



AETERNA ZENTARIS INC.

FORM POS AM

(Post-Effective Amendment To Registration Statement)

Filed 05/05/23

Address	C/O NORTON ROSE FULBRIGHT CANADA LLP, TORONTO, A6, M5K 1E7
Telephone	(727) 384-2323
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As filed with the Securities and Exchange Commission on May 5, 2023

Registration No. 333-239264

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549
POST-EFFECTIVE AMENDMENT NO. 4 TO
FORM F-1**

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

AETERNA ZENTARIS INC.

(Exact name of Registrant as specified in its charter)

Not Applicable

(Translation of Registrant's name into English)

Canada

(State or other jurisdiction of
incorporation or organization)

2834

(Primary Standard Industrial
Classification Code Number)

Not Applicable

(I.R.S. Employer
Identification Number)

c/o Norton Rose Fulbright Canada, LLP, 222 Bay Street, Suite 3000, PO Box 53, Toronto ON M5K 1E7
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Klaus Paulini, PhD
President and Chief Executive Officer
Aeterna Zentaris Inc.**

c/o Norton Rose Fulbright Canada, LLP, 222 Bay Street, Suite 3000, PO Box 53, Toronto ON M5K 1E7
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Janet Grove, Esq.
Trevor Zeyl, Esq.
Norton Rose Fulbright Canada LLP
222 Bay Street, Suite 3000, P.O. Box 53,
Toronto ON M5K 1E7
Canada (416) 216-4792**

**Brian P. Fenske, Esq.
Norton Rose Fulbright US LLP
1301 McKinney, Suite 5100
Houston, Texas 77010-3095
United States
(713) 651-5557**

Approximate date of commencement of proposed sale to the public: **As soon as practicable after the effective date of this Registration Statement.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. [X]

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. []

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933.

Emerging growth company []

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 7(a)(2)(B) of the Securities Act. []

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay

its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to Section 8(a) of the Securities Act, may determine.

EXPLANATORY NOTE

Aeterna Zentaris Inc., a corporation incorporated under the laws of Canada (the “Company” or the “Registrant”) filed a registration statement with the Securities and Exchange Commission (the “SEC”) on Form F-1 (Registration number 333-239264) which was declared effective by the SEC on July 1, 2020 (the “Form F-1”).

This Post-Effective Amendment No. 4 is being filed by the Registrant (i) to incorporate by reference into the Form F-1 the Registrant’s Annual Report on Form 20-F for the year ended December 31, 2022 filed with the SEC on March 23, 2023 and (ii) to include certain other information in the Form F-1. This Post-Effective Amendment contains an updated prospectus relating to the offer and sale of the Registrant’s common shares issuable upon exercise of warrants.

All filing fees payable in connection with the registration of the securities registered by the Form F-1 were paid by the Registrant at the time of the initial filing of the Form F-1.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED May 5, 2023

PRELIMINARY PROSPECTUS

**224,845 Common Shares
Issuable upon Exercise of Warrants**



Aeterna Zentaris Inc.

We are offering up to 224,845 of our common shares, no par value per share (“Common Shares”), which are issuable upon the exercise of warrants (each a “Common Warrant”) at an exercise price per whole Common Share of \$11.25. The Common Warrants were offered and sold by us pursuant to a prospectus dated July 1, 2020 as part of a public offering of Common Shares, Common Warrants and certain other warrants to purchase Common Shares. Such prospectus also covered the offer and sale by us of the Common Shares underlying the Common Warrants. No securities are being offered pursuant to this prospectus other than the Common Shares that will be issued upon the exercise of the Common Warrants.

In order to obtain the Common Shares offered hereby, holders of Common Warrants must pay the applicable exercise price per whole Common Share. The Common Warrants were exercisable upon issuance, and will expire on July 7, 2025. Each Common Share (including Common Shares underlying the Common Warrants) offered under this prospectus has associated with it one right to purchase a Common Share under our Rights Plan (as defined herein). Please see the section entitled “Description of Common Warrants” in this prospectus for a more detailed discussion. We will receive proceeds from the exercise of the Common Warrants but not from the sale of the underlying Common Shares.

Our Common Shares are listed on both the NASDAQ Capital Market (“NASDAQ”) and on the Toronto Stock Exchange (“TSX”) under the symbol “AEZS”. On May 4, 2023, the last reported sales price of our Common Shares on NASDAQ was \$2.99 per share and on TSX was C\$3.85 per share.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Investing in our securities involves a high degree of risk. Before making any decision to invest in our securities, you should carefully consider the information disclosed under “Risk Factors” beginning on page 4 of this Prospectus, as well as those risk factors contained or incorporated by reference into this Prospectus.

The securities offered by this prospectus have not been qualified in Canada and may not be offered or sold in Canada except

pursuant to a Canadian prospectus or an exemption from the prospectus requirements under applicable Canadian securities laws. The Company has not filed and does not intend to file a Canadian prospectus in connection with the securities offered by this prospectus.

The date of this Prospectus is May 5, 2023

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form F-1 that we filed with the SEC under the Securities Act of 1933, as amended, or the Securities Act. This prospectus does not contain all of the information included in the registration statement. For further information, we refer you to the registration statement, including its exhibits, filed with the SEC. Statements contained in this prospectus about the contents of any document are not necessarily complete. If SEC rules require that a document be filed as an exhibit to the registration statement, please see such document for a complete description of these matters. You should carefully read this prospectus, together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

This prospectus does not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus in any jurisdiction where it is unlawful to make such offer or solicitation. Before purchasing any securities, you should carefully read this prospectus, together with the additional information described under the headings, “Incorporation of Certain Documents by Reference,” and “Where You Can Find Additional Information” in this prospectus. We have not authorized anyone to provide information different from that contained in this prospectus, any amendment or supplement to this prospectus or in any free writing prospectus prepared by us or on our behalf. When you make a decision about whether to invest in our securities, you should not rely upon any information other than the information in this prospectus and any free writing prospectus prepared by us or on our behalf. This prospectus is not an offer to sell or solicitation of an offer to buy the securities being offered hereby in any circumstances under which the offer or solicitation is unlawful.

For investors outside of the United States: We have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should assume that the information contained in this prospectus and the documents incorporated by reference herein is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates. If any statement in this prospectus is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference into this prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

The financial statements included in or incorporated by reference into this prospectus have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. This may not be comparable to financial statements of United States (“U.S.”) companies, which use U.S. generally accepted accounting principles (“U.S. GAAP”). Our consolidated financial statements are subject to the standards of the Public Company Accounting Oversight Board (United States) and the SEC independence standards.

Unless otherwise stated, currency amounts in this prospectus are stated in United States dollars, or “\$” or “US\$”. All references to “C\$” are to Canadian dollars.

In this prospectus, unless otherwise indicated, references to “we”, “us”, “our”, “Aeterna Zentaris” or the “Company” are to Aeterna Zentaris Inc., a Canadian corporation, and its consolidated subsidiaries, unless it is clear that such terms refer only to Aeterna

PROSPECTUS SUMMARY

This summary highlights selected information about us, this offering and information contained in greater detail elsewhere in this prospectus and in the documents incorporated by reference herein. This summary is not complete and does not contain all of the information that you should consider before investing in our securities. You should carefully read and consider this entire prospectus and the documents, including financial statements and related notes, and information incorporated by reference into this prospectus, including the financial statements and "Risk Factors" in this prospectus, before making an investment decision. If you invest in our securities, you are assuming a high degree of risk.

Our Company

Aeterna Zentaris (the "Company" or "Aeterna") 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 ("FDA") and European Medicines Agency-approved oral test indicated for the diagnosis of patients with adult growth hormone deficiency ("AGHD"). Macrilen[®] is currently marketed in the US through a license agreement (the "Novo Amendment") between the Company and Novo Nordisk Health Care AG ("Novo") until May 23, 2023 and in the United Kingdom and Europe through a license agreement with Atnahs Pharma UK Limited ("Pharmanovia") under the trade name of Ghryvelin[™]. The Company is also dedicated to the development of therapeutic assets and has taken steps to establish a pre-clinical pipeline to potentially address unmet medical needs across several indications with a focus on rare or orphan indications.

Corporate Information

We were incorporated on September 12, 1990 under the Canada Business Corporations Act (the "CBCA") and continue to be governed by the CBCA. Our registered address is located at 222 Bay Street, Suite 3000, P.O. Box 53, Toronto ON M5K 1E7 Canada c/o Norton Rose Fulbright Canada LLP. Our principal executive offices are located c/o Norton Rose Fulbright Canada, LLP, 222 Bay Street, Suite 3000, PO Box 53, Toronto ON M5K 1E7; our telephone number is (843) 900-3223 and our website is www.zentaris.com. None of the documents or information found on our website shall be deemed to be included in or incorporated by reference into this prospectus, unless such document is specifically incorporated herein by reference. The SEC also maintains a website at www.sec.gov that contains reports, proxy statements and other information regarding registrants that file electronically with the SEC.

We currently have three wholly owned direct and indirect subsidiaries, Aeterna Zentaris GmbH ("AEZS Germany"), based in Frankfurt am Main, Germany, Zentaris IVF GmbH, a direct wholly owned subsidiary of AEZS Germany, based in Frankfurt am Main, Germany, and Aeterna Zentaris, Inc., an entity incorporated in the State of Delaware with an office based in Summerville, South Carolina in the U.S.

THE OFFERING

This summary highlights information presented in greater detail elsewhere in this prospectus. This summary is not complete and does not contain all the information you should consider before investing in our Common Shares. You should carefully read this entire prospectus before investing in our Common Shares including "Risk Factors," our consolidated financial statements and the documents incorporated herein.

Issuer	Aeterna Zentaris Inc.
Securities offered	Up to 224,845 of our common shares, no par value per share ("Common Shares"), which are issuable upon the exercise of warrants (each a "Common Warrant") at an exercise price per whole Common Share of \$11.25. Each Common Share (including Common Shares underlying the Common Warrants) offered under this prospectus has associated with it one right to purchase a Common Share under our Rights Plan (as defined herein). Please see the section entitled "Description of Common Warrants" in this prospectus for a more detailed discussion.
Description of Common Warrants	The Common Warrants were exercisable upon issuance and expire July 7, 2025. The Common Warrants have an exercise price of \$11.25 per share.
Common Shares outstanding before this offering	4,855,876 shares
Common Shares to be outstanding after this offering, assuming exercise of all of the Common Warrants	5,080,721 shares

Use of proceeds	We will receive proceeds from the exercise of the Common Warrants but not from the sale of the underlying Common Shares. We intend to use any proceeds from the exercise of the Common Warrants for general corporate purposes, which includes, 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, the funding of a pediatric clinical trial in the E.U. and U.S. for macimorelin, for trials costs in excess of amounts funded through the Novo Amendment through its termination in May 2023, and the investigation of further therapeutic uses of macimorelin. See “Use of Proceeds.”
Limitations on beneficial ownership	Subject to certain limitations and exceptions, a holder (together with its affiliates) may not exercise any portion of a Common Warrant to the extent that the holder would beneficially own more than 4.99% (or, at the election of the purchaser, 9.99%) of the outstanding Common Shares immediately after exercise of such Common Warrant, except that upon at least 61 days’ prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder’s Common Warrants up to 9.99% of the number of Common Shares outstanding immediately after giving effect to the exercise.
Risk factors	A n investment in our Common Shares involves a high degree of risk. Please refer to “Risk Factors” in this prospectus and in our Annual Report on Form 20-F for the year ended December 31, 2022, filed with the SEC on March 23, 2023, incorporated by reference herein, and other information included or incorporated by reference in this prospectus for a discussion of factors you should carefully consider before investing in our Common Shares.
Dividend policy	We have never declared or paid any cash dividends on our Common Shares. We do not anticipate paying any cash dividends in the foreseeable future.
Nasdaq Capital Market and TSX symbol	“AEZS.”

The number of Common Shares outstanding is based on 4,855,876 shares outstanding as December 31, 2022, which excludes

- 457,648 Common Shares issuable upon the exercise of outstanding warrants at a weighted average exercise price of \$21.76 per share;
- 138,950 Common Shares issuable upon the exercise of outstanding stock options and deferred share units at a weighted average exercise price of \$6.06 per share;
- 414,620 Common Shares reserved for future issuance under our 2018 Long-Term Incentive Plan; and
- 5,030 Common Shares reserved for future issuance under our Second Amended and Restated Stock Option Plan.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below in this prospectus and in any of our filings with the SEC, including the item captioned “Risk Factors” in our most recent Annual Report on Form 20-F and subsequent consolidated financial statements and corresponding management’s discussion and analysis filed with the Canadian securities regulatory authorities and our Reports on Form 6-K furnished to the SEC including our unaudited interim consolidated financial statements and corresponding management’s discussion and analysis. For additional information, please see the sources described in “Where You Can Find More Information.”

These risks are not the only risks we face. Additional risks not presently known to us, or that we currently view as immaterial, may also impair our business, if any of the risks described in our SEC filings or any additional risks actually occur, our business, financial condition, results of operations and cash flows could be materially and adversely affected. In that case, the value of our securities could decline substantially and you could lose all or part of your investment.

Risks related to the offering

Our management team will have immediate and broad discretion over the use of the net proceeds from this offering and may not use them effectively.

We currently intend to use the net proceeds of this offering for general corporate purposes, which includes, 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, the funding of a pediatric clinical trial in the E.U. and U.S. for macimorelin, for trials costs in excess of amounts funded through the Novo Amendment through its termination in May 2023, and the investigation of further therapeutic uses of macimorelin. See “Use of Proceeds.” However, our management will have broad discretion in the application of the net proceeds. Our shareholders may not agree with the manner in which our management chooses to allocate the net proceeds from this offering. The failure by our management to apply these funds effectively could have a material adverse effect on our business, financial condition and results of operation. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income. The decisions made by our management may not result in positive returns on your investment and you will not have an opportunity to evaluate the economic, financial or other information upon which our management bases its decisions.

If you purchase Common Shares in this offering by exercising Common Warrants, you will suffer immediate dilution of your investment.

The public offering price of our Common Shares is substantially higher than the as adjusted net tangible book value per Common Share. Therefore, if you purchase Common Shares in this offering by exercising Common Warrants, you will pay a price per Common Share that substantially exceeds our as adjusted net tangible book value per Common Share after this offering. To the extent outstanding options are exercised, you will incur further dilution. Based on the exercise price per Common Share of the Common Warrants, you will experience immediate dilution of \$13.07 per Common Share, representing the difference between our as adjusted net tangible book value per Common Share after giving effect to this offering and the exercise price. See "Dilution."

Prevention of Transactions Involving a Change of Control of the Company

Effective May 8, 2019, the shareholders re-approved the Company's Rights Plan (as defined herein) that provides the Board of Directors and the Company's shareholders with additional time to assess any unsolicited take-over bid for the Company and, where appropriate, to pursue other alternatives for maximizing shareholder value. Under the Rights Plan, one right has been issued for each currently issued common share, and one right will be issued with each additional common share that may be issued from time to time. The Rights Plan may have a significant anti-takeover effect. The Rights Plan has the potential to significantly dilute the ownership interests of an acquirer of shares of the Company, and therefore may have the effect of delaying, deterring or preventing a change in control of the Company.

SPECIAL NOTE ON FORWARD-LOOKING STATEMENTS

This Prospectus and the documents incorporated herein by reference contain forward-looking statements 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 risks and uncertainties, including those discussed the item captioned "Risk Factors" in our most recent Annual Report on Form 20-F. Known and unknown risks and uncertainties could cause our actual results to differ materially from those in forward-looking statements. Such risks include but are not limited to:

- the delisting of our Common Shares from the NASDAQ or the TSX could impact their market price and liquidity;
- we may be a passive foreign investment company, which could result in adverse tax consequences;
- our net operating losses may be limited under U.S. tax laws;
- our Rights Plan may prevent changes of control of the Company;
- the economic effects of COVID-19 may impact the market price of our Common Shares;
- investments in biopharmaceutical companies are generally considered to be speculative;
- risks relating to the failure to commercialize or out-license Macrilen™ (macimorelin);
- our revenues and expenses may fluctuate significantly and we may fail to meet financial expectations;
- the failure to complete the clinical trial program for the pediatric indication of Macrilen™ (macimorelin) could impact our operations;
- our dependence on strategic third party relationships regarding Macrilen™ (macimorelin);
- we may be unsuccessful in completing further out-licensing arrangement for Macrilen™ (macimorelin);
- we have initiated significant early-stage pre-clinical programs;
- we may require significant additional financing, and we may not have access to sufficient capital;
- we are and will be subject to ongoing government regulation for our products;
- marketing approval for Macrilen™ (macimorelin) could be subject to restrictions or withdrawals;
- healthcare reforms could hinder the commercial success of a product and affect our business;
- we may be subject to civil or criminal penalties if we interact with healthcare practitioners in a way that violates healthcare fraud or abuse laws;
- we may be unable to generate significant revenues if Macrilen™ (macimorelin) does not gain market acceptance;
- we may expend our limited resources to pursue a particular product or indication and fail to capitalize on other products or indications for which there may be a greater likelihood of success;
- we may not achieve our projected development goals in the time-frames we announce and expect;

- if we fail to obtain acceptable prices or adequate reimbursement for Macrilen™ (macimorelin), our ability to generate revenues will be diminished;
- competition in our targeted markets is intense, and development by other companies could render Macrilen™ (macimorelin), or any of our future products, non-competitive;
- we may not obtain adequate protection for Macrilen™ (macimorelin) through our intellectual property;
- we may infringe the intellectual property rights of others;

- patent litigation is costly and time consuming and may subject us to liabilities;
- we may not obtain trademark registrations for our current or future products;
- we rely on third parties to conduct, supervise and monitor our clinical trials, and those third parties may not perform satisfactorily;
- any difficulties or delays in our clinical trials could result in increased costs to us, delay or limit our ability to generate revenue and adversely affect our commercial prospects;
- the FDA and other foreign equivalents may not accept data from clinical trials outside the United States, in which case our development plans will be delayed, which could materially harm our business;
- in carrying out our operations, we are dependent on a stable and consistent supply of ingredients and raw materials;
- the failure to perform satisfactorily by third parties upon which we expect to rely to manufacture and supply products may lead to supply shortfalls;
- we are subject to intense competition for our skilled personnel, and the loss of key personnel or the inability to attract additional personnel could impair our ability to conduct our operations;
- we may be subject to litigation in the future;
- we are subject to the risk of product liability claims for which we may not have adequate insurance coverage;
- claims of creditors of our subsidiaries will generally have priority as to the assets of such subsidiaries over our claims and those of our creditors and shareholders;
- it may be difficult for U.S. investors to obtain and enforce judgments against us because of our Canadian incorporation and German presence;
- we can provide no assurance that we will, at all times in the future, be able to report that our internal controls over financial reporting are effective;
- we may have material weaknesses in our internal controls over financial reporting which could have a material adverse effect on the price of our Common Shares;
- we are subject to environmental laws and may be subject to environmental remediation obligations. The impact of these obligations may have a material adverse effect on our business;
- we may incur losses associated with foreign currency fluctuations;
- legislative actions, new accounting pronouncements and higher insurance costs may adversely impact our future financial position or results of operations;
- data security breaches may disrupt our operations and adversely affect our operating results;
- our share price is volatile, which may result from factors outside of our control;
- we do not intend to pay dividends in the near future;
- future issuances of securities and hedging activities may depress the trading price of our Common Shares;
- in the event we were to lose our foreign private issuer status as of June 30 of a given financial year, we would be required to comply with the Securities Exchange Act of 1934 domestic reporting regime, which could cause us to incur additional legal, accounting and other expenses;
- our articles of incorporation contain “blank check” preferred share provisions, which could delay or impede an acquisition of our company; and
- our business could be negatively affected as a result of the actions of activist shareholders.

More detailed information about these and other factors is included under “Risk Factors” in this Prospectus and in other

documents incorporated herein by reference. Investors should consult the Company's quarterly and annual filings with the Canadian and U.S. securities commissions for additional information on risks and uncertainties. Many of these factors are beyond our control. Future events may vary substantially from what we currently foresee. You should not place undue reliance on such forward-looking statements. The Company disavows and is under no obligation to update or alter such forward-looking statements whether as a result of new information, future results, events, developments or otherwise, unless required to do so by a governmental authority or applicable law.

USE OF PROCEEDS

To the extent that the Common Warrants are exercised for cash, we will receive the gross cash proceeds from such exercise of up to a total potential of approximately \$2.5 million, based on the exercise price of the Common Warrants. We cannot predict when or if the Common Warrants will be exercised, and it is possible that the Common Warrants may expire and never be exercised.

We intend to use the net proceeds from the issuance of the securities for general corporate purposes, which includes, 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, the funding of a pediatric clinical trial in the E.U. and U.S. for macimorelin, for trials costs in excess of amounts funded through the Novo Amendment through its termination in May 2023, and the investigation of further therapeutic uses of macimorelin.

Our management will have broad discretion in the application of the net proceeds of this offering, and investors will be relying on our judgment regarding the application of the net proceeds. In addition, we might decide to postpone or not pursue certain activities if the net proceeds from this offering and our other sources of cash are less than expected.

Pending their use, we plan to invest the net proceeds of this offering in short-and intermediate-term interest-bearing investments.

DIVIDEND POLICY

We have never declared nor paid dividends on our securities. We currently expect to retain future earnings, if any, for use in the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay dividends on our securities is subject to the discretion of our Board of Directors and will depend upon various factors, including, without limitation, our results of operations and financial condition.

CONSOLIDATED CAPITALIZATION

The following table presents the number of our issued and outstanding Common Shares and our consolidated cash and cash equivalents and capitalization as at December 31, 2022

- on an actual basis; and
- on an as adjusted basis to give effect to our issuance of the 224,845 Common Shares offered hereby upon exercise of the Common Warrants at an exercise price per Common Share of \$11.25. As at December 31, 2022, we had no outstanding long-term third-party debt.

Investors should read this table in conjunction with our audited consolidated financial statements and related notes as of and for the year ended December 31, 2022 and management's discussion and analysis thereon, each as incorporated by reference into this prospectus. Figures are in thousands of U.S. dollars except share data.

	As at December 31, 2022	
	Actual	Adjusted
Number of Common Shares issued and outstanding	4,855,876	5,080,721
Cash and cash equivalents ⁽¹⁾	\$ 50,611	\$ 53,141
Shareholders' equity:		
Share capital	\$ 293,410	\$ 296,933
Warrants ⁽²⁾	\$ 5,085	\$ 4,092
Other capital	\$ 90,332	\$ 90,332
Deficit	\$ (352,084)	\$ (352,084)
Accumulated other comprehensive income	\$ (967)	\$ (967)
Total shareholders' equity and total capitalization	\$ 35,776	\$ 38,306

(1) Since December 31, 2022, we have issued nil of our Common Shares for an aggregate amount of \$nil.

(2) The ascribed value of the warrants was reduced by transactions costs of \$666,115 incurred at the time of the initial issuance of the warrants.

The number of our Common Shares that will be outstanding both before and immediately after this offering is based on 4,855,876 shares outstanding as of December 31, 2022, and excludes as of such date:

- 457,648 Common Shares issuable upon the exercise of outstanding warrants at a weighted average exercise price of \$21.76 per share;

- 138,950 Common Shares issuable upon the exercise of outstanding stock options and deferred share units at a weighted average exercise price of \$6.06 per share;

- 414,620 Common Shares reserved for future issuance under our 2018 Long-Term Incentive Plan; and

- 5,030 Common Shares reserved for future issuance under our Second Amended and Restated Stock Option Plan.

DILUTION

If you exercise Common Warrants in this offering for our Common Shares, your interest will be diluted to the extent of the difference between the price per Common Share you will pay and the as adjusted net tangible book value per Common Share after the exercise

As of December 31, 2022, we had a net tangible book value of \$35.8 million, corresponding to a net tangible book value of \$7.37 per Common Share. Net tangible book value per share represents the amount of our total assets less our total liabilities, excluding intangible assets, divided by 4,855,876, the total number of our Common Shares outstanding as of December 31, 2022.

Assuming that we issue all 224,845 of the Common Shares upon exercise of the Common Warrants at their exercise price of \$11.25 per share, our as adjusted net tangible book value estimated as of December 31, 2022 would have been \$38.31 million, representing \$7.54 per Common Share. This represents an immediate increase in net tangible book value of \$0.17 per Common Share to existing shareholders and an immediate dilution in net tangible book value of \$3.71 per Common Share to new investors acquiring Common Shares upon the exercise of the Common Warrants. Dilution for this purpose represents the difference between the exercise price per Common Share paid upon exercise of Common Warrants and net tangible book value per Common Share immediately after the exercise, as illustrated by the following table:

	\$	\$
Exercise Price per Common Share		11.25
Consolidated net tangible book value per Common Share as of December 31, 2022	7.37	
Increase in consolidated net tangible book value per Common Share attributable to the offering	0.17	
As adjusted consolidated net tangible book value per Common Share after this offering		7.54
Dilution per Common Share to new investors participating in this offering		3.71

The number of our Common Shares that will be outstanding both before and immediately after this offering is based on 4,855,876 shares outstanding as of December 31, 2022, and excludes as of such date:

- 457,648 Common Shares issuable upon the exercise of outstanding warrants at a weighted average exercise price of \$21.76 per share;

- 138,950 Common Shares issuable upon the exercise of outstanding stock options and deferred share units at a weighted average exercise price of \$6.06 per share;

- 414,620 Common Shares reserved for future issuance under our 2018 Long-Term Incentive Plan; and

- 5,030 Common Shares reserved for future issuance under our Second Amended and Restated Stock Option Plan.

DESCRIPTION OF SHARE CAPITAL

Our authorized share capital structure consists of an unlimited number of shares of the following classes (all classes are without nominal or par value): Common Shares; and first preferred shares (the "First Preferred Shares") and second preferred shares (the "Second Preferred Shares" and, together with the First Preferred Shares, the "Preferred Shares"), each issuable in series. As of May 5, 2023, there were 4,855,876 Common Shares issued and outstanding, which have associated Common Share purchase rights under our Shareholder Rights Plan Agreement. No Preferred Shares have been issued to date.

Common Shares

The holders of the Common Shares are entitled to one vote for each Common Share held by them at all meetings of shareholders, except meetings at which only shareholders of a specified class of shares are entitled to vote. In addition, the holders are entitled to receive dividends if, and when, declared by the Board of Directors on the Common Shares. Finally, the holders of the Common Shares are entitled to receive the remaining property of the Company upon any liquidation, dissolution or winding-up of the affairs of the Company, whether voluntary or involuntary. Shareholders have no liability to further capital calls as all issued and outstanding shares are fully paid and non-assessable. Additional information on our share capital is provided in our Annual Report on Form 20-F for the year ended December 31, 2022, filed with the SEC on March 23, 2023, incorporated by reference to this prospectus.

Shareholder Rights Plan

The Board of Directors approved a shareholder rights plan of the Company on March 29, 2016, which was approved, ratified and confirmed by the shareholders at the annual and special meeting of shareholders of the Company on May 10, 2016 (the "2016 Rights

Plan"). The 2016 Rights Plan was implemented to ensure, to the extent possible, that all of our shareholders are treated fairly in connection with any take-over bid or other acquisition of control of the Company.

The Board of Directors reviewed the terms of the 2016 Rights Plan for conformity with current Canadian securities laws, as well as the evolving practices of public corporations in Canada, with respect to shareholder rights plan design and made some minor amendments thereto as a result.

The Board of Directors determined it appropriate and in the best interests of the shareholders to continue the 2016 Rights Plan and approved the amended and restated shareholder rights plan (the "Rights Plan") on March 26, 2019. The Rights Plan took effect immediately upon receipt of approval of the shareholders of the Company at the annual and special meeting of shareholders held on May 8, 2019.

The fundamental objectives of the Rights Plan are to provide adequate time for our Board of Directors and shareholders to assess an unsolicited take-over bid for us, to provide the Board of Directors with sufficient time to explore and develop alternatives for maximizing shareholder value if a take-over bid is made, and to provide shareholders with an equal opportunity to participate in a take-over bid. The Rights Plan encourages a potential acquirer who makes a take-over bid to proceed either by way of a "Permitted Bid," which requires a take-over bid to satisfy certain minimum standards designed to promote fairness, or with the concurrence of our Board of Directors. If a takeover bid fails to meet these minimum standards and the Rights Plan is not waived by the Board of Directors, the Rights Plan provides that holders of Common Shares, other than the acquirer, will be able to purchase additional Common Shares at a significant discount to market, thus exposing the person acquiring Common Shares to substantial dilution of its holdings.

Pursuant to the terms of the Rights Plan, one right was issued in respect of each common share outstanding at 5:01 p.m. on March 29, 2016 (the "Record Time"). In addition, we will issue one right for each additional Common Share issued after the Record Time and prior to the earlier of the Separation Time (as defined in the Rights Plan) and the Expiration Time (as defined in the Rights Plan). The rights have an initial exercise price equal to the Market Price (as defined in the Rights Plan) of the Common Shares as determined at the Separation Time, multiplied by five, subject to certain anti-dilution adjustments (the "Exercise Price"), and they are not exercisable until the Separation Time. Upon the occurrence of a Flip-in Event (as defined in the Rights Plan), each right will entitle the holder thereof, other than an Acquiring Person (as defined in the Rights Plan) or any other person whose rights are or become void pursuant to the provisions of the Rights Plan, to purchase from us, effective at the close of business on the eighth trading day after the Stock Acquisition Date (as defined in the Rights Plan), upon payment to us of the Exercise Price, Common Shares having an aggregate Market Price equal to twice the Exercise Price on the date of consummation or occurrence of such Flip-in Event, subject to certain anti-dilution adjustments.

The Rights Plan is described in detail in our Annual Report on Form 20-F for the year ended December 31, 2022, filed with the SEC on March 23, 2023, incorporated by reference to this prospectus.

Listing

Our Common Shares are listed on the NASDAQ Capital Market and on the TSX under the symbol "AEZS".

Transfer Agent and Registrar

The transfer agent and registrar for our Common Shares (and associated Common Share purchase rights) is Computershare Trust Company of Canada, 1500 University Street, 7th Floor, Montreal, Quebec, H3A 358.

DESCRIPTION OF COMMON WARRANTS

The Common Warrants were issued on July 7, 2020, pursuant to a prospectus dated July 1, 2020. The Common Warrants were issued as individual warrant agreements to the investors. The material terms and provisions of the Common Warrants are summarized below. The Common Warrants represent the rights to purchase an aggregate of up to 224,845 Common Shares at an exercise price per share of \$11.25.

The material terms and provisions of our Common Shares (and associated Common Share purchase rights) and each other class of our securities that qualifies or limits our Common Shares are described in the section entitled "*Description of Share Capital*" beginning on page 10 of this prospectus.

Duration and Exercise Price

The Common Warrants have an exercise price per share equal to \$11.25. The Common Warrants were immediately exercisable and will expire on July 7, 2025. The exercise price and number of Common Shares issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our Common Shares and the exercise price. In addition, we may, with the consent of the Common Warrant holders, reduce the then current exercise price with respect to the Common Warrants to any amount and for any period of time deemed appropriate by our board of directors.

Exercisability

The Common Warrants are exercisable, at the option of each holder, in whole or in part, by delivering a duly executed exercise notice accompanied by payment in full for the number of Common Shares purchased upon such exercise (except in the case of a cashless exercise as discussed below). Subject to certain limitations and exceptions, a holder (together with its affiliates) may not exercise any portion of a Common Warrant to the extent that the holder would beneficially own more than 4.99% (or, at the election of the purchaser, 9.99%) of the outstanding Common Shares immediately after exercise of such Common Warrant, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after

exercising the holder's Common Warrants up to 9.99% of the number of Common Shares outstanding immediately after giving effect to the exercise. No fractional Common Shares will be issued in connection with the exercise of a Common Warrant. In lieu of fractional Common Shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Cashless Exercise

If, at the time a holder exercises the Common Warrant, a registration statement registering the issuance of the Common Shares underlying the Common Warrants under the Securities Act is not then effective or available, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of Common Shares determined according to a formula set forth in the Common Warrants.

Fundamental Transaction

If, at any time while the Common Warrants are outstanding, (1) we, directly or indirectly, consolidate or merge with or into another person, (2) we, directly or indirectly, sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets, (3) any direct or indirect purchase offer, tender offer or exchange offer (whether by us or another person) is completed pursuant to which holders of our Common Shares are permitted to sell, tender or exchange their Common Shares for other securities, cash or property and has been accepted by the holders of 50% or more of our outstanding shares of Common Shares, (4) we, directly or indirectly, effect any reclassification, reorganization or recapitalization of our Common Shares or any compulsory share exchange pursuant to which our Common Shares are converted into or exchanged for other securities, cash or property, or (5) we, directly or indirectly, consummate a stock or share purchase agreement or other business combination with another person whereby such other person acquires more than 50% of our outstanding Common Shares, each, a "Fundamental Transaction", then upon any subsequent exercise of the Common Warrants, the holders thereof will have the right to receive the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Common Shares then issuable upon exercise of the Common Warrant, and any additional consideration payable as part of the Fundamental Transaction. In certain circumstances, upon a fundamental transaction, the holder will have the right to require us or a successor entity to repurchase its Common Warrants at the Black Scholes option pricing formula value; provided, however, that if the fundamental transaction is not within the Company's control, including not approved by the Company's board of directors, then the holder shall only be entitled to receive the same type or form of consideration (and in the same proportion), at the Black Scholes value of the unexercised portion of the Common Warrant, that is being offered and paid to the holders of our Common Shares in connection with the fundamental transaction.

Transferability

Subject to applicable laws, a Common Warrant may be transferred at the option of the holder upon surrender of the Common Warrant together with the appropriate instruments of transfer.

Rights as a Shareholder

Except as otherwise provided in the Common Warrants or by virtue of such holder's ownership of Common Shares, a holder of Common Warrants does not have rights or privileges of a holder of Common Shares, including any voting rights or dividends, until the holder exercises the Common Warrants.

INCOME TAX CONSIDERATIONS

THE FOLLOWING SUMMARY IS OF A GENERAL NATURE ONLY AND IS NOT INTENDED TO BE, NOR SHOULD IT BE CONSTRUED TO BE, LEGAL OR TAX ADVICE TO ANY PARTICULAR INVESTOR. CONSEQUENTLY, PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR OWN TAX ADVISORS FOR ADVICE AS TO THE TAX CONSEQUENCES OF AN INVESTMENT IN THE SECURITIES OFFERED BY THIS PROSPECTUS HAVING REGARD TO THEIR PARTICULAR CIRCUMSTANCES.

Material U.S. Federal Income Tax Considerations for U.S. Holders

The following discussion is a summary of the material U.S. federal income tax consequences applicable to the purchase, ownership and disposition of Common Shares being offered by this prospectus by a U.S. Holder (as defined below), but does not purport to be a complete analysis of all potential U.S. federal income tax effects.

This summary is based on the *Internal Revenue Code of 1986*, as amended (the "Code"), U.S. Treasury regulations promulgated thereunder, IRS rulings and judicial decisions in effect on the date of this prospectus. All of these are subject to change, possibly with retroactive effect, or different interpretations. This summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation that, if enacted, could be applied on a retroactive basis. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, and contrary to, the positions taken in this summary.

This summary does not address all aspects of U.S. federal income taxation that may be relevant to particular U.S. Holders in light of their specific circumstances (for example, U.S. Holders subject to the alternative minimum tax or the Medicare contribution tax on net investment income under the Code) or to holders that may be subject to special rules under U.S. federal income tax law, including, without limitation:

- dealers in stocks, securities or currencies;

- securities traders that use a mark-to-market accounting method;
- banks and financial institutions;
- insurance companies;
- regulated investment companies;
- real estate investment trusts;
- tax-exempt organizations;
- retirement plans, individual plans, individual retirement accounts and tax-deferred accounts;
- partnerships or other pass-through entities for U.S. federal income tax purposes and their partners or members;
- persons holding Common Shares as part of a hedging or conversion transaction straddle or other integrated or risk reduction transaction;
- persons who or that are, or may become, subject to the expatriation provisions of the Code;
- persons whose functional currency is not the U.S. dollar; and
- direct, indirect or constructive owners of 10% or more of the total combined voting power of all classes of our voting stock or 10% or more of the total value of shares of all classes of our stock.

This summary also does not discuss any aspect of state, local or foreign law, or estate or gift tax law as applicable to U.S. Holders. In addition, this discussion is limited to U.S. Holders purchasing Common Shares pursuant to this prospectus and that will hold such Common Shares as capital assets. For purposes of this summary, "U.S. Holder" means a beneficial holder of Common Shares who or that for U.S. federal income tax purposes is:

- an individual citizen or resident of the U.S.;
- a corporation or other entity classified as a corporation for U.S. federal income tax purposes created or organized in or under the laws of the U.S., any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust, if (a) a court within the U.S. is able to exercise primary supervision over the administration of such trust and one or more "U.S. persons" (within the meaning of the Code) have the authority to control all substantial decisions of the trust, or (b) a valid election is in effect to be treated as a U.S. person for U.S. federal income tax purposes.

If a partnership or other entity or arrangement classified as a partnership for U.S. federal income tax purposes holds Common Shares, the U.S. federal income tax treatment of a partner generally will depend on the status of the partner and the activities of the partnership. This summary does not address the tax consequences to any such partner. Such a partner should consult its own tax advisor as to the tax consequences of the partnership purchasing, owning and disposing of Common Shares.

PROSPECTIVE INVESTORS SHOULD CONSULT THEIR OWN TAX ADVISORS WITH REGARD TO THE APPLICATION OF THE TAX CONSEQUENCES DESCRIBED BELOW TO THEIR PARTICULAR SITUATIONS AS WELL AS THE APPLICATION OF ANY STATE, LOCAL, FOREIGN OR OTHER TAX LAWS, INCLUDING GIFT AND ESTATE TAX LAWS.

Tax Consequences if we are a Passive Foreign Investment Company

A foreign corporation will be classified as a PFIC for any taxable year in which, after taking into account the income and assets of the corporation and certain subsidiaries pursuant to applicable "look-through rules," either (i) at least 75% of its gross income is "passive income" or (ii) at least 50% of the average quarterly value of its assets is attributable to assets which produce passive income or are held for the production of passive income. Passive income generally includes dividends, interest, rents and royalties (other than certain rents and royalties derived in the active conduct of a trade or business), annuities and gains from assets that produce passive income. If a non-U.S. corporation owns at least 25% by value of the stock of another corporation, the non-U.S. corporation is treated for purposes of the PFIC tests as owning its proportionate share of the assets of the other corporation and as receiving directly its proportionate share of the other corporation's income.

The determination of whether we are, or will be, a PFIC for a taxable year depends, in part, on the application of complex U.S. federal income tax rules, which are subject to various interpretations. Although the matter is not free from doubt, we believe that we were not a PFIC during our 2020 taxable year and will not likely be a PFIC during our 2021 taxable year. Because PFIC status is based on our income, assets and activities for the entire taxable year, and our market capitalization, it is not possible to determine whether we will be characterized as a PFIC for the 2021 taxable year until after the close of the taxable year. The tests for determining PFIC status are subject to a number of uncertainties. These tests are applied annually, and it is difficult to accurately predict future income, assets and activities relevant to this determination. In addition, because the market price of our Common Shares is likely to fluctuate, the market price may affect the determination of whether we will be considered a PFIC. There can be no assurance that we will not be considered a PFIC for any taxable year (including our 2021 taxable year). Prospective investors should consult their tax advisors regarding the Company's PFIC status.

If the Company is classified as a PFIC for any taxable year during which a U.S. Holder owns Common Shares, the U.S. Holder, absent certain elections (including the mark-to-market and QEF elections described below), will generally be subject to adverse rules (regardless of whether the Company continues to be classified as a PFIC) with respect to (i) any “excess distributions” (generally, any distributions received by the U.S. Holder on the Common Shares in a taxable year that are greater than 125% of the average annual distributions received by the U.S. Holder in the three preceding taxable years or, if shorter, the U.S. Holder’s holding period for the Common Shares) and (ii) any gain realized on the sale or other disposition of the Common Shares.

Under these adverse rules (a) the excess distribution or gain will be allocated ratably over the U.S. Holder’s holding period, (b) the amount allocated to the current taxable year and any taxable year prior to the first taxable year in which the Company is classified as a PFIC will be taxed as ordinary income and (c) the amount allocated to each of the other taxable years during which the Company was classified as a PFIC will be subject to tax at the highest rate of tax in effect for the applicable category of taxpayer for that year and an interest charge will be imposed with respect to the resulting tax attributable to each such other taxable year. A U.S. Holder that is not a corporation will be required to treat any such interest paid as “personal interest,” which is not deductible.

U.S. Holders can avoid the adverse rules described above in part by making a mark-to-market election with respect to the Common Shares, provided that the Common Shares are “marketable.” The Common Shares will be marketable if they are “regularly traded” on a “qualified exchange” or other market within the meaning of applicable U.S. Treasury regulations. For this purpose, the Common Shares generally will be considered to be regularly traded during any calendar year during which they are traded, other than in *de minimis* quantities, on at least 15 days during each calendar quarter. The Common Shares are currently listed on the NASDAQ, which constitutes a qualified exchange; however, there can be no assurance that the Common Shares will be treated as regularly traded for purposes of the mark-to-market election on a qualified exchange. If the Common Shares were not regularly traded on the NASDAQ or were delisted from the NASDAQ and were not traded on another qualified exchange for the requisite time period described above, the mark-to-market election would not be available.

A U.S. Holder that makes a mark-to-market election must include in gross income, as ordinary income, for each taxable year an amount equal to the excess, if any, of the fair market value of the U.S. Holder’s Common Shares at the close of the taxable year over the U.S. Holder’s adjusted tax basis in the Common Shares. An electing U.S. Holder may also claim an ordinary loss deduction for the excess, if any, of the U.S. Holder’s adjusted tax basis in the Common Shares over the fair market value of the Common Shares at the close of the taxable year, but this deduction is allowable only to the extent of any net mark-to-market gains previously included in income. A U.S. Holder that makes a mark-to-market election generally will adjust such U.S. Holder’s tax basis in the Common Shares to reflect the amount included in gross income or allowed as a deduction because of such mark-to-market election. Gains from an actual sale or other disposition of the Common Shares will be treated as ordinary income, and any losses incurred on a sale or other disposition of the Common Shares will be treated as ordinary losses to the extent of any net mark-to-market gains previously included in income.

If we are classified as a PFIC for any taxable year in which a U.S. Holder owns Common Shares, but before a mark-to-market election is made, the adverse PFIC rules described above will apply to any mark-to-market gain recognized in the year the election is made. Otherwise, a mark-to-market election will be effective for the taxable year for which the election is made and all subsequent taxable years. The election cannot be revoked without the consent of the IRS unless the Common Shares cease to be marketable, in which case the election is automatically terminated.

If the Company is classified as a PFIC, a U.S. Holder of Common Shares will generally be treated as owning stock owned by the Company in any direct or indirect subsidiaries that are also PFICs and will be subject to similar adverse rules with respect to distributions to the Company by, and dispositions by the Company of, the stock of such subsidiaries. A mark-to-market election is not permitted for the shares of any subsidiary of the Company that is also classified as a PFIC. Prospective investors should consult their tax advisors regarding the availability of, and procedure for making, a mark-to-market election.

In some cases, a shareholder of a PFIC can avoid the interest charge and the other adverse PFIC consequences described above by making a QEF election to be taxed currently on its share of the PFIC’s undistributed income. We will endeavor to satisfy the record keeping requirements that apply to a QEF and to supply requesting U.S. Holders with the information that such U.S. Holders are required to report under the QEF rules. There can be no assurance, however, that we will satisfy the record keeping requirements or provide the information required to be reported by U.S. Holders.

A U.S. Holder that makes a timely and effective QEF election for the first tax year in which its holding period of its Common Shares begins generally will not be subject to the adverse PFIC consequences described above with respect to its Common Shares. Rather, a U.S. Holder that makes a timely and effective QEF election will be subject to U.S. federal income tax on such U.S. Holder’s pro rata share of (a) the Company’s net capital gain, which will be taxed as long-term capital gain to such U.S. Holder, and (b) the Company’s ordinary earnings, which will be taxed as ordinary income to such U.S. Holder, in each case regardless of which such amounts are actually distributed to the U.S. Holder by the Company. Generally, “net capital gain” is the excess of (i) net long-term capital gain over (ii) net short-term capital loss, and “ordinary earnings” are the excess of (A) “earnings and profits” over (B) net capital gain.

A U.S. Holder that makes a timely and effective QEF election with respect to the Company generally (a) may receive a tax-free distribution from us to the extent that such distribution represents “earnings and profits” that were previously included in income by the U.S. Holder because of such QEF election and (b) will adjust such U.S. Holder’s tax basis in the Common Shares to reflect the amount included in income or allowed as a tax-free distribution because of such QEF election. In addition, a U.S. Holder that makes a QEF election generally will recognize capital gain or loss on the sale or other taxable disposition of Common Shares.

The QEF election is made on a shareholder-by-shareholder basis. Once made, a QEF election will apply to the tax year for which the QEF election is made and to all subsequent tax years, unless the QEF election is invalidated or terminated or the IRS consents to revocation of the QEF election. In addition, if a U.S. Holder makes a QEF election, the QEF election will remain in effect (although it will not be applicable) during those tax years in which we are not a PFIC.

If the Company is classified as a PFIC and then ceases to be so classified, a U.S. Holder may make an election (a “deemed sale election”) to be treated for U.S. federal income tax purposes as having sold such U.S. Holder’s Common Shares on the last day of the taxable year of the Company during which it was a PFIC. A U.S. Holder that made a deemed sale election would then cease to be treated as owning stock in a PFIC by reason of ownership of Common Shares in the Company. Any gain recognized, however, as a result of making the deemed sale election would be subject to the adverse rules described above and loss would not be recognized.

If the Company is a PFIC in any year with respect to a U.S. Holder, the U.S. Holder will be required to file an annual information return on IRS Form 8621 regarding distributions received on Common Shares and any gain realized on the disposition of Common Shares.

In addition, if the Company is a PFIC, U.S. Holders will generally be required to file an annual information return with the IRS (also on IRS Form 8621, which PFIC shareholders are required to file with their U.S. federal income tax or information returns) relating to their ownership of Common Shares.

Prospective investors should consult their tax advisors regarding the potential application of the PFIC regime and any reporting obligations to which they may be subject under that regime.

Taxation of Distributions

Subject to the PFIC rules discussed above, any distributions paid by us out of current or accumulated earnings and profits (as determined for U.S. federal income tax purposes), before reduction for any Canadian withholding tax paid with respect thereto, will generally be taxable to a U.S. Holder as foreign source dividend income, and generally will not be eligible for the dividends received deduction generally allowed to corporations.

Distributions in excess of current and accumulated earnings and profits will be treated as a non-taxable return of capital to the extent of the U.S. Holder’s adjusted tax basis in the Common Shares and, thereafter, as capital gain. We do not, however, intend to calculate our earnings and profits under U.S. federal income tax principles. Therefore, U.S. Holders should expect that any distribution from us generally will be treated for U.S. federal income tax purposes as a dividend. Prospective investors should consult their own tax advisors with respect to the appropriate U.S. federal income tax treatment of any distribution received from us.

Dividends paid to non-corporate U.S. Holders by us in a taxable year in which we are treated as a PFIC, or in the immediately following taxable year, will not be eligible for the special reduced rates normally applicable to long-term capital gains. In all other taxable years, dividends paid by us should be taxable to a non-corporate U.S. Holder at the special reduced rates normally applicable to long-term capital gains, provided that certain conditions are satisfied (including a minimum holding period requirement). We believe we were not a PFIC for the 2020 taxable year. However, no assurance can be provided that we will not be classified as a PFIC for 2021 and, therefore, no assurance can be provided that a U.S. Holder will be able to claim a reduced rate for dividends paid in 2020 or 2021 (if any). Please see the subsection above entitled “Material U.S. Federal Income Tax Considerations for U.S. Holders — Tax Consequences if we are a Passive Foreign Investment Company” for a more detailed discussion.

Under current law, payments of dividends by us to non-Canadian investors are generally subject to a 25% Canadian withholding tax. The rate of withholding tax applicable to U.S. Holders that are eligible for benefits under the Canada-United States Tax Convention (the “Convention”) is reduced to a maximum of 15% (or 5% in the case of a U.S. holder that is a company beneficially owning at least 10% of the Company’s voting shares). This reduced rate of withholding will not apply if the dividends received by a U.S. Holder are effectively connected with a permanent establishment of the U.S. Holder in Canada. In such case, the provisions of Article VII (Business Profits) of the Convention should apply. For U.S. federal income tax purposes, U.S. Holders will be treated as having received the amount of Canadian taxes withheld by the Company, and as then having paid over the withheld taxes to the Canadian taxing authorities. As a result of this rule, the amount of dividend income included in gross income for U.S. federal income tax purposes by a U.S. Holder with respect to a payment of dividends may be greater than the amount of cash actually received (or receivable) by the U.S. Holder from the Company with respect to the payment.

Subject to certain limitations, a U.S. Holder will generally be entitled, at the election of the U.S. Holder, to a credit against its U.S. federal income tax liability, or a deduction in computing its U.S. federal taxable income, for Canadian income taxes withheld by us. This election is made on a year-by-year basis and applies to all foreign taxes paid (whether directly or through withholding) by a U.S. Holder during a year. For purposes of the foreign tax credit limitation, dividends paid by us generally will constitute foreign source income in the “passive category income” basket. The foreign tax credit rules are complex and prospective investors should consult their tax advisors concerning the availability of the foreign tax credit in their particular circumstances.

Dividends paid in Canadian dollars will be included in the gross income of a U.S. Holder in a U.S. dollar amount calculated by reference to the exchange rate in effect on the date the U.S. Holder (actually or constructively) receives the dividend, regardless of whether such Canadian dollars are actually converted into U.S. dollars at that time. If the Canadian dollars received are not converted into U.S. dollars on the date of receipt, a U.S. Holder will have a tax basis in the Canadian dollars equal to their U.S. dollar value on the date of receipt. Gain or loss, if any, realized on a sale or other disposition of the Canadian dollars will generally be U.S. source ordinary income or loss to a U.S. Holder.

We generally do not pay any dividends and do not anticipate paying any dividends in the foreseeable future.

Sale, Exchange or Other Taxable Disposition of Common Shares

Subject to the PFIC rules discussed above, upon a sale, exchange or other taxable disposition of Common Shares, a U.S. Holder generally will recognize capital gain or loss for U.S. federal income tax purposes equal to the difference, if any, between the amount realized on the sale, exchange or other taxable disposition and the U.S. Holder's adjusted tax basis in the Common Shares.

This capital gain or loss will be long-term capital gain or loss if the U.S. Holder's holding period in the Common Shares exceeds one year. The deductibility of capital losses is subject to limitations. Any gain or loss will generally be U.S. source for U.S. foreign tax credit purposes.

Information Reporting and Backup Withholding

In general, information reporting for U.S. federal income tax purposes should apply to distributions made on our securities within the United States to a U.S. Holder (other than an exempt recipient) and to the proceeds from sales and other dispositions of our securities by a U.S. Holder (other than an exempt recipient) to or through a U.S. office of a broker. Payments made (and sales and other dispositions effected at an office) outside the United States will be subject to information reporting in limited circumstances. In addition, certain information concerning a U.S. Holder's adjusted tax basis in securities it owns and adjustments to that tax basis and whether any gain or loss with respect to such securities is long term or short term also may be required to be reported to the IRS.

In addition, U.S. federal income tax information reporting rules generally require certain individuals who are U.S. Holders to file IRS Form 8938 to report the ownership of specified foreign financial assets if the total value of those assets exceeds an applicable threshold amount (subject to certain exceptions). For these purposes, a specified foreign financial asset includes not only a financial account (as defined for these purposes) maintained by a foreign financial institution, but also any stock or security issued by a non-U.S. person, any financial instrument or contract held for investment that has an issuer or counterparty other than a U.S. person and any interest in a foreign entity, provided that the asset is not held in an account maintained by a financial institution. The minimum applicable threshold amount is generally U.S. \$50,000 in the aggregate, but this threshold amount varies depending on whether the individual lives in the U.S., is married, files a joint income tax return with his or her spouse, and on certain other factors. Certain domestic entities that are U.S. Holders may also be required to file IRS Form 8938 if both (i) such entities are owned at least 80% by an individual who is a U.S. citizen or U.S. tax resident (or in some cases, by a nonresident alien who meets certain criteria) or are trusts with beneficiaries that are such individuals and (ii) more than 50% of their income consists of certain passive income or more than 50% of their assets is held for the production of such income. U.S. Holders are urged to consult with their tax advisors regarding their reporting obligations, including the requirement to file IRS Form 8938.

U.S. Holders who transfer more than \$100,000 to us in a 12-month period (and/or who become owners of 10% or more of our securities) will be required to file IRS Form 926, Return by U.S. Transferor of Property to a Foreign Corporation, and U.S. Holders who become holder of more than 10% of our securities may also have to file IRS Form 5471, Information Return of U.S. Persons With Respect to Certain Foreign Corporations, in each case reporting transfers of cash or other property to us and information relating to the U.S. Holder and us. Substantial penalties may be imposed upon a U.S. Holder that fails to comply with these filing requirements. U.S. Holders should consult their own tax advisors about the need to file either of these forms. See also the discussion, above, regarding IRS Form 8621, Information Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund.

Backup withholding of U.S. federal income tax, currently at a rate of 24%, generally will apply to dividends paid on our securities to a U.S. Holder (other than an exempt recipient) and the proceeds from sales and other dispositions of our securities by a U.S. Holder (other than an exempt recipient), in each case who:

- fails to provide an accurate taxpayer identification number;
- is notified by the IRS that backup withholding is required; or
- in certain circumstances, fails to comply with applicable certification requirements.

A non-U.S. Holder generally may eliminate the requirement for information reporting and backup withholding by providing certification of its foreign status, under penalties of perjury, on a duly executed applicable IRS Form W-8 or by otherwise establishing an exemption.

Backup withholding is not an additional tax. Rather, the amount of any backup withholding will be allowed as a credit against a U.S. Holder's U.S. federal income tax liability and may entitle such holder to a refund, provided that certain required information is timely furnished to the IRS.

Holders are urged to consult their own tax advisors regarding the application of backup withholding and the availability of and procedures for obtaining an exemption from backup withholding in their particular circumstances.

Canadian Federal Income Tax Considerations For U.S. Holders

The following is a general summary, as of the date hereof, of the principal Canadian federal income tax considerations generally applicable to the holding and disposition Common Shares acquired pursuant to this prospectus by a holder who, at all relevant times, (a) for the purposes of the Income Tax Act (Canada) (the "Tax Act"), (i) is not resident, or deemed to be resident, in Canada, (ii) deals at arm's length with, and is not affiliated with, the Company, (iii) beneficially owns Common Shares as capital property, (iv) does not use or hold the Common Shares in the course of carrying on, or otherwise in connection with, a business or a part of a business carried on or deemed to be carried on in Canada, and (v) is not a "registered non-resident insurer" or "authorized foreign bank" within the meaning of the Tax Act, and (b) for the purposes of the Convention, is a resident of the U.S., has never been a resident of Canada, does not have and has not had, at any time, a permanent establishment or fixed base in Canada, and is a qualifying person or otherwise qualifies for the full benefits of the Convention. Common Shares will generally be considered to be capital property to a holder unless such Common Shares are held in the course of carrying on a business of buying or selling securities or an adventure or concern in the nature of trade. Holders who meet all the criteria in clauses (a) and (b) are referred to

herein as a “U.S. Holder” or “U.S. Holders.” This summary does not deal with special situations, such as the particular circumstances of traders or dealers or holders who have entered or will enter into a “derivative forward agreement” (as defined in the Tax Act) in respect of any of the Common Shares. Such holders and other holders who do not meet the criteria in clauses (a) and (b) should consult their own tax advisors.

This summary is based upon the current provisions of the Tax Act and the regulations thereunder (the “Regulations”) and counsel’s understanding of the current administrative policies and assessing practices of the Canada Revenue Agency (the “CRA”) made publicly available prior to the date hereof. It also takes into account all proposed amendments to the Tax Act and the Regulations publicly released by the Minister of Finance (Canada) (the “Tax Proposals”) prior to the date hereof, and assumes that all such Tax Proposals will be enacted as currently proposed. No assurance can be given that the Tax Proposals will be enacted in the form proposed or at all. This summary does not otherwise take into account or anticipate any changes in law, whether by way of legislative, judicial or administrative action or interpretation, nor does it take into account tax laws of any province or territory of Canada or of any other jurisdiction outside Canada.

This summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any particular U.S. Holder and no representation with respect to the federal income tax consequences to any particular U.S. Holder or prospective U.S. Holder is made. The tax consequences to a U.S. Holder will depend on the holder’s particular circumstances. Accordingly, U.S. Holders should consult with their own tax advisors for advice with respect to their own particular circumstances.

Currency Conversion

In general, for purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of the Common Shares must be converted into Canadian dollars based on the applicable exchange rate quoted by the Bank of Canada for the relevant day or such other rate of exchange that is acceptable to the Minister of Revenue (Canada).

Exercise of Warrants

No gain or loss will be realized by a U.S. Holder of a Common Warrant upon the exercise of such Common Warrants for Common Shares. When a Common Warrant is exercised, the U.S. Holder’s cost of the Common Share acquired thereby will be equal to the adjusted cost base of the Common Warrant to such U.S. Holder, plus the amount paid by such U.S. Holder on the exercise of the Common Warrant. For the purpose of computing the adjusted cost base to a U.S. Holder of the Common Shares acquired on the exercise of Common Warrants, the cost of such Common Shares must be averaged with the adjusted cost base to such U.S. Holder of all other Common Shares (if any) held by the U.S. Holder as capital property immediately prior to the exercise of such Common Warrant.

Dividends

Amounts paid or credited or deemed to be paid or credited as, on account or in lieu of payment, or in satisfaction of, dividends on the Common Shares to a U.S. Holder will be subject to Canadian withholding tax. Under the Convention, the rate of Canadian withholding tax on dividends paid or credited by the Company to a U.S. Holder that beneficially owns such dividends is generally 15% unless the beneficial owner is a company that owns at least 10% of the Company’s voting stock at that time, in which case the rate of Canadian withholding tax is reduced to 5%.

Dispositions

Upon the disposition of a Common Share, a U.S. Holder will realize a capital gain (or capital loss) in the taxation year of the disposition equal to the amount by which the U.S. Holder’s proceeds of disposition, net of any reasonable costs of disposition, exceed (or are exceeded by) the adjusted cost base to the U.S. Holder of the Common Shares immediately before the disposition or deemed disposition.

A U.S. Holder will not be subject to tax under the Tax Act in respect of any capital gain realized by such U.S. Holder on a disposition of Common Shares, unless such Common Shares constitute “taxable Canadian property” (as defined in the Tax Act) of the U.S. Holder at the time of disposition and the U.S. Holder is not entitled to relief under the Convention.

Provided that the Common Shares are listed on a designated stock exchange for purposes of the Tax Act (which currently includes the NASDAQ and the TSX) at the time of the disposition, the Common Shares generally will not constitute taxable Canadian property of a U.S. Holder, unless: (a) at any time during the 60-month period immediately preceding the disposition or deemed disposition of the Common Shares (as applicable): (i) 25% or more of the issued shares of any class or series of the share capital of the Company were owned by, or belonged to, one or any combination of (x) the U.S. Holder, (y) persons with whom the U.S. Holder did not deal at arm’s length (within the meaning of the Tax Act) and (z) partnerships in which the U.S. Holder or a person referred to in (y) holds a membership interest directly or indirectly through one or more partnerships; and (ii) more than 50% of the fair market value of the Common Shares was derived directly or indirectly from one or any combination of: (A) real or immovable property situated in Canada, (B) Canadian resource property (as defined in the Tax Act), (C) timber resource property (as defined in the Tax Act), and (D) options in respect of, or interests in, or for civil law rights in, property described in any of (A) through (C) above, whether or not such property exists; or (b) the Common Share is deemed under the Tax Act to be taxable Canadian property.

If a Common Share is taxable Canadian property to a U.S. Holder, any capital gain realized on the disposition or deemed disposition of such Common Share may not be subject to Canadian federal income tax pursuant to the terms of the Convention. Non-Resident Holders whose Common Shares may be taxable Canadian property should consult their own tax advisors.

PLAN OF DISTRIBUTION

We will deliver Common Shares upon the exercise of the Common Warrants. Each of the Common Warrants contains instructions for exercise. We will deliver Common Shares in the manner described above in the section titled "Description of Common Warrants." We do not know if or when the Common Warrants will be exercised. We also do not know whether any of the Common Shares acquired upon exercise will be sold.

LEGAL MATTERS

The validity of the Common Shares issuable upon the exercise of the Common Warrants and certain other matters of Canadian law were passed upon for us by Stikeman Elliott LLP, Toronto, Canada.

EXPERTS

The consolidated financial statements as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021, incorporated into this Prospectus by reference to the Annual Report on Form 20-F for the year ended December 31, 2022, filed with the SEC on March 23, 2023, have been so incorporated in reliance on the report of Ernst & Young LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements for the year ended December 31, 2020, incorporated into this Prospectus by reference to the Annual Report on Form 20-F for the year ended December 31, 2022, filed with the SEC on March 23, 2023, have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

ENFORCEABILITY OF CIVIL LIABILITIES

We are a corporation incorporated under and governed by the *CBCA*. Many of our officers and directors, and some of the experts named in this Prospectus, are residents of Canada or elsewhere outside of the U.S., and a substantial portion of our assets and the assets of such persons are located outside the U.S. As a result, it may be difficult for investors in the U.S. to effect service of process within the U.S. upon such directors, officers and representatives of experts who are not residents of the U.S. or to enforce against them judgments of a U.S. court predicated solely upon civil liability under U.S. federal securities laws or the securities laws of any state within the U.S. We have been advised by our legal counsel, Norton Rose Fulbright Canada LLP, that a judgment of a U.S. court predicated solely upon civil liability under U.S. federal securities laws would probably be enforceable in Canada if the U.S. court in which the judgment was obtained has a basis for jurisdiction in the matter that would be recognized by a Canadian court for the same purposes. We have also been advised by Norton Rose Fulbright Canada LLP, however, that there is substantial doubt as to whether an action could be brought in Canada in the first instance on the basis of liability predicated solely upon U.S. federal securities laws.

WHERE YOU CAN FIND MORE INFORMATION

We file annual reports on Form 20-F with the SEC, and we furnish other documents, such as quarterly and current reports, proxy statements and other information and documents that we file with the Canadian securities regulatory authorities, to the SEC, as required. The materials we file with or furnish to the SEC are available to the public on the SEC's Internet website at www.sec.gov. Those filings are also available to the public on our corporate website at www.zentaris.com. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only. As we are a Canadian issuer, we also file continuous disclosure documents with the Canadian securities regulatory authorities, which documents are available on the System for Electronic Document Analysis and Retrieval website maintained by the Canadian Securities Administrators at www.sedar.com.

This prospectus forms part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and our Securities, including certain exhibits and schedules. You can obtain a copy of the registration statement from the SEC at the address listed above or electronically at www.sec.gov.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents have been filed with the various securities commissions or similar securities regulatory authorities in Canada and are specifically incorporated by reference into, and form an integral part of, this Prospectus:

- our Annual Report on Form 20-F for the fiscal year ended [December 31, 2022](#), filed with the SEC on March 23, 2023;
- a Form 8-A12B/A filed with the SEC on [May 5, 2019](#) to amend our previously filed Form 8-A12B filed on [April 14, 2017](#);
- the Reports on Form 6-K furnished to the SEC on [January 17, 2023](#), [March 16, 2023](#), [March 23, 2023](#), [March 31, 2023](#), [April 5, 2023](#); and
- to the extent permitted by applicable securities law, any other documents which we elect to incorporate by reference into this Prospectus.

The information relating to us contained in this prospectus does not purport to be comprehensive and should be read together with the information contained in the documents incorporated or deemed to be incorporated by reference in this prospectus.

As you read the above documents, you may find inconsistencies in information from one document to another. If you find inconsistencies between the documents and this prospectus, you should rely on the statements made in the most recent document. All information appearing in this prospectus is qualified in its entirety by the information and financial statements, including the notes thereto, contained in the documents incorporated by reference herein.

Potential investors, including any beneficial owner, may obtain a copy of any of the documents summarized herein (subject to certain restrictions because of the confidential nature of the subject matter) or any of our SEC filings incorporated by reference herein without charge by written or oral request directed to:

Aeterna Zentaris Inc.
Attention: Investor Relations
315 Sigma Drive
Summerville, South Carolina
USA, 29486
Tel. (843) 900-3223

You should rely only on the information contained or incorporated by reference in this prospectus or a prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus, or such earlier date, that is indicated in this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

**224,845 Common Shares
Issuable upon Exercise of Warrants**



Aeterna Zentaris Inc.

PROSPECTUS
May 5, 2023

PART II—INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 6. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Under Section 124 of the CBCA, the registrant may indemnify a present or former director or officer of the registrant or another individual who acts or acted at the registrant's request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the registrant or other entity. The registrant may not indemnify an individual unless the individual (i) acted honestly and in good faith with a view to the best interests of the registrant or, as the case may be, to the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at the registrant's request, and (ii) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, had reasonable grounds for believing that his or her conduct was lawful. Such indemnification may be made in connection with an action by or on behalf of the registrant or other entity to procure a judgment in its favor only with court approval. A director or officer is entitled to indemnification from the registrant as a matter of right if he or she was not judged by the Court or other competent authority to have committed any fault or omitted to do anything that he or she ought to have done and fulfilled the conditions set forth above. The registrant may advance moneys to a director, officer or other individual for the costs, charges and expenses of a proceeding referred to above. The individual shall repay the moneys if he or she does not fulfill the conditions set forth above to qualify for indemnification.

In accordance with the provisions of the CBCA described above, the by-laws of the registrant provide that the Company shall, to the full extent provided by law, indemnify a director or officer of the Company, a former director or officer of the Company or another individual who acts or acted at the Company's request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of that association with the corporation or other entity.

The by-laws of the registrant also provide that the registrant may, to the extent permitted by the CBCA, purchase and maintain

insurance for the benefit of any person referred to above against any such liability as the board of directors of the registrant may from time to time determine.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the U.S. Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

The registrant has also agreed to indemnify and save harmless the directors and its senior corporate officers as well as the managing director of its German subsidiary pursuant to various Director and Officer Indemnification Agreements against certain costs, charges, damages, awards, settlements, liabilities, interest, judgments, fines, penalties, statutory obligations, professional fees and retainers and other expenses of whatever nature or kind, provided that any such costs, charges, professional fees and other expenses are reasonable (collectively, "Expenses") and from and against all Expenses sustained or incurred by the indemnified party as a result of serving as a director, officer or employee of the registrant in respect of any act, matter, deed or thing whatsoever made, done, committed, permitted, omitted or acquiesced in by the indemnified party as a director, officer or employee of the registrant. The form of Director and Officer Indemnification Agreement has been furnished to the SEC as Exhibit 99.1 to the registrant's Report on Form 6-K dated October 21, 2016.

ITEM 7. RECENT SALES OF UNREGISTERED SECURITIES

Set forth below are the sales of all unregistered securities of ours sold by us within the past three years (i.e., since April 1, 2019, up to the date of this registration statement) which were not registered under the Securities Act:

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On August 3, 2020, the Company entered into a securities purchase agreement (the "August 2020 Securities Purchase Agreement") with institutional investors in the U.S. to purchase 497,115 Common Shares, at a purchase price of \$14.08 per share. Under the terms of the August 2020 Securities Purchase Agreement, the Company issued to the investors unregistered warrants to purchase up to an aggregate of 372,836 Common Shares in a concurrent private placement. The warrants have an exercise price of \$11.75 per common share, are exercisable immediately and will expire five and one-half years following the date of issuance. The gross proceeds from the offering totaled approximately \$7.0 million, before deducting placement agent fees and offering expenses.

On February 21, 2020, the Company entered into a securities purchase agreement (the "2020 Securities Purchase Agreement") with institutional investors in the U.S. to purchase 139,130 Common Shares, at a purchase price of \$32.34 per share. Under the terms of the 2020 Securities Purchase Agreement, the Company issued to the investors unregistered warrants to purchase up to an aggregate of 104,348 Common Shares in a concurrent private placement. The warrants have an exercise price of \$30.00 per common share, are exercisable immediately and will expire five and one-half years following the date of issuance. The gross proceeds from the offering totaled approximately \$4.5 million, before deducting placement agent fees and offering expenses.

On September 20, 2019, the Company entered into a securities purchase agreement with U.S. institutional investors to purchase \$5.0 million in gross proceeds (before transaction costs of \$0.8 million) of Common Shares for \$37.50 per share in a registered direct offering and warrants to purchase Common Shares in a concurrent private placement. Under the terms of the securities purchase agreement, the Company sold 133,000 common shares. In the concurrent private placement, the Company issued warrants to purchase up to an aggregate of 133,000 common shares. The warrants are exercisable commencing six months from the date of issuance, have an exercise price of \$41.25 per share and expire 5 years following the date of issuance.

The privately placed securities above were offered and sold pursuant to an exemption from the registration requirements under Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated thereunder since, among other things, the transactions did not involve a public offering and the securities were acquired for investment purposes only and not with a view to or for sale in connection with any distribution thereof.

ITEM 8. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this registration statement:

See Exhibit Index attached to this registration statement, which is incorporated by reference herein.

(b) Financial Statement Schedules

None.

ITEM 9. UNDERTAKINGS

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a further post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in

the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) To file a post-effective amendment to the registration statement to include any financial statements required by Item 8. A. of Form 20-F at the start of any delayed offering or throughout a continuous offering. Financial statements and information otherwise required by Section 10(a)(3) of the Securities Act of 1933 need not be furnished, *provided*, that the registrant includes in the prospectus, by means of a post-effective amendment, financial statements required pursuant to this paragraph (a) (4) and other information necessary to ensure that all other information in the prospectus is at least as current as the date of those financial statements.

(5) That, for the purpose of determining liability of the Registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned Registrant to the offering required to be filed pursuant to Rule 424;

(ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by an undersigned Registrant;

(iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and

(iv) any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

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(b) The undersigned registrant hereby undertakes that:

(i) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of the registration statement as of the time it was declared effective.

(ii) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(e) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

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EXHIBIT INDEX

Exhibit Index

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| 3.1 | <u>Restated Certificate of Incorporation and Restated Articles of Incorporation of the Registrant (incorporated by reference to Exhibit 99.2 to the Registrant's report on Form 6-K furnished to the Commission on May 25, 2011)</u> |
| 3.2 | <u>Certificate of Amendment and Articles of Amendment of the Registrant (incorporated by reference to Exhibit 99.2 to the Registrant's report on Form 6-K furnished to the Commission on October 3, 2012)</u> |

- 3.3 [Certificate of Amendment and Articles of Amendment of the Registrant \(incorporated by reference to Exhibit 99.1 to the Registrant's report on Form 6-K furnished to the Commission on November 17, 2015\)](#)
- 3.4 [Amended and Restated By-Law One of the Registrant \(incorporated by reference to Exhibit 1.3 of the Registrant's Annual Report on Form 20-F for the financial year ended December 31, 2012 filed with the Commission on March 22, 2013\)](#)
- 4.1 [Amended and Restated Shareholder Rights Plan Agreement between the Registrant and Computershare Trust Company of Canada, as Rights Agent, dated as of May 8, 2019 \(incorporated by reference to Exhibit 99.2 to the Registrant's report on Form 6-K furnished to the Commission on May 9, 2019\)](#)
- 4.2 [Form of Warrant Agreement \(incorporated by reference to Exhibit 99.1 of the Registrant's report on Form 6-K furnished to the Commission on September 20, 2019\)](#)
- 4.3 [Form of Investor Warrant \(incorporated by reference to Exhibit 99.1 of the Registrant's report on Form 6-K furnished to the Commission on February 21, 2020\)](#)
- 4.4 [Form of Placement Agent Warrant \(incorporated by reference to Exhibit 99.4 of the Registrant's report on Form 6-K furnished to the Commission on February 21, 2020\)](#)
- 4.5 [Form of Common Share Purchase Warrant \(incorporated by reference to Exhibit 4.5 of the Registrant's Registration Statement on Form F-1 filed with the Commission on June 30, 2020\)](#)
- 4.6 [Form of Pre-Funded Warrant \(incorporated by reference to Exhibit 4.6 of the Registrant's Registration Statement on Form F-1 filed with the Commission on June 30, 2020\)](#)
- 4.7 [Form of Placement Agent Warrant \(incorporated by reference to Exhibit 4.7 of the Registrant's Registration Statement Form F-1 filed with the Commission on June 30, 2020\)](#)
- 4.8 [Form of Investor Warrant \(incorporated by reference to Exhibit 99.1 of the Registrant's report on Form 6-K furnished to the Commission on August 5, 2020\)](#)
- 4.9 [Form of Placement Agent Warrant \(incorporated by reference to Exhibit 99.5 of the Registrant's report on Form 6-K furnished to the Commission on August 5, 2020\)](#)
- 4.10 [Form of Underwriter Warrant \(incorporated by reference to Exhibit 99.2 of the Registrant's report on Form 6-K furnished to the Commission on February 18, 2021\)](#)
- 5.1* [Opinion of Stikeman Elliott LLP, Canadian counsel to the Company, as to the validity of the Common Shares](#)
- 10.1 [Second Amended and Restated Stock Option Plan of the Registrant \(incorporated by reference to Exhibit 4.1 of the Registrant's Annual Report on Form 20-F for the financial year ended December 31, 2013 filed with the Commission on March 21, 2014\)](#)
- 10.2 [2018 Long-Term Incentive Plan of the Registrant \(incorporated by reference to Exhibit 4.7 of the Registrant's Form S-8 filed with the Commission on May 8, 2018\)](#)
- 10.3 [License and Assignment Agreement, dated January 16, 2018 by and between Aeterna Zentaris GmbH and Strongbridge Ireland Limited \(incorporated by reference to Exhibit 99.2 of the Registrant's report on Form 6-K furnished to the Commission on January 19, 2018\)](#)
- 10.4 [Independent Contractor Agreement dated September 18, 2018 between Leslie Auld and the Registrant \(incorporated by reference to Exhibit 4.8 of the Registrant's Annual Report on Form 20-F for the financial year ended December 31, 2018 filed with the Commission on April 1, 2019\)](#)
- 10.5± [Director and Officer Indemnification Agreement \(incorporated by reference to Exhibit 99.1 of the Registrant's report on Form 6-K furnished to the Commission on October 21, 2016\)](#)
- 10.6 [Placement Agency Agreement between the Registrant and Maxim Group LLC, dated as of September 20, 2019 \(incorporated by reference to Exhibit 99.2 of the Registrant's report on Form 6-K furnished to the Commission on September 20, 2019\)](#)
- 10.7 [Form of Securities Purchase Agreement by and between the Registrant and certain institutional investors, dated as of September 20, 2019 \(incorporated by reference to Exhibit 99.3 of the Registrant's report on Form 6-K furnished to the Commission on September 20, 2019\)](#)
- 10.8 [Amendment Agreement, dated November 16, 2020, by and between Aeterna Zentaris GmbH and Novo Nordisk Biopharm Limited \(incorporated by reference to Exhibit 99.1 of the Company's Report on Form 6-K furnished with the SEC on November 16, 2020\)](#)
- 10.9 [License Agreement, effective December 7, 2020, by and between Aeterna Zentaris GmbH and Consilient Health Ltd. \(incorporated by reference to Exhibit 99.1 of the Company's Report on Form 6-K furnished with the SEC on December 7, 2020\)](#)
- 10.10 [Engagement Letter dated February 14, 2021 between the Registrant and H.C. Wainwright & Co. \(incorporated by reference to Exhibit 4.17 of the Registrant's Annual Report on Form 20-F for the financial year ended December 31, 2021 filed with the Commission on March 29, 2022\)](#)
- 21.1 [Subsidiaries of the Registrant \(incorporated by reference to Exhibit 8.1 of the Registrant's Annual Report on Form 20-F for the financial year ended December 31, 2022 filed with the Commission on March 23, 2023\)](#)
- 23.1* [Consent of Stikeman Elliott LLP \(included in Exhibit 5.1\)](#)
- 23.2 [Consent of Ernst & Young LLP](#)
- 23.3 [Consent of PricewaterhouseCoopers LLP](#)
- 24.1* [Power of Attorney](#)

* Previously filed.

± Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-1 and has duly caused this Post-Effective Amendment No. 4 to registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Charleston, South Carolina, on May 5, 2023.

By: /s/ Klaus Paulini, PhD

Name: Klaus Paulini, PhD

Title: President and Chief Executive Officer

SIGNATURES

Pursuant to the requirements of the Securities Act, this Post-Effective Amendment No. 4 to Registration Statement has been signed by the following persons in the capacities indicated below on May 5, 2023.

Signature	Title
<u>/s/ Klaus Paulini, PhD</u> Klaus Paulini, PhD	President, Chief Executive Officer (Principal Executive Officer) and Director
<u>/s/ Giuliano La Fratta</u> Giuliano La Fratta	Senior Vice President, Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
* Carolyn Egbert	Director and Chair of the Board
* Peter G. Edwards	Director
* Gilles Gagnon	Director
*By: <u>/s/ Klaus Paulini, PhD</u> Name: Klaus Paulini, PhD Title: Attorney-in-fact	

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AUTHORIZED REPRESENTATIVE

Pursuant to the requirements of Section 6(a) of the Securities Act of 1933, the undersigned has signed this Post-Effective Amendment No. 4 to Registration Statement on Form F-1, solely in the capacity of the duly authorized representative of Aeterna Zentaris Inc. in the United States, on May 5, 2023.

AETERNA ZENTARIS INC.

By: /s/ Klaus Paulini, PhD

Name: Klaus Paulini, PhD

Title: Authorized Signatory

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