company executed various agreements including in-licensing and similar arrangements with development partners reflecting the purchase of separately acquired intangible assets.

Capital stock

As at November 4, 2021, we had 121,397,007 common shares issued and outstanding, as well as 506,400 stock options, 423,000 deferred share units and 11,441,213 warrants outstanding. Each stock option, deferred share unit and warrant is exercisable for one common share.

During the first nine months of 2021, holders have exercised certain of our outstanding warrants, as follows:

	Number Exercised	Exercise Price	Cash Receipts
September 2019 Investor warrants	2,000,000	\$ 1.65	\$ 3,300,000
February 2020 Investor warrants	1,739,130	\$ 1.20	\$ 2,086,956
July 2020 Investor warrants	20,945,555	\$ 0.45	\$ 9,425,500
July 2020 Placement Agent warrants	1,866,667	\$ 0.5625	\$ 1,050,000
August 2020 Investor warrants	7,589,883	\$ 0.47	\$ 3,567,245
August 2020 Placement Agent warrants	869,952	\$ 0.7040625	\$ 612,501
	<u>35,011,187</u>		<u>\$ 20,042,202</u>

Adequacy of financial resources

Since inception, the Company has incurred significant expenses in its efforts to develop and co-promote products. Our current business focus is to: investigate further therapeutic uses of Macrilen™ (macimorelin), expand pipeline development activities, further expand the commercialization of macimorelin in available territories and potentially fund the pediatric clinical trial in the E.U. and U.S. for macimorelin if such trials exceed €9 million. 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 U.S. and Canada. The Company expects to incur significant expenses and operating losses for the foreseeable future as it advances its product candidates through preclinical and clinical development, seeks regulatory approval and pursues commercialization of any approved product candidates. We expect that our research and development costs will increase in connection with our planned research and development activities. As at September 30, 2021, the Company had an accumulated deficit of \$327.7 million. The Company also had a net loss of \$5.2 million for the nine months ended September 30, 2021, and negative cash flow from operations of \$6.2 million. We believe that our existing cash on hand will be sufficient to fund our anticipated operating and capital expenditure requirements through 2023. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our capital resources sooner than we expect. We may also require additional capital to pursue in-licenses or acquisitions of other product candidates.

In 2020, the COVID-19 pandemic began causing significant financial market declines and social dislocation. To date, the Company has not experienced significant business disruption from COVID-19. The situation is dynamic with various cities and countries around the world responding in different ways to address the outbreak. The spread of COVID-19 may impact our operations, including the potential interruption of our clinical trial activities and our supply chain, or that of our licensee. For example, the COVID-19 outbreak may delay enrollment in our clinical trial due to prioritization of hospital resources toward the outbreak, and some patients may be unwilling to be enrolled in our trials or be unable to comply with clinical trial protocols if quarantines impede patient movement or interrupt healthcare services, which would delay our ability to conduct clinical trials or release clinical trial results and could delay our ability to obtain regulatory approval and commercialize our product candidates. The pandemic may also impact the ability of our suppliers to deliver components or raw materials on a timely basis or at all. In addition, hospitals may reduce staffing and reduce or postpone certain treatments in response to the spread of an infectious disease. Sales activities for Macrilen™ in the US by Novo Nordisk may be impacted due to significant delays of diagnostic activities on AGHD in the U.S.

Contractual obligations and commitments as at September 30, 2021

<i>(in thousands)</i>	Service and manufacturing	R&D contracts	TOTAL
	\$	\$	\$
Less than 1 year	900	2,273	3,173
1 - 3 years	600	1,514	2,114
4 - 5 years	—	125	125
More than 5 years	—	—	—
Total	1,500	3,912	5,412

During 2021, the Company executed various agreements including in-licensing and similar arrangements with development partners with \$0.6 million in additions of separately acquired intangible assets recognized in the condensed interim consolidated statements of financial position. Such agreements may require the Company to make payments on achievement of stages of development, launch or revenue milestones, although the Company generally has the right to terminate these agreements at no penalty. The Company recognizes research and development milestones as an intangible asset once it is committed to the payment, which is generally when the Company reaches a set point in the development cycle.

Based on the closing exchange rates at September 30, 2021, the Company expects to pay \$3.9 million, including \$3.7 million [EUR 3.2 million], and \$0.2 million [GBP 0.2 million], in R&D contracts and up to \$9.1 million, including \$7.6 million [EUR 6.5 million] and \$1.5 million [GBP 1.2 million], in R&D milestone payments and up to \$33.7 million, including \$32.0 million [EUR 27.6 million] and \$1.7 million [GBP 1.3 million], in revenue related milestone payments. The table below contains all potential R&D and revenue-related milestone payments that the Company may be required to make under such agreements:

<i>(in thousands)</i>	Future potential R&D milestone payments	Future potential revenue milestone payments	TOTAL
	\$	\$	\$
Less than 1 year	29	—	29
1 - 3 years	—	—	—
4 - 5 years	1,063	—	1,063
More than 5 years	8,025	33,695	41,720
Total	9,117	33,695	42,812

The table excludes any payments already capitalized in the condensed interim consolidated statements of financial position. The future payments that are disclosed represent contract payments and are not discounted and are not risk-adjusted. The development of any pharmaceutical product candidates is a complex and risky process that may fail at any stage in the development process due to a number of factors. The timing of the payments is based on the Company's current best estimate of achievement of the relevant milestone.

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

On March 9, 2020, the Company settled the previously disclosed class-action lawsuit against it pending in the U.S. District Court for the District of New Jersey. This settlement was approved by the U.S. District Court for the District of New Jersey on June 3, 2021. The settlement payment was funded entirely by the Company's insurers. As no appeals were filed within the 30-day appeal period, this matter is fully and finally settled.

Related Party Transactions and Off-Balance Sheet Arrangements

Other than employment agreements and indemnification agreements with our management, there are no related party transactions.

As at September 30, 2021, we did not have any interests in special purpose entities or any other off-balance sheet arrangements.

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 consolidated financial statements, investors are urged to carefully consider the risks described under the caption "Risk Factors" in our most recent Annual Report on Form 40-F and annual information form for the year ended December 31, 2020 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 40-F and annual information form were filed with the relevant Canadian and U.S. securities' regulatory authorities at www.sedar.com and with the SEC at www.sec.gov. Investors are urged to consult the risk factors in these documents.

Disclosure Controls and Procedures and Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting ("ICFR") and disclosure controls and procedures ("DC&P"). ICFR is a framework designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Management has used the Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) in order to assess the effectiveness of the Company's ICFR. DC&P form a broader framework designed to provide reasonable assurance the information required to be disclosed by Aeterna in its annual and interim filings and other reports filed under securities legislation is recorded, processed, summarized and reported within the time frame specified in securities legislation and includes controls and procedures designed to ensure that information required to be disclosed by the Company in its annual and interim filings and other reports submitted under securities legislation is accumulated and communicated to our management to allow timely decisions regarding required disclosure. Together, the ICFR and DC&P frameworks provide internal control over financial reporting and disclosure. We maintain disclosure controls and procedures that are designed to provide reasonable assurance that information, which is required to be disclosed in our annual and interim filings and other reports filed under securities legislation, is accumulated and communicated in a timely fashion. Due to their inherent limitations, Aeterna acknowledges that, no matter how well designed, ICFR and DC&P can provide only reasonable assurance of achieving the desired control objectives and as such may not prevent or detect all misstatements. Further, the effectiveness of ICFR is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with policies or procedures may change. There have been no significant changes to our disclosure controls nor to our internal controls over financial reporting for the three-month period ended September 30, 2021 that have materially affected, or are reasonably likely to materially affect, the reliability of financial reporting.