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AETERNA ZENTARIS INC.

FORM 20-F/A

(Amended Annual And Transition Report (Foreign Private Issuer))

Filed 02/15/24 for the Period Ending 12/31/22

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Symbol	AEZS
SIC Code	2834 - Pharmaceutical Preparations
Fiscal Year	12/31

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F/A
(Amendment No. 1)

☐ **Registration Statement Pursuant to Section 12(b) or 12(g) of The Securities Exchange Act of 1934**

OR

☒ **Annual Report Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934 for the fiscal year ended December 31, 2022**

OR

☐ **Transition Report Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934**

OR

☐ **Shell Company Report Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934**

Commission file number 001-38064

AETERNA ZENTARIS INC.
(Exact Name of Registrant as Specified in its Charter)

Not Applicable
(Translation of Registrant's Name into English)

Canada
(Jurisdiction of Incorporation)

c/o Norton Rose Fulbright Canada, LLP, 222 Bay Street, Suite 3000, PO Box 53, Toronto ON M5K 1E7
(Address of Principal Executive Offices)

Klaus Paulini
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Weismüllerstr. 50
Frankfurt am Main, Germany
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(Name, Telephone, E-mail and Address of Company Contact Person)

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

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Shares	AEZS	NASDAQ Capital Market Toronto Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act: **NONE**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the ACT: **NONE**

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as at the close of the period covered by the annual report: 4,855,876 Common Shares as at December 31, 2022.

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No : ☒

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☒ 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 13(a) of the Exchange 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.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

US GAAP ☐ International Financial Reporting Standards as issued by the Other ☐

International Accounting Standards Board ☒

If "other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

EXPLANATORY NOTE

This Amendment No. 1 on Form 20-F/A (the "**Amendment**") is being filed by Aeterna Zentaris Inc. (the "**Company**," "**we**," "**our**," or "**us**") to amend the Company's Annual Report on Form 20-F for the fiscal year ended December 31, 2022, originally filed with the U.S. Securities Exchange Commission (the "**SEC**") on March 23, 2023 (the "**Original Filing**"). The Company is filing this Amendment solely to reflect that the consolidated financial statements included in the Original Filing and this Amendment were prepared in accordance with Item 18 of Form 20-F, not Item 17 of Form 20-F, as erroneously indicated in the Original Filing.

This Amendment consists solely of the cover page, this Explanatory Note and corrected Item 17 and Item 18, with the same consolidated financial statements that are contained in the Original Filing, but reflecting that such consolidated financial statements were prepared in accordance with Item 18 of Form 20-F, not Item 17 of Form 20-F. Additionally, any references to "Item 17" in the Original Filing now refer to "Item 18." Accordingly, this Amendment should be read in conjunction with the Original Filing.

This Amendment does not, and does not purport to, amend, modify, update, restate or change in any way the information contained or disclosures made in the Original Filing, including the previously reported consolidated financial statements, other than to reflect that the consolidated financial statements included in the Original Filing were prepared in accordance with Item 18 of Form 20-F. This Amendment speaks as of the original filing date of the Original Filing, and does not reflect events that may have occurred subsequent to the date the Original Filing was filed with the SEC.

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PART III

Item 17 Financial Statements

We have elected to provide financial statements pursuant to Item 18.

Item 18. Financial Statements

The financial statements appear on pages 5 to 52**.**

Aeterna Zentaris Inc.

Consolidated Financial Statements
As of December 31, 2022 and 2021 and for the years ended December 31, 2022, 2021 and 2020

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of

Aeterna Zentaris Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of **Aeterna Zentaris Inc. (**the Company) as of December 31, 2022 and 2021, the related consolidated statements of changes in shareholders' equity, loss and comprehensive loss, and cash flows, for each of the two years in the period ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and its financial performance and its cash flows for each of the two years in the period ended December 31, 2022, in conformity with International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

Goodwill impairment

Description of the matter

As disclosed in notes 2, 3 and 11 of the consolidated financial statements, the Company tests goodwill for impairment at least annually, or if there is an indication that the group of CGUs to which goodwill has been allocated may be impaired. Impairment is determined by assessing whether the carrying value of the group of CGUs, including the allocated goodwill, exceeds its recoverable amount, which is determined based on the higher of fair value less costs of disposal ("FVLCD") and value in use ("VIU"). For the year ended December 31, 2022, the Company recorded an impairment charge on its goodwill for an amount of $7.6 million. Management determined the recoverable amount of the group of CGUs based on a FVLCD model which was determined to be higher than VIU. FVLCD was determined based on a market approach and derived from market data, including information from market participants regarding the price that the Company could receive in a sale of the group of CGUs. VIU was determined using cash flow projections covering a five-year period and discounted to their present value using an estimated pre-tax discount rate.

We identified the impairment of goodwill for the group of CGUs as a critical audit matter because of the significant judgments made by management to determine the appropriate methodology and assumptions made to estimate the recoverable amount of the group of CGUs.

How we addressed the matter in our audit

To test the estimated recoverable amount for the goodwill impairment test, our audit procedures included, among others, obtaining the analysis prepared by management and, with the assistance of our valuation specialists, assessing the methodology used by management for developing the recoverable amount estimate. We compared the estimated FVLCD to supporting documentation and available market data, including, information from market participants regarding the price that the Company could receive in a sale of the group of CGUs. We also obtained management's VIU model and assessed the reasonableness of management's estimates and assumptions related to cash flow projections by comparing to historical data, current agreements and market information. With the assistance of our valuation specialists, we tested the discount rate by developing a range of independent estimates and compared those to the discount rate selected by management.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2021.
Montreal, Canada
March 22, 2023

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Aeterna Zentaris Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of changes in shareholders' equity, loss and comprehensive loss and cash flows for the year ended December 31, 2020, including the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the results of the Company's operations and its cash flows for the year ended December 31, 2020 in conformity International Financial Reporting Standards as issued by the International Accounting Standards Board.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Chartered Professional Accountants, Licensed Public Accountants

Toronto, Canada
March 24, 2021
Except for adjustments to reflect the reverse stock split as described in note 16, for which the date is March 22, 2023.

We have served as the Company's auditor from 1993 to 2021.

PricewaterhouseCoopers LLP
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Aeterna Zentaris Inc.
Consolidated Statements of Financial Position
As of December 31, 2022 and 2021
(in thousands of US dollars)

	2022	2021
	$	$
ASSETS		
Current assets		
Cash and cash equivalents (note 6)	**50,611**	65,300
Trade and other receivables (note 7)	**732**	1,314
Inventory	**229**	73
Income taxes receivable	**1,428**	2,361
Prepaid expenses and other current assets (note 8)	**2,488**	1,772
Total current assets	**55,488**	70,820
Non-current assets		
Restricted cash equivalents (note 6)	**322**	335
Property and equipment (note 9)	**216**	192
Identifiable intangible assets (note 10)	**—**	625
Goodwill (note 11)	**—**	8,130
Total non-current assets	**538**	9,282
Total assets	**56,026**	80,102
LIABILITIES		
Current liabilities		
Payables and accrued liabilities (note 12)	**3,828**	2,672
Provisions (note 13)	**45**	34
Income taxes payable (note 22)	**108**	115
Deferred revenues (note 5)	**2,949**	4,815
Lease liabilities (note 14)	**114**	130
Total current liabilities	**7,044**	7,766
Non-current liabilities		
Deferred revenues (note 5)	**1,684**	1,493
Deferred gain (note 10)	**110**	98
Lease liabilities (note 14)	**65**	31
Employee future benefits (note 15)	**11,159**	17,485
Provisions (note 13)	**188**	243
Total non-current liabilities	**13,206**	19,350
Total liabilities	**20,250**	27,116
Shareholders' equity		
Share capital (note 16)	**293,410**	293,410
Warrants (note 17)	**5,085**	5,085
Other capital (note 18)	**90,332**	89,788
Deficit	**(352,084)**	(334,619)
Accumulated other comprehensive loss	**(967)**	(678)
Total Shareholders' equity	**35,776**	52,986
Total liabilities and shareholders' equity	**56,026**	80,102

Commitments (note 27)
Subsequent event (note 28)

The accompanying notes are an integral part of these consolidated financial statements.

Approved by the Board of Directors

/s/ Carolyn Egbert	*/s/ Dennis Turpin*
Carolyn Egbert	Dennis Turpin
Chair of the Board	Director

Aeterna Zentaris Inc.
Consolidated Statements of Changes in Shareholders' Equity
For the years ended December 31, 2022, 2021 and 2020
(in thousands of US dollars)

	Share capital $	Warrants $	Other capital $	Deficit $	Accumulated other comprehensive income (loss) $	Total $
Balance – January 1, 2020	224,528	—	89,806	(316,891)	94	(2,463)
Net loss	—	—	—	(5,118)	—	(5,118)
Other comprehensive loss:						
Foreign currency translation adjustments	—	—	—	—	(1,139)	(1,139)
Actuarial loss on defined benefit plans and remeasurement of the net defined benefit liability (note 15)	—	—	—	(650)	—	(650)
Comprehensive loss	—	—	—	(5,768)	(1,139)	(6,907)
Reclassification of warrants to equity (note 17)	—	7,377	—	—	—	7,377
Issuance of common shares and warrants, net of transaction costs (note 16)	10,480	5,025	(362)	—	—	15,143
Share-based compensation costs	—	—	61	—	—	61
Balance - December 31, 2020	**235,008**	**12,402**	**89,505**	**(322,659)**	**(1,045)**	**13,211**
Net loss	—	—	—	(8,368)	—	(8,368)
Other comprehensive loss:						
Foreign currency translation adjustments	—	—	—	—	367	367
Actuarial loss on defined benefit plans and remeasurement of the net defined benefit liability (note 15)	—	—	—	(3,592)	—	(3,592)
Comprehensive loss	—	—	—	(11,960)	367	(11,593)
Issuance of common shares and warrants, net of transaction costs (note 16)	29,082	1,897	—	—	—	30,979
Exercise of warrants (note 17)	29,833	(9,746)	—	—	—	20,087
Transfer of warrant issuance costs upon exercise of warrants (note 17)	(532)	532	—	—	—	—
Exercise of deferred share units	19	—	(28)	—	—	(9)
Share-based compensation costs	—	—	311	—	—	311
Balance - December 31, 2021	**293,410**	**5,085**	**89,788**	**(334,619)**	**(678)**	**52,986**
Net loss	**—**	**—**	**—**	**(22,727)**	**—**	**(22,727)**
Other comprehensive loss:						
Foreign currency translation adjustments	**—**	**—**	**—**	**—**	**(289)**	**(289)**
Actuarial gain on defined benefit plans and remeasurement of the net defined benefit liability (note 15)	**—**	**—**	**—**	**5,262**	**—**	**5,262**
Comprehensive loss	**—**	**—**	**—**	**(17,465)**	**(289)**	**(17,754)**
Share-based compensation costs	**—**	**—**	**544**	**—**	**—**	**544**
Balance – December 31, 2022	**293,410**	**5,085**	**90,332**	**(352,084)**	**(967)**	**35,776**

The accompanying notes are an integral part of these consolidated financial statements.

Aeterna Zentaris Inc.
Consolidated Statements of Loss and Comprehensive Loss
For the years ended December 31, 2022, 2021 and 2020
(in thousands of US dollars, except share and per share data)

	Years ended December 31,		
	2022	2021	2020
	$	$	$

Revenues (notes 5 and 25)	**5,640**	5,260	3,652
Expenses (note 19)			
Cost of sales	**157**	90	2,317
Research and development	**12,506**	6,574	1,506
Selling, general and administrative	**8,230**	7,267	5,893
Gain on modification of building lease	**—**	—	(219)
Impairment of intangible assets (note 10)	**584**	—	—
Impairment of goodwill (note 11)	**7,642**	—	—
(Reversal of) impairment of other assets (note 7)	**124**	—	(139)
Total operating expenses	**29,243**	13,931	9,358
Loss from operations	**(23,603)**	(8,671)	(5,706)
Gains due to changes in foreign currency exchange rates	**879**	215	572
Change in fair value of warrant liability (note 17)	—	—	1,147
Other finance costs	**(3)**	(21)	(736)
Net finance income	**876**	194	983
Loss before income taxes	**(22,727)**	(8,477)	(4,723)
Income tax recovery (expense) (note 22)	**—**	109	(395)
Net loss	**(22,727)**	(8,368)	(5,118)
Other comprehensive loss:			
Items that may be reclassified subsequently to profit or loss:			
Foreign currency translation adjustments	**(289)**	367	(1,139)
Items that will not be reclassified to profit or loss:			
Actuarial gain (loss) on defined benefit plans and remeasurement of the net defined benefit liability	**5,262**	(3,592)	(650)
Comprehensive loss	**(17,754)**	(11,593)	(6,907)
Basic and diluted loss per share (note 26)	**(4.68)**	(1.82)	(3.11)
Weighted average number of shares outstanding (basic and diluted)	**4,855,876**	4,596,980	1,643,327

The accompanying notes are an integral part of these consolidated financial statements.

Aeterna Zentaris Inc.
Consolidated Statements of Cash Flows
For the years ended December 31, 2022, 2021 and 2020
(in thousands of US dollars)

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Cash flows from operating activities			
Net loss	**(22,727)**	(8,368)	(5,118)
Items not affecting cash and cash equivalents:			
Amortization of deferred revenues	**(1,704)**	(1,670)	1,257
Share-based compensation costs	**544**	311	61
Provision for restructuring and other costs	**(28)**	23	(383)
Impairment of intangible assets (note 10)	**584**	—	—
Impairment of goodwill (note 11)	**7,642**	—	—
(Reversal of) impairment of other assets	**124**	—	(139)
Depreciation and amortization	**135**	145	232
Employee future benefits	**295**	161	217
Gain on modification of building lease	**—**	—	(219)
Change in fair value of warrant liability	**—**	—	(1,147)
Transaction costs of warrants issued, expensed as finance cost	**—**	—	732
Gain on disposal of property and equipment	**—**	(1)	(2)
Interest accretion on lease liabilities	**4**	7	(19)
Net foreign exchange differences	**16**	(179)	(688)
Other non-cash items	**-**	95	133
Refund (Payment) of income taxes	**831**	(1,605)	(1,448)
Changes in operating assets and liabilities (note 21)	**604**	2,500	2,402
Net cash used in operating activities	**(13,680)**	(8,581)	(4,129)

Cash flows from financing activities			
Proceeds from issuances of common shares and warrants (note 16)	**—**	34,200	23,500
Transaction costs	**—**	(3,221)	(2,767)
Proceeds from exercise of warrants and deferred share units	**—**	20,087	—
Proceeds on deferred gain	**16**	98	—
Payments on lease liabilities	**(134)**	(127)	(265)
Net cash (used in) provided by financing activities	**(118)**	51,037	20,468
Cash flows from investing activities			
Purchase of intangible assets	**—**	(609)	—
Purchase of property and equipment	**(11)**	(30)	—
Proceeds for disposals of property and equipment	**—**	1	6
(Decrease) increase in restricted cash equivalents	**(1)**	(20)	50
Net cash (used in) provided by investing activities	**(12)**	(658)	56
Effect of exchange rate changes on cash and cash equivalents	**(879)**	(769)	38
Net change in cash and cash equivalents	**(14,689)**	41,029	16,433
Cash and cash equivalents – beginning of year	**65,300**	24,271	7,838
Cash and cash equivalents – end of year	**50,611**	65,300	24,271

The accompanying notes are an integral part of these consolidated financial statements.

Aeterna Zentaris Inc.
Notes to Consolidated Financial Statements
As of December 31, 2022 and December 31, 2021 and for the years ended
December 31, 2022, 2021 and 2020
(in thousands of US dollars, except share and per share data and where otherwise noted)

1. Business overview

Summary of business

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 2023 and in the United Kingdom and Europe through a license agreement with Consilient Healthcare Inc ("Consilient" or "CH") under the trade name of Ghryvelin®. The Company is also dedicated to the development of therapeutic assets and has recently 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 with the potential for pediatric use.

Impact of COVID-19 and the Russian invasion of Ukraine

The impact of the COVID-19 variants and the Russian invasion of Ukraine continue to cause delays in site initiation and patient enrollment in our DETECT-trial and may be impacting sales activities for Macrilen™ in the US and for Ghryvelin® in Europe. As a result of these delays in our DETECT-trial, the DETECT-trial will now continue until later into 2023, as compared to the end of the 2022 year as anticipated at the end of the previous fiscal year. The delays associated with COVID-19 and the Russian invasion of Ukraine have resulted in additional costs to the program and an increase in the estimated costs to complete the DETECT-trial. The Company will continue to monitor the impact of the COVID-19 pandemic and the Russian invasion of Ukraine in future periods and assess the impact of these on its judgments, estimates, accounting policies and amounts recognized in the consolidated financial statements. Actual results could differ from these estimates, and such differences may be material.

Reporting entity

The accompanying consolidated financial statements include the accounts of Aeterna Zentaris Inc., an entity incorporated under the *Canada Business Corporations Act*, and its wholly owned subsidiaries (the "Group"). Aeterna Zentaris Inc. is the ultimate parent company of the Group. The Company currently has three wholly owned direct and indirect subsidiaries, Aeterna Zentaris GmbH ("AEZS Germany"), based in Frankfurt, Germany, Zentaris IVF GmbH, a wholly owned subsidiary of AEZS Germany, based in Frankfurt, Germany, and Aeterna Zentaris, Inc., an entity incorporated in the state of Delaware and with offices in Summerville, South Carolina, in the US.

The registered office of the Company is located at 222 Bay Street, Suite 3000, P.O. Box 53, Toronto, Ontario M5K 1E7, Canada.

The Company's common shares are listed on both the Toronto Stock Exchange and on the NASDAQ Capital Market.

Basis of presentation

(a) Statement of compliance

These consolidated financial statements as of December 31, 2022 and 2021 and for the years ended December 31, 2022, 2021 and 2020 have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS").

These consolidated financial statements were approved by the Company's Board of Directors on March 22, 2023.

The preparation of financial statements in accordance with IFRS requires the use of certain critical accounting estimates and the exercise of management's judgment in applying the Company's accounting policies. Areas involving a high degree of judgment or complexity and areas where assumptions and estimates are significant to the Company's consolidated financial statements are discussed in note 3 - Critical accounting estimates and judgments.

(b) Basis of measurement

The consolidated financial statements have been prepared under a historical cost convention.

(c) Principles of consolidation

These consolidated financial statements include any entity in which the Company directly or indirectly holds more than 50% of the voting rights or over which the Company exercises control. The Company controls an entity when the Company is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. An entity is included in the consolidation from the date that control is transferred to the Company, while any entities that are sold are excluded from the consolidation from the date that control ceases. All inter-company balances and transactions are eliminated on consolidation.

(d) Foreign currency

Items included in the financial statements of the Group's entities are measured using the currency of the primary economic environment in which the entities operate (the "functional currency"), which is the US dollar for the Company and its US subsidiary, Aeterna Zentaris, Inc., and the Euro ("EUR" or "€") for its German subsidiaries.

Assets and liabilities of the German subsidiaries are translated from EUR balances at the period-end exchange rates, and the results of operations are translated from EUR amounts at average rates of exchange for the period. The resulting translation adjustments are included in accumulated other comprehensive loss within shareholders' equity.

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the underlying transaction. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities not denominated in the functional currency are recognized in the consolidated statements of loss and comprehensive loss.

2. Summary of significant accounting policies

The accounting policies set out below have been applied consistently to all years presented in these consolidated financial statements and have been applied consistently by all Group entities.

Cash and cash equivalents

Cash and cash equivalents consist of unrestricted cash on hand and balances with banks, as well as short-term interest-bearing deposits, such as money market accounts, that are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value, with a maturity of three months or less from the date of acquisition.

Aeterna Zentaris Inc.
Notes to Consolidated Financial Statements
As of December 31, 2022 and December 31, 2021 and for the years ended
December 31, 2022, 2021 and 2020
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Inventory

Inventory is valued at the lower of cost or net realizable value. Cost is determined using the first-in, first-out method. The Company's policy is to write down inventory that has become obsolete and inventory that has a cost basis in excess of its

expected net realizable value. Increases in the reserve are recorded as charges in cost of sales. For product candidates that have not been approved by the FDA, inventory used in clinical trials is written down at the time of production and recorded as research and development ("R&D") costs. For products that have been approved by the FDA, inventory used in clinical trials is expensed at the time the inventory is packaged for the clinical trial. All direct manufacturing costs incurred after approval are capitalized into inventory. As of December 31, 2022 and 2021, all inventory related to work in process.

Restricted cash equivalents

Restricted cash equivalents are comprised of bank deposits, which are related to a guarantee for a long-term operating lease obligation, and for corporate credit card programs that cannot be used for current purposes.

Property and equipment

Items of property and equipment are recorded at cost, net of accumulated depreciation and impairment charges. Depreciation is calculated using the following methods, annual rates and period:

	Methods	Annual rates and period
Equipment	Declining balance and straight-line	20%
Computer equipment	Straight-line	25% to 33^{1}/3%

Depreciation expense, which is recorded in the consolidated statement of loss and comprehensive loss, is allocated to the appropriate functional expense categories to which the underlying items of property and equipment relate.

Right of use assets are measured at cost, which comprises the initial lease liability, lease payments made at or before the lease commencement date, initial direct costs and restoration obligations, less lease incentives. Right of use assets are subsequently measured at amortized cost. The assets are depreciated over the shorter of the assets' useful life and the lease terms on a straight-line basis, less any accumulated impairment losses, and adjusted for any remeasurement of the lease liability. The lease term includes periods covered by an option to extend if the Company is reasonably certain to exercise that option.

Identifiable intangible assets

Identifiable intangible assets with finite useful lives consist of in-process R&D acquired in business combinations, patents, trademarks, in-licensed technology and rights to serialization equipment located at the Company's third-party macimorelin manufacturer. In-process R&D acquired in business combinations is recognized at fair value at the acquisition date. Patents and trademarks are comprised of costs, including professional fees incurred in connection with the filing of patents and the registration of trademarks for product marketing and manufacturing purposes, net of related government grants, impairment losses and accumulated amortization. Identifiable intangible assets with finite useful lives are amortized beginning at the time at which the assets are available for use, on a straight-line basis over the assets' estimated useful lives, which range from seven to fifteen years for in-process R&D and patents and are ten years for trademarks. Amortization expense, which is recorded in the consolidated statement of loss and comprehensive loss, is allocated to the appropriate functional expense categories to which the underlying identifiable intangible assets relate.

Contingent payments

The Company accounts for contingent variable payments for separately acquired intangible assets, such as in-licensed technology, under the cost accumulation approach. Contingent consideration is not considered on initial recognition of the asset but instead is added to the cost of the asset initially recorded when incurred.

Goodwill

Goodwill is recognized as the fair value of the consideration transferred, including the recognized amount of any non-controlling interest in the acquiree, less the fair value of the net identifiable assets acquired, and liabilities assumed, as of the acquisition date. Subsequent to initial recognition, goodwill is measured at cost less accumulated impairment losses. Goodwill acquired in business combinations is allocated to groups of cash generating units ("CGU") that are expected to benefit from the synergies of the combination.

Impairment of long-lived assets

Items of property and equipment and identifiable intangible assets with finite lives that are subject to depreciation or amortization, respectively, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. Intangible assets that are not subject to amortization are tested when there are indications that their carrying value may not be recoverable, or, at a minimum, annually. Management is required to assess at each reporting date whether there is any indication that an asset may be impaired. Where such an indication exists, the asset's recoverable amount is compared to its carrying value, and an impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows, or CGU. In determining value in use of a given asset or CGU, estimated future cash flows are discounted to

their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Items of property and equipment and identifiable intangible assets with finite lives that have suffered impairment are reviewed for possible reversal of the impairment if there has been a change, since the date of the most recent impairment test, in the estimates used to determine the impaired asset's recoverable amount. However, an asset's carrying amount, increased due to the reversal of a prior impairment loss, must not exceed the carrying amount that would have been determined, net of depreciation or amortization, had the original impairment not occurred.

Goodwill is not subject to amortization, but instead is tested for impairment annually or more often if there is an indication that the group of CGUs to which the goodwill has been allocated may be impaired. Impairment is determined for goodwill by assessing whether the carrying value of the group of CGUs, including the allocated goodwill, exceeds the group of CGU's recoverable amount, which is the higher of fair value less costs of disposal and the group of CGU's value in use. Fair value less costs of disposal is determined based on a market approach and also derived from market data, including, information from market participants regarding the price that the Company could receive in a sale of the group of CGUs. Value in use is determined based on cash flow projections from financial budgets approved by senior management covering a five-year period. The estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the group of CGUs. In the event that the carrying amount of the group of CGU's, including the allocated goodwill exceeds its recoverable amount, an impairment loss is recognized in an amount equal to the excess. Impairment losses related to goodwill, which are recorded in the consolidated statement of loss and comprehensive loss, are not subsequently reversed.

Provisions

Provisions represent liabilities to the Company for which the amount or timing is uncertain. Provisions are recognized when the Company has a present legal or constructive obligation as a result of past events when it is probable that an outflow of resources will be required to settle the obligation and where the amount can be reliably estimated. Provisions are not recognized for future operating losses.

Provisions are made for any contracts which are deemed onerous. A contract is onerous if the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. Provisions for onerous contracts are measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract. Present value is determined based on expected future cash flows that are discounted at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized in finance costs.

Leases

At the inception of a contract, the Company assesses whether a contract is or contains a lease. A lease is a contract in which the right to control the use of an identified asset is granted for an agreed-upon period of time in exchange for consideration. The Company assesses whether a contract conveys the right to control the use of an identified asset when there is both the right to direct the use of the asset and obtain substantially all the economic benefits from that use. The Company recognizes a right of use asset and a lease liability at the lease commencement date.

The lease liability is initially measured at the present value of the non-cancellable lease payments over the lease term and discounted at the rate implicit in the lease. If that rate cannot be determined, the Company's incremental borrowing rate, or the rate that Company would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions, is used. Lease payments include fixed payments and such variable payments that depend on an index or a rate less any lease incentives receivable.

The lease liability is subsequently measured at amortized cost using the effective interest method and is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Company's estimate of the amount expected to be payable under a residual value guarantee or if the Company changes its assessment of whether it will exercise a purchase, extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the right of use asset, with any difference recorded in the statement of loss and comprehensive loss.

The Company accounts for a lease modification as a separate lease if both of the following conditions exist: (a) the modification increases the scope of the lease by adding the right to use one or more underlying assets; and (b) the consideration for the lease increases by an amount equivalent to the standalone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract. Where the Company accounts for a lease modification as a new lease, the separate lease is accounted for in the same way as a new lease, as described above.

Where the Company does not account for a lease modification as a separate lease, the lease liability is remeasured by: (a) decreasing the carrying amount of the right of use asset to reflect the partial or full termination of the lease for lease modifications that decrease the scope of the lease, with any gain or loss relating to the partial or full termination of the lease recorded in the consolidated statement of loss and comprehensive loss; or (b) making a corresponding adjustment to the right of use asset for all other lease modifications.

Payments associated with short-term leases and leases of low-value assets are recognized on a straight-line basis as an expense in the consolidated statement of loss and comprehensive loss.

Post-employment benefits

The Company has partially funded and unfunded defined benefit multi-employer pension plans, namely the DUPK pension plan and the RUK 1990 and 2006 pension plans, (the "Pension Benefit Plans") and unfunded post-employment benefit plans in Germany. Provisions for pension obligations are established for benefits payable in the form of retirement, disability and surviving dependent pensions. The Company also provides defined contribution plans to some of its employees.

For defined benefit pension plans and other post-employment benefits, net periodic pension expense is actuarially determined on a quarterly basis using the projected unit credit method. The cost of pension and other benefits earned by employees is determined by applying certain assumptions, including discount rates, rate of pension benefit increases, the projected age of employees upon retirement and the expected rate of future compensation.

The employee future benefits liability is recognized at its present value, which is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the terms of the related future benefit liability. Actuarial gains and losses that arise in calculating the present value of the defined benefit obligation are recognized in other comprehensive loss, net of tax, and simultaneously reclassified in the deficit in the consolidated statement of financial position in the year in which the actuarial gains and losses arise and without recycling to the consolidated statement of loss and comprehensive loss in subsequent periods.

For defined contribution plans, expenses are recorded in the consolidated statement of loss and comprehensive loss as incurred– namely, over the period that the related employee service is rendered.

Financial instruments

The Company classifies its financial instruments in the following categories: financial assets at fair value through profit or loss ("FVTPL"); financial liabilities at FVTPL; financial assets at amortized cost; financial liabilities at amortized cost and financial assets at fair value through other comprehensive income ("FVTOCI").

Financial assets at FVTPL

Financial assets carried at FVTPL are initially recorded at fair value, and transaction costs directly attributable to issuing the financial assets are expensed in the statement of loss and comprehensive loss. Realized and unrealized gains and losses arising from changes in the fair value of the financial assets held at FVTPL are included in the statement of loss and comprehensive loss in the period in which they arise. As of December 31, 2022 and 2021, the Company did not have any financial assets at FVTPL.

Financial liabilities at FVTPL

These financial liabilities are initially recognized at fair value, and transaction costs directly attributable to issuing the financial liabilities are expensed in the statement of loss and comprehensive loss. Financial liabilities that are required to be measured at FVTPL are re-measured at each reporting date, with changes in fair value reported in the statement of loss and comprehensive loss. As of December 31, 2022 and 2021, the Company did not have any financial liabilities at FVTPL.

Financial assets at amortized cost

A financial asset is measured at amortized cost if the objective of the business model is to hold the financial asset for the collection of contractual cash flows, and the asset's contractual cash flows are comprised solely of payments of principal and interest. Financial assets at amortized cost are classified as current or non-current based on their maturity date and are initially recognized at fair value and subsequently carried at amortized cost, less any impairment.

Financial liabilities at amortized cost

Financial liabilities classified as amortized cost are initially recognized at fair value, less directly attributable transaction costs. After initial recognition, costs are subsequently measured at amortized cost using the effective interest rate method with interest

expense recognized on an effective yield basis. The effective interest rate is the rate that discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period. Interest accretion is recorded in interest expense in the consolidated statement of loss and comprehensive loss.

Financial assets at FVTOCI

Investments in equity instruments at FVTOCI are initially recognized at fair value, plus incremental transaction costs. Subsequently, financial assets at FVTOCI are measured at fair value, with gains and losses arising from changes in fair value recognized in other comprehensive loss in the period in which those gains or losses arise. As of December 31, 2022 and 2021, the Company did not have any financial assets at FVTOCI.

Impairment of financial assets at amortized cost

The Company applies the simplified approach on trade receivables, which allows for the use of a lifetime expected credit loss ("ECL") provision considering the probability of default over the expected life of the financial asset. The 12-month ECL only considers default events that are possible within the year following the reporting date. The Company uses a provision matrix to calculate ECLs for trade receivables. The provision matrix is initially based on the Company's historical observed default rates and is subsequently evaluated and updated based on new and forward-looking information.

Share capital

Common shares are classified as equity. Incremental costs that are directly attributable to the issuance of common shares are recognized as a deduction from equity, net of any tax effects.

Share-based compensation costs

The Company operates an equity-settled share-based compensation plan under which the Company receives services from directors, senior executives, employees and other collaborators as consideration for equity instruments of the Company. The Company accounts for all forms of share-based compensation using the fair value-based method. Fair value of stock options is determined at the date of grant using the Black-Scholes option pricing model, which includes estimates of the number of awards that are expected to vest over the vesting period. Where granted share options vest in installments over the vesting period (defined as graded vesting), the Company treats each installment as a separate share option grant. Share-based compensation expense is recognized over the vesting period, or as specified vesting conditions are satisfied, and credited to other capital. Any consideration received by the Company in connection with the exercise of stock options is credited to share capital. Any other capital component of the share-based compensation is transferred to share capital upon the issuance of shares.

The Company grants deferred share units ("DSUs") to members of its Board of Directors who are not employees or officers of the Company. DSUs cannot be redeemed until the holder is no longer a director of the Company and are considered equity-settled instruments. Under the terms of the DSU agreement, the DSUs vest immediately upon grant. The value attributable to the DSUs is based on the market value of the share price at the time of grant and share based compensation expense is recognized in general and administrative expenses in the consolidated statement of loss and comprehensive loss. At the time of redemption, each DSU may be exchanged for one common share of the Company, net of applicable holding taxes. Any consideration received by the Company in connection with the exercise of DSUs is credited to share capital. Any other capital component of the share-based compensation is transferred to share capital upon the issuance of shares.

Revenue recognition

The Company generates revenue from license and collaboration agreements with customers (license fees, milestone revenue, royalties), the provision of development services, the sale of certain active pharmaceutical ingredients ("API"), semi-finished goods and finished goods, and from certain supply chain activities, which are comprised largely of oversight or supervisory support services related to stability studies or development activities carried out with respect to API batch production as specified in underlying contracts with customers.

The Company applies the provisions of IFRS 15, *Revenue from Contracts with Customers* ("IFRS 15"), a single, comprehensive set of criteria for revenue recognition. IFRS 15 applies to all contracts with customers except for contracts that are within the scope of other standards. IFRS 15 prescribes a five-step framework through which revenue is recognized when control of promised goods or services is transferred to a customer at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Goods and services that are determined not to be distinct are combined with other promised goods or services until a distinct bundle is identified. The Company allocates the transaction price (the amount of consideration to which the Company expects to be entitled in exchange for the promised goods or services) to each performance obligation and recognizes the associated revenue when (or as) each performance obligation is satisfied. The Company's estimate of the transaction price for each contract includes all variable consideration to which the Company expects to be entitled, and that estimate is reassessed at the end of each reporting period. When two or more contracts are entered into with the same customer at or near the same time, the Company evaluates the contracts to determine whether the contracts should be accounted for as a single arrangement.

The transaction price is allocated among the performance obligations on a relative standalone selling price basis, and the

applicable revenue recognition criteria are applied to each of the separate performance obligations. Standalone selling prices may be estimated via methods that include, but are not limited to, an adjusted market assessment approach, an expected cost-plus-margin approach or a residual approach. Determining the standalone selling price for performance obligations requires significant judgment.

The Company applies judgment in determining whether a combined performance obligation is satisfied at a point in time or over time, and, for performance obligations satisfied over time, in concluding upon the appropriate method of measuring progress to be applied for purposes of recognizing revenue. The Company evaluates the measure of progress each reporting period and, as estimates related to the measure of progress change, related revenue recognition is adjusted accordingly. Changes in the Company's estimated measure of progress are accounted for on a cumulative catch-up basis as a change in accounting estimate and are recorded in the consolidated statement of loss and comprehensive loss in the period of adjustment.

License fees

If the license to the Company's intellectual property is determined to be distinct from the other promises or performance obligations identified in the arrangement, the Company recognizes revenue from non-refundable, upfront fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. In assessing whether a license is distinct from the other promises, the Company considers whether the collaboration partner can benefit from the license for its intended purpose without the receipt of the remaining promises, whether the value of the license is dependent on the unsatisfied promises, whether there are other vendors that could provide the remaining promises and whether it is separately identifiable from the remaining promises. For licenses that are combined with other promises, the Company utilizes judgment to assess the nature of the combined performance obligation and whether the license is the predominant promise within the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue.

Development services

Arrangements that include a promise for the Company to provide development services are assessed to determine whether the services are capable of being distinct, are not highly interdependent or do not significantly modify one another, and if so, the services are accounted for as a separate performance obligation as the services are provided to the customer. Otherwise, when development services are determined not to be capable of being distinct, such services are added to the performance obligation that includes the underlying license. For development services that are combined with other promises, the Company applies judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time. The Company utilizes judgment to determine the appropriate method of measuring progress for purposes of recognizing revenue, which is generally an input measure such as costs incurred.

Milestone payments

At the inception of any contracts with a customer that includes milestone payments, which are oftentimes payable upon the successful achievement of development or regulatory events, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If the Company concludes it is highly probable that a significant revenue reversal will not occur, the associated milestone payment is included in the transaction price. Milestone payments that are not within the control of the Company or the licensee, such as regulatory approvals, are generally not considered probable of being achieved until those approvals are received. The transaction price is then allocated to each performance obligation on a relative stand-alone selling price basis, for which the Company recognizes revenue when (or as) the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, the Company reassesses the probability of achievement of milestones and any related constraints, and, if necessary, adjusts the estimate of the overall transaction price on a cumulative catch-up basis.

Royalty payments

For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and when the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (a) when the related sales occur, or (b) when the performance obligation to which some or all of the royalty has been allocated has been satisfied or partially satisfied.

Product sales

The Company recognizes revenue from the sale of certain API and semi-finished goods, including Macrilen™, upon delivery of such items to its customer.

Supply chain revenue

Supply chain services are contracted with fixed fees and are provided over a period of time. The Company recognizes revenue on a straight-line basis over time as it best represents the pattern of performance of the services.

While providing services, the Company incurs certain direct costs for subcontractors and other expenses that are recoverable directly from its customers. The recoverable amounts of these direct costs are included in the Company's operating expenses as

the Company controls the services before they are transferred to the customer and acts as a principal in these arrangements.

Contract costs

The Company recognizes as an asset the incremental costs of obtaining a contract with a customer if the costs are expected to be recovered, and any capitalized contract costs are amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. As a practical expedient, the Company recognizes the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset that it otherwise would have recognized is one year or less. To date, the Company has not incurred any incremental costs of obtaining a contract with a customer.

Contract modifications

Contract modifications are defined in IFRS 15 as changes in the scope or price (or both) of a contract that are approved by the parties to the contract, such as a contract amendment. Contract modifications exist when the parties to a contract approve a modification that either creates new or changes existing enforceable rights and obligations of the parties to the contract. Depending on facts and circumstances, the Company accounts for a contract modification in one of the following ways: (a) as a separate contract; (b) as a termination of the existing contract and a creation of a new contract; or (c) as a combination of the preceding treatments. A contract modification is accounted for as a separate contract if the scope of the contract increases because of the addition of promised goods or services that are distinct and the price of the contract increases by an amount of consideration that reflects the Company's standalone selling prices of the additional promised goods or services. When a contract modification is not considered a separate contract and the remaining goods or services are distinct from the goods or services transferred on or before the date of the contract modification, the Company accounts for the contract modification as a termination of the existing contract and a creation of a new contract. When a contract modification is not considered a separate contract and the remaining goods or services are not distinct, the Company accounts for the contract modification as an add-on to the existing contract and as an adjustment to revenue on a cumulative catch-up basis.

Income tax

Income tax on profit or loss comprises current and deferred tax. Tax is recognized in profit or loss, except that a change attributable to an item of income or expense recognized as other comprehensive loss or directly in equity is also recognized directly in other comprehensive loss or directly in equity. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation and establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

The current income tax charge is calculated in accordance with tax rates and laws that have been enacted or substantively enacted by the reporting date in the countries where the Company's subsidiaries operate and generate taxable income.

Deferred income tax is recognized on temporary differences (other than, where applicable, temporary differences associated with unremitted earnings from foreign subsidiaries and associates, to the extent that the investment is essentially permanent in duration, and temporary differences associated with the initial recognition of goodwill) arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements and on unused tax losses or R&D non-refundable tax credits in the Group. Deferred income tax is determined using tax rates and laws that have been enacted or substantively enacted by the reporting date.

Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions and other issues. Reserves are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filing is more likely than not to be realized following resolution of any potential contingencies present related to the tax benefit.

Government assistance

Amounts received or receivable resulting from government assistance programs, including grants and refundable investment tax credits for research and development, are accounted for in accordance with IAS 20, *Accounting for Government Grants and Disclosure of Government Assistance,* and are recognized where there is reasonable assurance that the amount of government assistance will be received, and all attached conditions will be complied with. When the amount relates to an expense item such as research and development costs, it is recognized as income on a systematic basis as a reduction to the costs that it is intended to compensate. When the grant relates to an asset, it reduces the carrying amount of the asset and is then recognized as income over the useful life of the depreciable asset by way of a reduced depreciation charge.

Research and development expenses

Research costs are expensed as incurred. Development costs are expensed as incurred, except for those that meet the criteria for deferral, in which case the costs are capitalized and amortized to operations over the estimated period of benefit. No development costs have been capitalized during any of the periods presented.

Net loss per share

Basic net loss per share is calculated using the weighted average number of common shares outstanding during the year.

Diluted net loss per share is calculated based on the weighted average number of common shares outstanding during the year, plus the effects of dilutive common share equivalents, such as stock options, warrants and similar instruments. The number of shares included with respect to options, warrants and similar instruments is computed using the treasury stock method. Diluted net loss per share is equal to the basic net loss per share as the Company is in a loss position and all securities, comprised of options and warrants, would be anti-dilutive.

3. Critical accounting estimates and judgments

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

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

Critical accounting estimates and assumptions are those that have a significant risk of causing material adjustment and are often applied to matters or outcomes that are inherently uncertain and subject to change. As such, management cautions that future events often vary from forecasts and expectations and that estimates routinely require adjustment.

The following discusses the most significant accounting estimates and assumptions that the Company has made in the preparation of the consolidated financial statements.

Accounting for a contract modifications

The Novo Amendment as well as the Novo notice of termination of the Novo Amendment received on August 26, 2022, as defined and discussed in note 5 – License, supply and distribution arrangements, and which were determined to be modifications pursuant to the provisions of IFRS 15, required management to apply significant judgments, including: assessment of any changes to the scope of the license agreement; assessment of whether the remaining goods or services are distinct from goods or services transferred before the modifications; and assessment as to whether a portion of the changes in the transaction price was attributable to the amount of variable consideration promised before the modifications. Any changes in the judgments or assumptions applied to account for this agreement could have a significant impact on the Company's revenue and deferred revenue.

License and collaboration arrangements with multiple elements

The Company enters into licensing and supply agreements related to the licensing, development, supply and distribution for macimorelin in various territories. Each agreement may contain specific terms or clauses that require careful analysis by management under IFRS 15 in order to ensure the appropriate accounting treatment is reached. The agreements may include non-refundable upfront payments and licensing fees, the provision of development services, pre- and post-commercialization milestone payments, royalties on future product sales derived from such license agreements, and supply arrangements. Management analyzes each agreement and applies significant judgment to determine whether contracts entered into at or near the same time should be accounted for as a single arrangement, whether all parts of the contract are scoped within IFRS 15, to identify all performance obligations, determine whether a performance obligation is distinct or should be combined with other promised goods and services, determine and allocate the transaction price on a relative stand-alone selling price basis, determine

(in thousands of US dollars, except share and per share data and where otherwise noted)

whether a combined performance obligation is satisfied at a point in time or over time, and, for performance obligations satisfied over time, in concluding upon the appropriate method of measuring progress to be applied for purposes of recognizing revenue. Any changes in the judgments or assumptions applied can give rise to a significant impact on the Company's revenues and deferred revenues.

Impairment of goodwill

The annual impairment assessment related to goodwill requires management to estimate the recoverable amount, which is the higher of an asset's fair value less costs of disposal and value in use. Management has determined that using fair value less cost of disposal results in the higher estimated recoverable value. The carrying amount of its consolidated net assets is compared to the fair value less cost of disposal. Based on this calculation, management determined that goodwill was impaired (see note 11).

Employee future benefits

The determination of expenses and obligations associated with employee future benefits requires the use of assumptions, such as the discount rate to measure obligations, rate of pension benefit increases, the projected age of employees upon retirement and the expected rate of future compensation. Because the determination of the costs and obligations associated with employee future benefits requires the use of various assumptions, there is measurement uncertainty inherent in the actuarial valuation process. Actual results will differ from results that are estimated based on the aforementioned assumptions. Additional information is included in note 15 - Employee future benefits.

Research and development accruals

As part of the process of preparing our financial statements, management is required to estimate accrued expenses including those pertaining to the Company's research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on the Company's behalf and estimating the level of service performed and the associated cost incurred for the service when the Company has not yet been invoiced or otherwise notified of the actual cost. If the actual timing of the performance of services or the level of effort varies from management's estimate, the Company adjusts the accrued or prepaid expense balance accordingly. Although the Company does not expect estimates to be materially different from amounts actually incurred, if those estimates of the status and timing of services performed differ from the actual status and timing of services performed, the Company may report amounts that are too high or too low in any particular period.

4. Recent accounting pronouncements

New standards and interpretations not yet adopted

Certain new accounting standards, amendments to accounting standards and interpretations have been published that are not mandatory for 31 December 2022 reporting periods and have not been early adopted by the Company. These standards, amendments or interpretations are not expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

5. Revenue

Disaggregation of revenue

The Company derives revenue from the transfer of goods and services over time and at a point in time in the following categories:

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
License fees	**1,704**	1,670	911
Development services	**3,617**	3,337	**—**
Product sales	**57**	—	2,370
Royalties	**101**	68	67
Supply chain	**161**	185	304
	5,640	5,260	3,652

Revenues of approximately $5,555 (2021 – $5,260 and 2020 - $3,634) are derived from Novo Nordisk.

License, supply and distribution arrangements

Novo Nordisk Health Care AG - Macrilen™ - United States and Canada

On January 16, 2018, the Company entered into a License Agreement with Strongbridge Ireland Limited ("Strongbridge") to carry out development, manufacturing, registration, regulatory and supply chain services for the commercialization of Macrilen™

(macimorelin) in the U.S. and Canada, which provides for (i) a right to use license relating to the adult indication (the "Adult Indication"); (ii) a license for a future FDA-approved pediatric indication (the "Pediatric Indication"); (iii) the licensee to fund 70% of the costs of a pediatric clinical trial (the "DETECT-trial") submitted for approval to the EMA and FDA to be run by the Company with oversight from a joint steering committee (the "PIP"); and (iv) for an Interim Supply Arrangement. In January 2018, the Company received a cash payment of $24,000 from Strongbridge and on July 23, 2018, Strongbridge launched product sales of Macrilen™ (macimorelin) in the U.S. The Company is also entitled to receive a milestone payment of $5,000 upon FDA approval of the Pediatric Indication. Effective December 19, 2018, Strongbridge sold the entity which owned the License Agreement for the U.S. and Canadian rights to Macrilen™ (macimorelin) to Novo. In 2020, the Interim Supply Arrangement was concluded and Novo contracted the Company to provide supply chain services for the manufacture of Macrilen™ (macimorelin).

On November 16, 2020, the Company entered into an amendment (the "Novo Amendment") of its existing License Agreement with Novo related to the development and commercialization of macimorelin.

Under the Novo Amendment, Aeterna continues to retain all rights to macimorelin outside of the U.S. and Canada but Novo agreed to make an upfront payment to Aeterna of $6,109 (€5,000), which the Company received in December 2020. Under the Novo Amendment, the royalty payment Aeterna receives on sales in the U.S. and Canada was reduced from 15% to 8.5% for annual net sales up to $40,000 and returns to 15% or more for annual net sales of macimorelin over $40,000. Additionally, the $5,000 variable payment owing to Aeterna by Novo, upon FDA approval of the pediatric indication, was waived. Under the Novo Amendment, Novo and Aeterna agreed that solely Aeterna will conduct the pivotal DETECT-trial in partnership with a contract research organization ("CRO"). Given the transfer of development activities to Aeterna, the percentage of DETECT-trial costs that Novo is required to reimburse to Aeterna was adjusted from 70% to 100% of costs up to €9,000 (approximately $10,980). Any additional external jointly approved DETECT-trial costs incurred over €9,000 will be shared equally between Novo and Aeterna. In addition, certain changes to rights and responsibilities of the joint steering committee were made.

Under the amended terms, Novo was also granted co-ownership of the U.S. and Canadian patents and trademarks owned by Aeterna on macimorelin but will be required to transfer co-ownership in those patents back to Aeterna on the occurrence of certain termination events.

Management has determined that the modification that grants co-ownership of the U.S. and Canadian patents and trademarks that were previously licensed by the Company to Novo is not a distinct performance obligation as the related benefits are highly interdependent and interrelated with the licensed indications granted under the existing license contract prior to the modification.

In addition, upon regulatory approval of macimorelin in the U.S. for the diagnosis of CGHD, if Novo determines not to commercialize macimorelin in Canada, then Aeterna has the option to exclusively license rights to macimorelin in Canada (but not in U.S.) to a third party. The Novo Amendment also confirms that Aeterna has the right to use the results from the DETECT-trial, if successful, to support Aeterna seeking regulatory approval and ongoing efforts to seek partnering opportunities for macimorelin in other regions outside of the two countries licensed to Novo, the U.S. and Canada.

Analysis prior to modification

At contract inception, upon analysis of the total discounted cash flows of both the $24,000 payment and the $5,000 payment upon FDA approval of the Pediatric Indication, the Company determined that 84% of the future revenue streams would be derived from the Adult Indication and 16% from the Pediatric Indication. On a relative fair value basis, the Company had allocated the transaction price to the performance obligations resulting in $23,600 being allocated to the Adult Indication and being recognized as license fee revenue in the consolidated statement of loss and comprehensive loss for the year ended, December 31, 2018, and $400 being allocated to the Pediatric Indication, which was recognized as deferred revenue on the consolidated statement of financial position and amortized on a straight-line basis beginning January 2018, over a period of 5.4 years, into the consolidated statements of loss and comprehensive loss.

Under the License Agreement, the Company considered the funding arrangement under the PIP to be a collaboration arrangement under IFRS 11 and has accounted for the invoicing as a reduction of costs incurred. During 2020, the Company invoiced its licensee $1,099 as its share of the costs incurred by the Company.

Analysis post modification

On November 16, 2020, the Company announced that it had entered into the Novo Amendment of its existing License Agreement and received an upfront payment of $6,109 (€5,000) in December 2020. Management determined that the remaining performance

obligation under the contract which provides the customer with the license of a future FDA approved Pediatric Indication is a distinct performance obligation before and after the modification. Accordingly, the Company accounted for the modification to the License Agreement as an adjustment to the existing License Agreement with Novo, on a prospective basis. The portion of the changes in the transaction price that was attributable to the change in royalty rate was allocated to both the Adult Indication and the Pediatric Indication. Based on the change in future royalty rates, the Company determined that $550 of the additional upfront payment should be allocated to the Adult Indication. Accordingly, the Company allocated $550 (€470) to the Adult Indication which was recognized in revenues for the year ended December 31, 2020 and deferred $5,559 (€4,530).

As required per IFRS 11, given changes in facts and circumstances with respect to the development activities associated with the pediatric indication—namely, the substantive changes to rights and responsibilities granted to Novo pursuant to the Novo Amendment—management reassessed whether the classification of those activities should change. Management concluded that the parties to the Novo Amendment no longer share joint control of the related activities. As such, the Pediatric Indication development activities are no longer accounted for under IFRS 11, and the incremental performance obligation associated with the Pediatric Indication development services has been combined with the pediatric license for revenue recognition purposes. No other additional performance obligations were identified in the Novo Amendment.

Based on the preceding analysis, management determined that the total modified transaction price was $5,754 (€4.7 million), which is comprised of $195 (€0.2 million) pre-Novo Amendment unamortized pediatric license fee and $5,559 (€4.5 million) post-Novo Amendment Pediatric Indication and has been allocated to the remaining combined performance obligation. Revenue associated with this performance obligation is being recognized as pediatric development services using a cost-to-cost measure of progress method. The transfer of control to Novo occurs over time, and as such, in management's judgment, this input method is the best measure of progress towards satisfying the performance obligation and reflects a faithful depiction of the transfer of goods and services.

Notice of termination

On August 26, 2022, Novo provided the Company with a notice of termination of the Novo Amendment. Under the terms of the Novo Amendment, the termination is effective May 23, 2023 upon the completion of a 270 day notice period ("notice period"). Upon termination, the rights and licenses granted by the Company to Novo under the Novo Amendment will be returned to the Company, and the Company will regain full rights to continue the clinical development and future commercialization of Macrilen™. Following the notice of termination and throughout the 270 day notice period, as per the terms of the Novo Amendment, Novo will continue to fund all DETECT-trial costs up to $9.6 million (€9 million), and any additional DETECT-trial costs incurred over $9.6 million (€9 million) up to $10.5 million (€9.8 million) will be shared equally between Novo and the Company.

The Company concluded that the notice of termination represents a contract modification for accounting purposes. The Company further concluded that upon receipt of the notice of termination, the remaining goods and services to be performed during the notice period are considered distinct goods and services and therefore, the contract modification is to be accounted for prospectively. As of the date of receipt of the notice of termination from Novo, the Company had recognized total license fees associated with the Pediatric Indication of $1,615 (€1,880) and total development services revenue of $3,865 (€4,448). Subsequent to the receipt of the notice of termination, management estimated the combined transaction price of the remaining services to be performed as $7,937 (€7,776), comprised of Pediatric Indication license fees of $2,872 (€2,814) and development services revenue of $5,065 (€4,962). Revenue associated with this combined performance obligation will be recognized as pediatric development services are incurred during the notice period, until the date of termination on May 23, 2023, using the cost-to-cost method. As such, all amounts in deferred revenue are classified as current as of December 31, 2022 to reflect the revised timing. Management will continue to reevaluate the transaction price at the end of each reporting period.

Supply Chain Arrangement

The Company agreed, in the Interim Supply Arrangement to the License Agreement, to supply ingredients for the manufacture of Macrilen™ (macimorelin) during an interim period at a price that is set 'at cost' without any profit margin. The Company believes the stand-alone selling price of the manufacturing ingredients to be their cost, as that approximates the amount at which Novo would be able to procure those same goods with other suppliers. In November 2019, Novo contracted with AEZS Germany, to provide supply chain services including provision of supervision of stability studies (support services) as well as API batch production and delivery of certain API and semi-finished goods.

Consilient Healthcare Limited - Macimorelin - European Union and United Kingdom

On December 7, 2020, the Company entered into an exclusive licensing agreement with Consilient Health Limited ("CH") for the commercialization of macimorelin (the "Licensed Product") in the European Economic Area and the United Kingdom (the "CH License Agreement").

Under the terms of the CH License Agreement, CH agreed to make a non-refundable, non-creditable upfront payment to the Company of $1,209 (€1.0 million), which the Company received in January 2021. The Company also is eligible to receive additional consideration, including regulatory milestones related to agreed-upon pricing and reimbursement parameters; net sales milestones; and royalties, ranging from 10%-20% of net sales of macimorelin, subject to reduction in certain cases, or sublicense income recorded by CH. Also on December 7, 2020, the Company and CH entered into an exclusive supply agreement, pursuant to which the Company agreed to provide the Licensed Product to CH, with such Licensed Product to be manufactured by third-party

(in thousands of US dollars, except share and per share data and where otherwise noted)

manufacturers for a period of ten years, subject to renewal (the “CH Supply Agreement”).

The total transaction price associated with the CH Agreement is $1,209 (€1.0 million), which consists of the non-refundable, non-creditable upfront payment, discussed above. At the inception of the contract, all other contractual consideration to which the Company may be entitled represents variable consideration, including the regulatory milestones, which were determined to be zero, based on management’s estimate of the most likely amount, given that the achievement of the underlying milestones is uncertain and highly susceptible to factors outside of the Company’s control.

The Company allocated the transaction price to the combined performance obligation of the license agreement and the supply agreement for the adult and pediatric indication, using the application of an adjusted market assessment approach. Revenue will be recognized over time using an outputs method based on units of Licensed Product supplied to CH. The total units that the Company expects to supply to CH pursuant to the CH Agreement is an estimate, based on current projections and anticipated market demand, and therefore will be a significant judgment that will be relied upon when using the outputs method to recognize revenue.

In December 2021, the Department of Health and Social Care in the United Kingdom approved a list price which triggered a $226 (€0.2 million) pricing milestone payment, which was allocated to the Adult license performance obligation and deferred to the consolidated statement of financial position.

In May 2022, the list price was approved in Germany which triggered a $213 (€0.2 million) pricing milestone payment. In December 2022, the list price was also approved in Spain which triggered a further $106 (€0.1 million) pricing milestone payment. Both payments were allocated to the Adult license performance obligation and deferred to the consolidated statement of financial position.

The aggregate amount of the transaction price allocated to the Company’s unsatisfied or partially unsatisfied performance obligations under the CH Agreement as of December 31, 2022 was $1,591 (€1,483) and as of December 31, 2021 was $1,358 (€1,200). The Company expects to recognize the balance of the relevant deferred revenue over the remaining period of nine years, subject to extension based on the outcome of the ongoing clinical development related to the Pediatric Indication and related patent application initiatives.

For the year ended December 31, 2022, the Company recognized $18 (2021 - $nil) as license fee revenue associated with the CH Agreement.

NK Meditech Limited - Macimorelin - Korea

The Company and NK Meditech Limited (“NK”) entered into a licensing agreement, effective November 30, 2021 and pursuant to which the Company granted to NK the exclusive right to commercialize (including marketing, selling and offering to sell) macimorelin in the Republic of Korea (the “ROK”) and as applicable, in the Democratic People’s Republic of Korea (“DPRK”) to the extent NK is allowed to use the aforementioned licensed rights in the latter (“NK License Agreement”).

Under the terms of the NK License Agreement, NK agreed to make a non-refundable, non-creditable upfront payment to the Company of $136 (€0.1 million), which the Company received in December 2021. The Company also is eligible to receive additional consideration, including a regulatory milestone related to the approval of macimorelin in the Pediatric Indication in the ROK and/or DPRK. Additionally, NK has agreed to pay AEZS royalties of 12% of any sublicense income (i.e., royalties, upfront payments, license or option fees, lump sum payments, equity securities, milestone payments or other non-cash consideration) that may be received by NK from any future sublicensees (“Sublicense Income”).

Also, effective November 30, 2021, the Company and NK entered into an exclusive supply agreement, pursuant to which the Company agreed to provide macimorelin to NK for a period of ten years, subject to renewal (the “NK Supply Agreement”).

Management determined that the total transaction price associated with the NK License Agreement was $136 (€0.1 million), which consists of the upfront payment, discussed above, that was received by the Company in 2021. The Company allocated the $136 (€0.1 million) transaction price to the single combined performance using an outputs method based on units of macimorelin supplied to NK over a 10-year period.

Liabilities related to contracts with customers

The Company has recognized the following deferred revenue balances related to contracts with customers:

	December 31, 2022		
	Current	**Non-Current**	**Total**
	$	**$**	**$**
Novo Nordisk Health Care	**2,914**	**—**	**2,914**
Consilient Healthcare Limited	**35**	**1,556**	**1,591**
NK Meditech Limited	**—**	**128**	**128**
	2,949	**1,684**	**4,633**

(in thousands of US dollars, except share and per share data and where otherwise noted)

	December 31, 2021		
	Current	Non-Current	Total
	$	$	$
Novo Nordisk Health Care	4,791	23	4,814
Consilient Healthcare Limited	24	1,334	1,358
NK Meditech Limited	—	136	136
	4,815	**1,493**	**6,308**

6. Cash and cash equivalents

	December 31,	
	2022	2021
	$	$
Cash on hand and balances with banks	**50,611**	55,600
Interest-bearing deposits with maturities of three months or less	**—**	9,700
	50,611	65,300

The Company had restricted cash equivalents amounting to $322 at December 31, 2022 (2021 - $335). These balances consist of certificates of deposit that are used as collateral for corporate credit cards and leases.

7. Trade and other receivables

	December 31,	
	2022	2021
	$	$
Trade accounts receivable	**403**	877
Value added tax	**275**	248
Other receivables	**54**	189
	732	1,314

During the year ended December 31, 2022, the Company recorded a write-down within other receivables of $124 (2021 - $nil).

8. Prepaid expenses and other current assets

	December 31,	
	2022	2021
	$	$
Prepaid insurance	**428**	421
Prepaid research and development	**1,998**	1,329
Other	**62**	22
	2,488	1,772

9. Property and equipment

Components of the Company's property and equipment are summarized below.

	Cost				
	Equipment	Computer Equipment	Right of use building	Right of use vehicles	Total
	$	$	$	$	$
At January 1, 2021	215	335	546	94	1,190
Additions	6	24	16	—	46

(in thousands of US dollars, except share and per share data and where otherwise noted)

Modification of building lease	—	—	109	—	109
Disposals	(5)	(69)	—	—	(74)
Impact of foreign exchange rate changes	(17)	(22)	(48)	(7)	(94)
At December 31, 2021	**199**	**268**	**623**	**87**	**1,177**
Additions	**—**	**11**	**—**	**38**	**49**
Modification of lease	**—**	**—**	**98**	**18**	**116**
Disposals	**—**	**(1)**	**(10)**	**—**	**(11)**
Impact of foreign exchange rate changes	**(11)**	**(13)**	**(26)**	**(7)**	**(57)**
At December 31, 2022	**188**	**265**	**685**	**136**	**1,274**

	Accumulated Depreciation				
	Equipment	**Computer Equipment**	**Right of use building**	**Right of use vehicles**	**Total**
	$	**$**	**$**	**$**	**$**
At January 1, 2021	199	329	437	46	1,011
Disposals	(5)	(69)	—	—	(74)
Depreciation	4	5	94	26	129
Impact of foreign exchange rate changes	(17)	(21)	(38)	(5)	(81)
At December 31, 2021	**181**	**244**	**493**	**67**	**985**
Disposals	**—**	**(1)**	**(10)**	**—**	**(11)**
Depreciation	**2**	**9**	**94**	**25**	**130**
Impact of foreign exchange rate changes	**(10)**	**(12)**	**(21)**	**(3)**	**(46)**
At December 31, 2022	**173**	**240**	**556**	**89**	**1,058**

	Carrying amount				
	Equipment	**Computer Equipment**	**Right of use building**	**Right of use vehicles**	**Total**
	$	**$**	**$**	**$**	**$**
At December 31, 2021	18	24	130	20	192
At December 31, 2022	**15**	**25**	**129**	**47**	**216**

On September 30, 2022 the Company and its landlord mutually agreed to a one-year plus 6 months' notice extension to its existing building lease agreement for its German subsidiary, continuing such terms until March 31, 2024, resulting in a modification being recorded to the building right of use asset in the amount of $98 (2021 - $109).

10. Identifiable intangible assets

Changes in the carrying value of the Company's identifiable intangible assets are summarized below.

	December 31, 2022			December 31, 2021		
	Cost	**Accumulated amortization**	**Carrying value**	**Cost**	**Accumulated amortization**	**Carrying value**
	$	**$**	**$**	**$**	**$**	**$**
Balances – Beginning of the year	**32,411**	**(31,786)**	**625**	35,020	(34,961)	59
Additions	**—**	—	**—**	609	—	609
Amortization	—	**(5)**	**(5)**	—	(16)	(16)
Impairment of intangible assets	**(584)**	—	**(584)**	—	—	—
Impact of foreign exchange rate changes	**(2,055)**	**2,019**	**(36)**	(3,218)	3,191	(27)
Balances – End of the year	**29,772**	**(29,772)**	**—**	**32,411**	**(31,786)**	**625**

In 2021, the Company recorded additions of $609, for separately identified intangibles related to upfront payments under certain license agreements. These intangible assets were not subject to amortization in the years ended December 31, 2022 and 2021 as they are not ready for their intended use. Amortization of intangible assets with finite lives of $5 (2021 - $16 and 2020 - $20) is presented in research and development expenses.

During the year ended December 31, 2022, the Company ceased its development of both the COVID-19 and Chlamydia vaccine trials. The previously capitalized upfront payments for licenses relating to these two trials of $212 was fully impaired. Furthermore, as part of the Company's annual goodwill and intangible asset impairment assessment, the Company identified the need for an additional impairment of $372 to intangible assets, as discussed in note 11.

(in thousands of US dollars, except share and per share data and where otherwise noted)

Cetrotide

On August 10, 2021, the Company entered into a trademark maintenance and assignment option agreement with ARES Trading SA, a subsidiary of Merck KGaA ("Merck"), with respect to the trademarks owned by the Company on Cetrotide® (cetrorelix acetate for injection), a luteinizing hormone-releasing hormone antagonist approved for therapeutic use as part of in vitro fertilization programs in women undergoing infertility treatment (the "Cetrotide Agreement"). The Company had transferred all Cetrotide activities to Merck in 2013 via a license and supply agreement ("LSA").

Pursuant to the Cetrotide Agreement, the Company has granted to Merck the exclusive option to acquire any and all rights in the Cetrotide trademarks at the end of the term of the LSA (the "Option"), which currently is May 2029 (the "Transfer Date"), when, as agreed, the Company will convey and assign to Merck all rights and interest in, as well as title to, the Cetrotide trademarks. The transfer of the trademarks on the Transfer Date shall constitute a sale, after which the Company will no longer have any ownership in or obligations related to the Cetrotide trademarks.

As consideration for having been granted the Option, Merck has agreed to pay the Company a total of $566 (€0.5 million) a portion of which is to be calculated as a reimbursement of all internal and external trademark fees incurred by the Company for all years beginning with 2020 until the Transfer Date. If the Company is not able to transfer the trademarks to Merck on the Transfer Date, all consideration paid by Merck to the Company through the Transfer Date shall be refunded to Merck, and all rights associated with the Trademarks shall revert back to the Company.

The carrying value of the trademarks underlying Cetrotide is $nil and the Company received proceeds of $16 (2021 - $98) in the year ended December 31, 2022 and as of December 31, 2022 has received total proceeds of $110 (2021 - $98). Any proceeds that are received pursuant to the Cetrotide Agreement have been or will be recorded as a deferred gain in the Company's consolidated statement of financial position. The Company will recognize the entirety of the gain on the Transfer Date to the extent that the transfer is successful.

11. Goodwill

	December 31,	
	2022	**2021**
	$	**$**
Balance – Beginning of period	**8,130**	8,815
Impairment of goodwill	**(7,642)**	—
Impact of foreign exchange rate changes	**(488)**	(685)
Balance – End of period	**—**	8,130

The Company considers the relationship between its market capitalization and its book value, among other factors, when reviewing for indicators of impairment. As of December 31, 2022, the market capitalization of the Company was below the carrying value of its shareholders' equity, indicating a potential impairment of goodwill and impairment of the assets of the group of CGUs. For the year ended December 31, 2022, the recoverable amount of the group of CGUs was determined based on a fair value less cost of disposal ("FVLCD") model. FVLCD was determined based on a market approach and also derived from market data, including, information from market participants regarding the price that the Company could receive in a sale of the group of CGUs. The fair value measurement is categorized as a level 2 fair value based on the inputs in the valuation techniques used. Management determined that value-in-use resulted in a lower estimated recoverable value than FVLCD. Based on the Company's assessment, the recoverable amount of the group of CGUs was lower than the carrying value and therefore an impairment charge was recorded on its goodwill and intangible assets for an amount of $7,642 and $372 respectively.

12. Payables and accrued liabilities

	December 31,	
	2022	**2021**
	$	**$**
Trade accounts payable	**2,038**	934
Accrued research and development costs	**751**	531
Accrued employee benefits	**325**	533
Payroll tax and other statutory liabilities	**74**	63
Other accrued liabilities	**640**	611
	3,828	2,672

(in thousands of US dollars, except share and per share data and where otherwise noted)

13. Provisions

	December 31,	
	2022	**2021**
	$	**$**
Balance – Beginning of period	**277**	371
Utilization of provision	**(28)**	(90)
Change in the provision	**—**	23
Unwinding of discount and impact of foreign exchange rate changes	**(16)**	(27)
Balances – End of the year	**233**	**277**
Less: current portion	**45**	34
Non-current portion	**188**	243

In 2013, the Company recognized a provision for certain non-cancellable contracts related to the Cetrotide activities, discussed in note 10, that were deemed onerous. The provisions for onerous contracts represent the present value of estimated unavoidable future royalty and patent costs associated with the intellectual property underlying Cetrotide.

14. Lease liabilities

	December 31,	
	2022	**2021**
	$	**$**
Balance – Beginning of period	**161**	184
Additions	**38**	15
Interest paid as charged to net loss as other finance costs	**(4)**	(7)
Payment against lease liabilities	**(134)**	(127)
Modification of lease liability	**114**	103
Impact of foreign exchange rate changes	**4**	(7)
Balances – End of the year	**179**	161
Current lease liabilities	**114**	130
Non-current lease liabilities	**65**	31

The Company and its landlord mutually agreed to a one-year plus 6 months' notice extension to its existing building lease agreement for its German subsidiary, continuing such terms until March 31, 2024, resulting in a modification being recorded to the lease liability in the amount of $98 (2021 - $103).

Future lease payments as of December 31, 2022 are as follows:

	$
Less than 1 year	114
1 – 3 years	65
Total	179

15. Employee future benefits

The Company has partially funded and unfunded defined benefit multi-employer pension plans and unfunded post-employment benefit plans in Germany. The plans are final salary pension plans, which provide benefits to members (or to their surviving dependents) in the form of a guaranteed level of pension payable for life. The level of benefits provided depends on the members' length of service and their salary in the final years leading up to retirement.

These plans are governed by the employment laws of Germany, which generally require final salary payments of each plan to be adjusted every third year for either an inflationary increase or a set 1% increase per annum. The form of increase varies for each plan and was an election made by each plan when it was initially established.

Since the pension liability is adjusted for either an increase in inflation or a set1% increase per annum, the pension plan is exposed to the Company's inflation, interest rate risks and changes in the life expectancy for pensioners. As the plan assets include significant investments in listed equity shares of entities and real estate, the Company is also exposed to equity market and property market risk. A decrease in corporate bond yields will also increase plan liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.

In the past, certain Pension Benefit Plans were accounted for as defined contribution plans as sufficient information was not available for the Company to account for its proportionate share of the defined benefit obligation, plan assets and cost associated

(in thousands of US dollars, except share and per share data and where otherwise noted)

with such Pension Benefit Plans. In 2021, additional information became available to the Company, which began to account for its proportionate share of the defined benefit obligation and plan assets amounting to $16,137 and $11,963, respectively, which amounts were recorded through other comprehensive income.

The change in the Company's accrued benefit obligations associated with the employee future benefit obligation is summarized for the years ended:

	December 31,			
	2022			2021
	Pension benefit plans	Other benefit plans	Total	Total
	$	$	$	$
Change in plan liabilities				
Balances – Beginning of the period	**29,313**	**99**	**29,412**	15,435
Current service cost	**122**	**20**	**142**	65
Interest cost	**294**	**1**	**295**	88
Actuarial gain arising from changes in financial assumptions	**(5,903)**	**(12)**	**(5,915)**	(1,130)
Past service cost associated with multi-employer plan	**—**	—	**—**	16,137
Actuarial loss arising from change in current assumptions on funding of future pension increases	**—**	**—**	**—**	556
Benefits paid	**(742)**	**(10)**	**(752)**	(511)
Impact of foreign exchange rate changes	**(1,427)**	**(5)**	**(1,432)**	(1,228)
Balances – End of the period	**21,657**	**93**	**21,750**	29,412
Change in plan assets				
Balances – Beginning of the period	**11,927**	**—**	**11,927**	**—**
Presentation of plan assets as of December 31, 2021	**—**	**—**	**—**	11,963
Interest income from plan assets	**120**	—	**120**	**—**
Employer contributions	**45**	—	**45**	**—**
Employee contributions	**10**	—	**10**	**—**
Benefits paid	**(247)**	—	**(247)**	**—**
Remeasurement of plan assets	**(641)**	—	**(641)**	—
Impact of foreign exchange rate changes	**(623)**	—	**(623)**	(36)
Balances – End of the period	**10,591**	—	**10,591**	11,927
Net liability of the unfunded plans	**10,694**	**93**	**10,787**	12,749
Net liability of the funded plans	**372**	**—**	**372**	4,736
Net amount recognized as Employee future benefits	**11,066**	**93**	**11,159**	17,485
Amounts recognized:				
In net loss	**286**	**9**	**295**	161
Actuarial gain (loss) on defined benefit plans and remeasurement of the net defined benefit liability in other comprehensive (gain) loss	**5,262**	—	**5,262**	(3,592)

The Company's proportionate share of the multi-employer pension plan assets as of December 31, 2022 are as follows:

	December 31,	
	2022	2021
	$	$
Equity instruments (Level 1)	**846**	826

(in thousands of US dollars, except share and per share data and where otherwise noted)

Debt instruments (Level 1)	**6,302**	7,445
Cash and cash equivalents (Level 1)	**46**	67
Real estate (Level 3)	**2,079**	2,207
Other (Level 3)	**1,318**	1,382
	10,591	11,927

The significant actuarial assumptions applied to determine the Company's accrued benefit obligations are as follows:

	Pension Benefit Plans Years ended December 31,			**Other benefit plans Years ended December 31,**		
Actuarial assumptions	**2022**	**2021**	**2020**	**2022**	**2021**	**2020**
	%	**%**	**%**	**%**	**%**	**%**
Discount rate	**3.75**	1.10	0.60	**3.75**	1.10	0.60
Pension benefits increase	**2.00**	0.50	0.50	**2.00**	0.50	0.50
Rate of compensation increase	**2.50**	2.50	2.00	**2.50**	2.50	2.00

Assumptions regarding future mortality are set based on actuarial advice in accordance with published statistics and experience in Germany. These assumptions translate into an average remaining life expectancy in years for a pensioner retiring at age 65:

	December 31,		
	2022	**2021**	**2020**
	Years	**Years**	**Years**
Retiring at the end of the reporting period:			
Male	**21**	21	20
Female	**24**	24	24

In accordance with the assumptions used as of December 31, 2022, undiscounted defined pension benefits expected to be paid are as follows:

	Total $
2023	829
2024	895
2025	894
2026	926
2027	1,083
Thereafter	35,976
	40,603

The weighted average duration of the defined benefit obligation is 14.4 years (2021 – 16.0 years).

If variations in the following assumptions had occurred during 2022, the impact on the Company's pension benefit obligation of $21,657 as of December 31, 2022 would have been as follows:

Assumption	**Increase**	**Decrease**
Change in discount rate of 0.25%	(730)	771
Change in salary rate of 0.25%	16	(16)
Change in pension rate assumption by 0.25%	456	(438)
Change mortality by one year	1,014	(1,020)

Total expenses for the defined benefit plan that the Company accounts for as a defined contribution plan amounted to approximately $20 for the year ended December 31, 2022 (2021 - $45 and 2020 - $38).

16. Share Capital

Authorized

The Company has unlimited number of common shares (being voting and participating shares) with no par value, as well as an unlimited number of preferred, first and second ranking shares, issuable in series, with rights and privileges specific to each class, with no par value.

Shareholder rights plan

(in thousands of US dollars, except share and per share data and where otherwise noted)

Effective May 8, 2019, the shareholders re-approved the Company's shareholder rights plan (the "Rights Plan") 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.

Issued and outstanding	**Common shares**	**Amount**
	#	**$**
Balance – December 31, 2019	799,780	224,528
Issuance of common shares, net of transaction costs	1,707,365	10,480
Balance – December 31, 2020	2,507,145	235,008
Issuance of common shares, net of transaction costs	943,448	29,082
Exercise of warrants, net of issuance costs upon exercise	1,404,443	29,301
Exercise of deferred share units	840	19
Balance – December 31, 2021	**4,855,876**	**293,410**
	—	—
Balance – December 31, 2022	**4,855,876**	**293,410**

On July 15, 2022, the Company's shareholders and board of directors approved an amendment to the Company's articles of incorporation to effect a 1-for-25 share consolidation (reverse split) of the Company's common shares. The Company's outstanding stock options, DSUs and warrants were also adjusted to reflect the 1-for-25 share consolidation (reverse split) of the Company's common shares. Accordingly, all common shares, DSU, warrants, stock options and per share amounts in these consolidated financial statements have been retroactively adjusted for all years presented to give effect to the share consolidation (reverse split). Outstanding warrant and stock options were proportionately reduced and the respective exercise prices, if applicable, were proportionately increased. The share consolidation (reverse split) was affected on July 21, 2022.

2021

On February 19, 2021, the Company completed an underwritten public offering of 820,390 common shares at $36.25 per common share, resulting in aggregate gross proceeds of $29,739, less underwriting discounts, commissions and offering expenses of $2,837 (the "February 2021 Financing"). The Company also granted to the underwriter and placement agent (the "Underwriter"), a 30-day over-allotment option to purchase up to 123,058 additional common shares at a price of $36.25 per common share (the "Underwriter Option"). Additionally, the Company issued warrants underlying 57,427 common shares to the Underwriter, with each warrant bearing an exercise price of $45.31 (the "February 2021 Placement Agent Warrants"). The February 2021 Placement Agent Warrants expire on February 17, 2026.

On February 22, 2021, the Underwriter exercised the Underwriter Option and received 123,058 common shares in exchange for gross proceeds to the Company of $4,461. Upon exercise of the Underwriter Option, the Underwriter also received an additional 8,614 February 2021 Placement Agent Warrants.

Aggregate gross proceeds received in connection with the February 2021 Financing totaled $34,200, less cash transaction costs of $3,221 and non-cash transaction costs, which represent the issue-date fair value of the February 2021 Placement Agent Warrants, of $1,897.

2020

On February 21, 2020, the Company closed a registered direct offering for 139,130 common shares, at a purchase price of $32.25 per share, priced at-the-market. Additionally, 104,348 investor warrants were issued at an exercise price of $30.00 per common share and 9,739 broker warrants were issued at an exercise price of $40.50 per common share. The net cash proceeds to the Company from the offering totaled $3,900. The gross proceeds of $4,500 was allocated as $2,325 to warrant liability based on the ascribed fair value and the remaining gross proceeds of $2,174 were allocated to share capital. The transaction costs of $600 were allocated between share capital and warrants based on their relative fair values. The fair value of the share capital was recorded within equity net of the allocated transaction costs. The transaction costs of $311 allocated to the warrant liability were recorded as expense in the consolidated statement of loss and comprehensive loss.

On July 7, 2020, the Company closed a public offering of 1,066,667 units at a price of $11.25 per unit, for net cash proceeds to the Company of $10,596. Each unit contained one common share (or common share equivalent in lieu thereof) and one investor warrant to purchase one common share. In total, 1,066,667 common shares, 1,066,667 investor warrants at an exercise price of $11.25 per share expiring July 7, 2025 (the "July 2020 Investor Warrants") and 74,661 placement agent warrants with an exercise price of $14.06 per share, expiring July 1, 2025 (the "July 2020 Placement Agent Warrants") were issued. As these warrants were registered and can be settled for a fixed number of the Company's underlying common shares, the warrants meet the requirements of the fixed-for-fixed rule and have been classified as equity.

(in thousands of US dollars, except share and per share data and where otherwise noted)

Because the warrants were classified as equity, the gross proceeds of $12,000 were allocated as $6,308 to share capital and $5,691 to warrants based on their relative fair values. The transaction costs of $1,420 were reduced from share capital and warrants in the amounts of $754 and $666, respectively, and charged to share issuance costs and classified as equity. The values ascribed to the share capital and warrants were recorded within equity, net of the allocated transaction costs.

On August 5, 2020, the Company closed a securities purchase agreement of 497,115 common shares at a purchase price of $14.08 per common share. The offering resulted in gross proceeds of $7,000. Concurrently, the Company issued to the purchasers unregistered warrants to purchase up to an aggregate of 372,836 common shares. The warrants are exercisable for a period of five and one-half years, exercisable immediately following the issuance date and have an exercise price of $11.75 per common share. In addition, the Company issued unregistered warrants to the placement agent to purchase up to an aggregate of 34,798 common shares, with an exercise price of $17.60 per share and an expiration date of August 3, 2025. The gross proceeds of $7,000 was allocated as $3,944 to warrant liability based on the ascribed fair value and the remaining gross proceeds of $3,056 were allocated to share capital. The transaction costs of $748 were allocated between share capital and warrants based on their relative fair values. The fair value of the share capital was recorded within equity net of the allocated transaction costs of $327. The transaction costs of $421 allocated to the warrant liability were recorded as expense in the consolidated statement of loss and comprehensive loss.

17. Warrants

Warrant activity for the years ended December 31, 2022, 2021 and 2020, was as follows:

	Number	Weighted average exercise price	Amount
	#	$	$
December 31, 2019	**—**	**—**	**—**
Granted	1,141,328	11.44	5,025
Reclassification of warrant liability to equity	654,722	21.39	7,377
December 31, 2020	1,796,050	17.79	12,402
Granted	66,041	45.31	1,897
Exercised	(1,404,443)	14.31	(9,746)
Allocation of transaction costs to share capital	—	—	532
December 31, 2021	457,648	21.76	5,085
	—		—
December 31, 2022	**457,648**	**21.76**	**5,085**

Reclassification of warrant liability to equity

The Company had issued 133,000 unregistered investor warrants in the September 2019 closed direct offering (the "September 2019 Warrants") as well as 104,348 unregistered investor warrants (the "February 2020 Investor Warrants") and 9,739 unregistered placement agent warrants (the "February 2020 Placement Agent Warrants") in the February 2020 closed direct offering transaction. The terms of the warrant agreement stated that if the warrants remained unregistered, the warrant holder could elect to exercise the warrants by way of a cashless exercise. This violated the fixed-for-fixed criterion due to the cashless exercise option, and accordingly these warrants had been accounted for as a liability.

Effective June 16, 2020, the Company registered the common shares underlying these warrants by way of a registration statement which eliminated the cashless exercise option on the warrants, on a one-for-one basis. Accordingly, as of June 16, 2020, the warrant liability was remeasured at fair value using the Black-Scholes option pricing model, with the amount of the remeasurement loss recognized in the consolidated statement of loss and comprehensive loss. The carrying value of the warrants was then reclassified from warrant liability to other capital within equity.

The Company also issued 372,836 unregistered investor warrants (the "August 2020 Investor Warrants") and 34,799 unregistered placement agent warrants (the "August 2020 Placement Agent Warrants") in the August 2020 registered direct offering transaction. The terms of the warrant agreement stated that if the warrants remained unregistered, the warrant holder could elect

(in thousands of US dollars, except share and per share data and where otherwise noted)

to exercise the warrants by way of a cashless exercise. This violated the fixed-for-fixed criterion due to the cashless exercise option, and accordingly these warrants were accounted for as a liability on issuance and measured at fair value using the Black-Scholes option pricing model. Effective September 14, 2020, the Company registered the common shares underlying these warrants by way of a registration statement which eliminated the cashless exercise option on the warrants, on a one-for-one basis. Accordingly, as of September 14, 2020, the warrant liability was remeasured at fair value using the Black-Scholes option pricing model, with the amount of the remeasurement loss recognized in the consolidated statement of loss and comprehensive loss. The carrying value of the warrants was then reclassified from warrant liability to other capital within equity.

The fair values of warrants are estimated using the Black-Scholes option pricing model. The weighted average assumptions used in the Black-Scholes valuation model for the periods presented were as follows:

	Years ended December 31,	
	2021	2020
Expected dividend yield	0.00%	0.00%
Expected volatility	119.18%	116.50%
Risk-free annual interest rate	0.59%	0.31%
Expected life (years)	4.99	5.09
Weighted average share price	$ 37.00	$ 14.84
Weighted average exercise price	$ 45.31	$ 20.74

The expected volatility of these warrants was determined using historical volatility rates and the expected life was determined based on time to expiry from the issuance date.

18. Other capital

At the 2018 annual and special meeting of shareholders, the Company's shareholders approved the adoption of the 2018 long-term incentive plan (the "LTIP"), which allows the Board of Directors to issue up to 11.4% of the total issued and outstanding common shares at any given time to eligible individuals at an exercise price to be determined by the Board of Directors at the time of the grant, subject to a ceiling, as stock options, stock appreciation rights, stock awards, deferred stock units ("DSUs"), performance shares, performance units, and other stock-based awards. This LTIP replaces the stock option plan (the "Stock Option Plan") for its directors, senior executives, employees and other collaborators who provide services to the Company. Options granted under the LTIP expire after seven years following the date of grant, vest over three years, beginning one year after date of grant. The Company's Board of Directors amended the Stock Option Plan on March 20, 2014 and the Company's Shareholders approved, ratified and confirmed the Stock Option Plan on May 10, 2016. Options granted under the Stock Option Plan prior to the 2014 amendment expire after a maximum period of 10 years following the date of grant. Options granted after the 2014 amendment expire after a maximum period of seven years following the date of grant.

Stock options

The Company settles stock options exercised through the issuance of new common shares as opposed to purchasing common shares on the market to settle stock option exercises.

The compensation expense for the year end December 31, 2022 was $142 (2021 – $107 and 2020 – ($51)) recognized over the vesting period. Option activity for the years ended December 31, 2022, 2021 and 2020, was as follows:

	Number	Weighted average exercise price (US$)	Number	Weighted average exercise price (CAD$)
	#	$	#	$
December 31, 2019	29,645	90.25	18	22.80
Granted	7,200	9.15	—	—
Canceled/Forfeited	(13,214)	64.00	—	—
Expired	(3,375)	53.50	(18)	22.80
December 31, 2020	**20,256**	36.43	—	
Granted	23,200	10.51	—	—
Expired	(1)	14,000.00	—	—
December 31, 2021	**43,455**	21.95	—	
Granted	**2,000**	8.88	—	—
Canceled/Forfeited	**(2,900)**	14. 49	—	—
Expired	**(525)**	165.08	—	—
December 31, 2022	**42,030**	20.05	—	

(in thousands of US dollars, except share and per share data and where otherwise noted)

On January 17, 2023, subsequent to year end, the Company granted 14,000 stock options under the LTIP. The stock options will be exercisable at $3.75 per share and will have a term of seven years and will vest over a period of three years.

The table below shows the assumptions, or weighted average parameters, applied to the Black-Scholes option pricing model in order to determine share-based compensation costs over the life of the awards.

	Years ended December 31,		
	2022	**2021**	**2020**
Expected dividend yield	**0.00%**	0.00%	0.00%
Expected volatility	**115.75%**	115.80%	112.50%
Risk-free annual interest rate	**1.59%**	1.23%	0.27%
Expected life (years)	**5.72**	5.71	4.02
Weighted average share price	**$ 8.88**	$ 10.51	$ 9.15
Weighted average exercise price	**$ 8.88**	$ 10.51	$ 9.15
Weighted average grant date fair value	**$ 7.47**	$ 8.82	$ 6.79

The expected volatility of these stock options was determined using historical volatility rates and the expected life was determined using the weighted average life of past options issued.

At December 31, 2022, the following options were outstanding:

	Options outstanding			Options exercisable		
Range of US dollar stock option exercise prices	**Number (#)**	**Weighted average remaining contractual life (years)**	**Weighted average exercise price ($)**	**Number (#)**	**Weighted average remaining contractual life (years)**	**Weighted average exercise price ($)**
8.88 to 10.00	8,800	5.20	9.09	4,538	4.95	9.15
10.01 to 20.00	21,200	5.96	10.51	7,072	5.96	10.51
20.01 to 30.00	6,000	3.91	22.68	6,000	3.91	22.68
50.01 to 60.00	3,400	2.21	51.99	3,400	2.21	51.99
60.01 to 87.50	2,630	0.84	86.37	2,630	0.84	86.37
	42,030	**4.89**	**20.05**	**23,640**	**4.14**	**27.74**

Deferred share units

The compensation expense for the year end December 31, 2022 was $402 (2021 – $204 and 2020 - $112) and is presented in selling, general and administrative expenses. DSU activity for the years ended December 31 are:

	Years ended December 31,		
	2022	**2021**	**2020**
	#	**#**	**#**
Balance – Beginning of the year	16,920	6,920	8,480
Granted	80,000	11,200	4,800
Exercised	—	(1,200)	(6,360)
Balance – End of the year	**96,920**	**16,920**	6,920

19. Expenses by nature

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Inventory expensed during the year	**54**	—	2,317

(in thousands of US dollars, except share and per share data and where otherwise noted)

Provision for obsolete inventory	**32**	—	—
Third-party research and development	**11,244**	5,534	692
Salaries, wages and benefits	**3,563**	3,037	2,789
Professional and consulting fees	**2,475**	2,570	2,185
Insurance	**1,687**	1,077	861
Stock-based compensation	**544**	311	61
Software and IT services	**386**	387	275
Depreciation and amortization	**135**	144	232
Marketing, communications and investor relations	**317**	289	34
Impairment of goodwill	**7,642**	—	—
(Reversal of) impairment of other assets	**124**	—	(139)
Impairment of intangible assets	**584**	—	—
Travel, meals and entertainment	**225**	111	49
Office, rent and telecommunications	**120**	162	272
License fees	**19**	139	27
Other	**92**	170	(78)
Gain on modification of building lease	**—**	—	(219)
	29,243	13,931	9,358

20. Compensation of key management

Key management includes the Corporation's Directors, Chief Executive Officer, Chief Financial Officer, Chief Scientific Officer and Chief Medical Officer. Compensation awarded to key management is summarized as follows:

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Salaries and short-term benefits	**1,848**	1,646	1,540
Consultant's fees	**17**	163	167
Post-retirement benefits	**63**	70	86
Stock-based compensation	**460**	295	160
	2,388	2,174	1,953

Most of the employment agreements entered into between the Company and its executive officers include termination provisions, whereby the executive officers would be entitled to receive benefits that would be payable if the Company were to terminate the executive officers' employment without cause or if their employment is terminated following a change of control. Separation benefits generally are calculated based on an agreed-upon multiple of applicable base salary and incentive compensation and, in certain cases, other benefit amounts.

21. Supplemental disclosure of cash flow information

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Changes in operating assets and liabilities:			
Trade and other receivables	**592**	120	(1,023)
Inventory	**(161)**	(56)	1,182
Prepaid expenses and other current assets	**(783)**	(750)	(702)
Payables and accrued liabilities	**1,076**	634	51
Income taxes payable	**—**	(109)	395
Deferred revenues	**441**	3,010	3,031
Provision for restructuring and other costs	**(2)**	—	—
Employee future benefits	**(559)**	(349)	(532)
	604	2,500	2,402

22. Income taxes

Significant components of the current and deferred income tax recovery (expense) for the years ended December 31, 2022, 2021 and 2020 are as follows:

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Current income tax recovery (expense)	**—**	109	(395)
Deferred tax:			

Origination and reversal of temporary differences	**2,885**	1,291	1,509
Change in unrecognized tax assets	**(2,885)**	(1,291)	(1,509)
Total income tax recovery (expense)	**—**	109	(395)

From time to time, the Company is subject to tax audits. While the Company believes that its filing positions are appropriate and supportable, periodically, certain matters are challenged by tax authorities. Although the Company believes its tax provisions are adequate, the final determination of tax audits and any related disputes could be materially different from historical income tax provisions and accruals. In 2020, AEZS Germany underwent a tax audit regarding the taxation years 2013 to 2016. As of December 31, 2022 and 2021, the tax authorities concluded the audit for those years. The subsequent years remain unaudited, and the Company has accrued $108 as an uncertain tax provision for those years.

The reconciliation of the combined Canadian federal and provincial corporate income tax rate to the income tax expense is provided below:

	Years ended December 31,		
	2022	**2021**	**2020**
Combined Canadian federal and provincial statutory income tax rate	**26.5%**	26.5%	26.5%

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Income tax recovery based on combined statutory income tax rate	**6,023**	2,246	1,252
Change in unrecognized tax assets	**(2,885)**	(1,291)	(1,872)
Share issuance costs	**—**	367	363
Permanent difference attributable to impairment of goodwill	**(2,407)**	—	—
Impact of expiring investment tax credits	**(1,559)**	(1,724)	(481)
Provision to filed return adjustments	**106**	151	—
Permanent difference attributable to net change in fair value of warrant liability	**—**	—	304
Share-based compensation costs	**(144)**	(82)	(16)
Difference in statutory income tax rate of foreign subsidiaries	**902**	226	99
Uncertain tax position	**—**	—	(123)
Other	**(36)**	216	79
	—	109	(395)

Loss before income taxes is attributable to the Company’s tax jurisdictions as follows:

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Germany	**(16,756)**	(4,383)	(2,042)
Canada	**(5,679)**	(3,860)	(2,463)
United States	**(292)**	(234)	(218)
Total loss before income taxes	**(22,727)**	(8,477)	(4,723)

Significant components of deferred tax assets and liabilities are as follows:

	December 31,	
	2022	**2021**

(in thousands of US dollars, except share and per share data and where otherwise noted)

	$	$
Deferred tax assets		
Operating losses carried forward	**582**	205
Intangible assets	**—**	776
	582	981
Deferred tax liabilities		
Accounts receivable	**—**	375
Payables and accrued liabilities	**450**	7
Property and equipment	**55**	47
Deferred revenues	**—**	492
Other	**77**	60
	582	981
Deferred tax assets (liabilities), net	**—**	—

Significant components of unrecognized deferred tax assets and losses are as follows:

	December 31,	
	2022	2021
	$	$
Unrecognized deferred tax assets		
Deferred revenues and other provisions	**1,475**	1,680
Operating losses carried forward	**87,445**	87,734
Capital losses carried forward	**210**	105
SR&ED Pool	**9,138**	9,138
Unused tax credits	**1,559**	2,945
Employee future benefits	**1,317**	3,396
Property and equipment	**524**	523
Intangible assets	**95**	—
Share issuance expenses	**781**	1,110
Other	**294**	84
Unrecognized deferred tax assets	**102,838**	106,715

Deferred income tax assets are recognized to the extent that the realization of the related tax benefit through reversal of temporary differences and future taxable profits is probable. Based on the current forecasted future taxable profits and reversal of temporary differences, the company does not believe it will have sufficient future earnings to offset the deferred tax assets and has an unrecognized deferred tax asset balance of $102,838.

As of December 31, 2022, the Corporation has total accumulated non-capital losses of $84,234 federally and $82,833 provincially, which may be carried forward for twenty years and used to reduce taxable income in future years. The Corporation has not recognized deferred tax assets on any of the non-capital losses, due to the uncertainty that there will be sufficient taxable income or that the taxable temporary differences will be reversing in the same reporting period and jurisdiction. The losses will be expiring as follows:

	Canada	
	Federal	Provincial
	$	$
2028	**8,054**	**6,668**
2029	**4,791**	**4,773**
2030	**4,104**	**4,089**
2031	**1,753**	**1,737**
2032	**4,250**	**4,250**
2033	**3,721**	**3,721**
2034	**4,153**	**4,153**
2035	**10,418**	**10,452**
2036	**10,592**	**10,592**
2037	**7,343**	**7,343**
2038	**6,557**	**6,557**
2039	**3,501**	**3,501**
2040	**3,808**	**3,808**
2041	**4,822**	**4,822**
2042	**6,367**	**6,367**

(in thousands of US dollars, except share and per share data and where otherwise noted)

	84,234	**82,833**

The Company has non-refundable R&D investment tax credits of approximately $1,559 which can be carried forward to reduce Canadian federal income taxes payable and which expire at dates ranging from 2023 to 2035. Furthermore, the Company has unrecognized tax assets in respect of operating losses to be carried forward in Germany and in the US. The federal tax losses amount to approximately $208,656 in Germany (€ 195,006) for which there is no expiry date, and to $5,095 in the US. The losses in the US will be expiring as follows:

	United States
	$
2028	**369**
2029	**178**
2034	**151**
2035	**447**
2036	**195**
2037	**709**
indefinite	**1,224**
indefinite	**771**
indefinite	**516**
indefinite	**535**
	5,095

The operating loss carryforwards and the tax credits claimed are subject to review, and potential adjustment, by tax authorities. Other deductible temporary differences for which tax assets have not been booked are not subject to a time limit, except for share issuance expenses which are amortizable over five years.

23. Capital management

The Company's objective in managing capital, consisting of shareholders' equity, with cash and cash equivalents and restricted cash equivalents being its primary components, is to ensure sufficient liquidity to fund R&D costs, selling expenses, general and administrative expenses and working capital requirements. Over the past several years, the Company has raised capital via public and private equity offerings and issuances as its primary source of liquidity, as discussed in note 24. The capital management objective of the Company remains the same as that in previous periods. The policy on dividends is to retain cash to keep funds available to finance the activities required to advance the Company's product development portfolio and to pursue appropriate commercial opportunities as they may arise.

The Company is not subject to any capital requirements imposed by any regulators or by any other external source.

24. Financial instruments and financial risk management

Financial assets and liabilities as of December 31, 2022 and 2021 are presented below.

December 31, 2022	**Financial assets at amortized cost**	**Financial liabilities at amortized cost**
	$	**$**
Cash and cash equivalents	**50,611**	**—**
Trade and other receivables	**457**	**—**
Restricted cash equivalents	**322**	**—**
Payables and accrued liabilities	**—**	**3,752**
Lease liability	**—**	**179**
	51,390	**3,931**

December 31, 2021	**Financial assets at amortized cost**	**Financial liabilities at amortized cost**
	$	**$**
Cash and cash equivalents	65,300	—
Trade and other receivables	1,065	—
Restricted cash equivalents	335	—
Payables and accrued liabilities	**—**	2,609
Lease liability	—	161
	66,700	2,770

Assets and liabilities, such as value added taxes, that are not contractual and that arise as a result of statutory requirements imposed by governments, do not meet the definition of financial assets or financial liabilities and are, therefore, excluded from trade and other receivables and payables and accrued liabilities.

Fair value

IFRS 13, *Fair Value Measurement* ("IFRS 13") establishes a hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement).

The input levels discussed in IFRS 13 are:

Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly (i.e. prices) or indirectly (i.e. derived from prices).

Level 3 – Inputs for an asset or liability that are not based on observable market data (unobservable inputs).

Financial risk factors

The following provides disclosures relating to the nature and extent of the Company's exposure to risks arising from financial instruments, including credit risk, liquidity risk and foreign exchange risk and how the Company manages those risks.

(a) Credit risk

Credit risk is the risk of an unexpected loss if a customer or counterparty to a financial instrument fails to meet its contractual obligations. The Company regularly monitors credit risk exposure and takes steps to mitigate the likelihood of this exposure resulting in losses. The Company's exposure to credit risk currently relates to the financial assets at amortized cost in the table above. The Company holds its available cash in amounts that are readily convertible to known amounts of cash and deposits its cash balances with financial institutions that have an investment grade rating of at least "P-2" or the equivalent. This information is supplied by independent rating agencies where available and, if not available, the Company uses publicly available financial information to ensure that it invests its cash in creditworthy and reputable financial institutions. Once there are indicators that there is no reasonable expectation of recovery, such financial assets are written off but are still subject to enforcement activity.

As of December 31, 2022, three counterparties included in trade accounts receivable comprised a total receivable of approximately $403 (2021 - $932) of which $nil (2021 - $55) was past due, considered to be impaired and fully provided for.

Generally, the Company does not require collateral or other security from customers for trade accounts receivable; however, credit is extended following an evaluation of creditworthiness. In addition, the Company performs ongoing credit reviews of all of its customers and determines expected credit losses. On this basis, as of December 31, 2022, the Company has provided for all outstanding and unpaid amounts relating to its operations.

The maximum exposure to credit risk approximates the amount recognized in the Company's consolidated statement of financial position.

(b) Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. As indicated in note 23, the Company manages this risk through the management of its capital structure by monitoring rolling forecasts of the Company's cash and cash equivalents on the basis of expected cash flows.

Management concluded that the Company has sufficient cash on hand to meet its obligations as they become due for the next 12 months, considering the Company's planned research and development activities, selling expenses, general and administrative expenses and working capital requirements. The Company has the ability to scale its research and development activities, and will do so as necessary, based on cash availability. While the Company has $ 50,611 in cash and cash equivalents at December 31, 2022, it continues to have an ongoing need for additional capital resources to research and develop, commercialize and manufacture its products and technologies.

(in thousands of US dollars, except share and per share data and where otherwise noted)

All of the Company's financial liabilities except lease liabilities are current liabilities with expected settlement dates within one year. The maturity analysis for lease liabilities is disclosed in note 14.

(c) Foreign exchange risk

Entities using the Euro as their functional currency

The Company is exposed to foreign exchange risk due to its investments in foreign operations whose functional currency is the Euro. As of December 31, 2022, if the US dollar had increased or decreased by 10% against the Euro, with all other variables held constant, net loss for the year ended December 31, 2022 would have been lower or higher by approximately $823 (2021 - $300 and 2020 - $110).

25. Segment information

The Company operates in a single operating segment, being the biopharmaceutical segment.

Geographical information

Revenues by geographical area have been allocated to geographic regions based on the country of residence of the Company's external customers or licensees and are detailed as follows:

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Switzerland	**5,395**	5,075	905
Ireland	**82**	—	73
Denmark	**160**	185	2,655
Other	**3**	—	19
	5,640	5,260	3,652

Non-current assets include restricted cash equivalents, right of use assets, property and equipment, identifiable intangible assets, other asset and goodwill (2021 only) and are detailed by geographical area as follows:

	December 31,	
	2022	**2021**
	$	**$**
Germany	**463**	9,212
Canada	**4**	—
United States	**71**	70
	538	9,282

26. Net loss per share

The following table sets forth pertinent data relating to the computation of basic and diluted net loss per share attributable to common shareholders.

	Years ended December 31,		
	2022	**2021**	**2020**
	$	**$**	**$**
Net loss	**(22,727)**	(8,368)	(5,118)
Basic and diluted weighted-average number of shares outstanding	**4,855,876**	4,596,980	1,643,327
Items excluded from the calculation of diluted net loss per share due to their anti-dilutive effect:			
Stock options and DSUs	**138,950**	60,375	27,176
Share purchase warrants	**457,648**	457,648	1,796,050

27. Commitments

Significant expenditure contracted for at the end of the reporting period but not recognized as liabilities is as follows:

	Service and manufacturing	R&D contracts	TOTAL
	$	$	$
Less than 1 year	**9,250**	**1,577**	**10,827**
1 – 3 years	**1,362**	**218**	**1,580**
4 – 5 years	**29**	**—**	**29**
More than 5 years	**—**	**—**	**—**
	10,641	**1,795**	**12,436**

In 2021, the Company executed various agreements including in-licensing and similar arrangements with development partners (note 10). Such agreements may require the Company to make payments on achievement of stages of development, launch or revenue milestones, although the Company generally has the right to terminate these agreements at no penalty. The Company may have to pay up $38,458 upon achieving certain sales volumes, regulatory or other milestones related to specific products.

28. Subsequent event

On March 15, 2023, with the Company's consent, Consilient Health entered into an assignment agreement to transfer the current licensing agreement for the commercialization of macimorelin in the European Economic Area and the United Kingdom to Atnahs Pharma UK Limited ("Pharmanovia"). Also on March 15, 2023, the Company and Pharmanovia entered into an exclusive supply agreement, pursuant to which the Company agreed to provide the Licensed Product to Pharmanovia.

29. Reclassification of comparative figures

Certain comparative amounts in the consolidated statements of financial position, consolidated statements of loss and comprehensive loss and the notes to these consolidated financial statements have been reclassified to conform to the presentation adopted in the current year.

Item 19. Exhibits

The following exhibits are filed as part of this Amendment No. 1 to Annual Report on Form 20-F/A:

Exhibit No.	Document
12.1†	CEO Certification Pursuant to Section 302 of the Sarbanes Oxley Act of 2002
12.2†	CFO Certification Pursuant to Section 302 of the Sarbanes Oxley Act of 2002
13.1#	CEO Certification Pursuant to Section 906 of the Sarbanes Oxley Act of 2002
13.2#	CFO Certification Pursuant to Section 906 of the Sarbanes Oxley Act of 2002
15.1†	Consent of Ernst &Young LLP
15.2†	Consent of PricewaterhouseCoopers LLP

† Filed with this Annual Report on Form 20-F/A
Furnished with this Annual Report on Form 20-F/A

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F/A and that it has duly caused and authorized the undersigned to sign this Amendment No. 1 to Annual Report on Form 20-F/A on its behalf.

AETERNA ZENTARIS INC.

/s/ Klaus Paulini
Klaus Paulini
President and Chief Executive Officer

Date: February 15, 2024