Gemina Laboratories Ltd.

Management Discussion and Analysis
(in Canadian dollars)

For the year ended January 31, 2024

This management discussion and analysis ("**MD&A**") should be read in conjunction with the audited consolidated financial statements and notes of Gemina Laboratories Ltd. ("Gemina" or the "**Company**") for year ended January 31, 2024. Our audited consolidated financial statements are prepared in accordance with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board ("**IASB**") and all dollar amounts are expressed in Canadian dollars unless otherwise noted. In this discussion, unless the context requires otherwise, references to "we" or "our" are references to Gemina.

All information contained in this MD&A is current as of May 29, 2024, unless otherwise stated.

Forward Looking Statements

Certain statements and information in this MD&A contain forward-looking statements or forward-looking information under applicable Canadian securities legislation that may not be based on historical fact, including, without limitation, statements containing the words "believe", "may", "plan", "will", "estimate", "continue", "anticipate", "intend", "expect", "predict", "project", "potential", "continue", "ongoing", "could", "would", "seek", "target" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words and similar expressions.

Forward-looking statements are necessarily based on estimates and assumptions made by us in light of our experience and perception of historical trends, current conditions and expected future developments, as well as factors that we believe are appropriate. Such forward-looking statements reflect our current views with respect to future events, are subject to risks and uncertainties and are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Gemina as of the date of such statements, are inherently subject to significant scientific, business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause our actual results, performance, achievements, prospects or opportunities to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements. In making the forward-looking statements included in this MD&A, the Company has made various material assumptions, including, but not limited to: (i) obtaining any regulatory approvals; (ii) assumptions regarding general business and economic conditions; (iii) the Company's ability to successfully develop its products; (iv) that the Company's current positive relationships with third parties will be maintained; (v) the availability of financing on reasonable terms; (vi) the Company's ability to attract and retain skilled employees and consultants; (vii) assumptions regarding market competition; (viii) the products and technology offered by the Company's competitors and (ix) the Company's ability to protect patents and proprietary rights.

In evaluating forward-looking statements, current and prospective shareholders should specifically consider various factors,

- the Company's operations could be adversely affected by possible future government legislation, policies and controls or by changes in applicable laws and regulations;
- the volatility of global capital markets over the past several years has generally made the raising of capital more difficult;
- risks associated with political instability and changes to the regulations governing the Company's business operations;
- the success of the Company is largely dependent on the performance of its directors and officers;
- the Company and/or its directors and officers may be subject to a variety of legal proceedings, the results of which may have a material adverse effect on the Company's business;
- the Company may be adversely affected if potential conflicts of interests involving its directors and officers are not resolved in favour of the Company;

- if securities or industry analysts do not publish research or publish inaccurate or unfavourable research about the Company's business, the price and trading volume of the Common Shares could decline;
- there is no existing public market for the Common Shares and an active and liquid one may never develop, which could impact the liquidity of the Common Shares;
- the Common Shares may be subject to significant price volatility;
- dilution from future equity financing could negatively impact holders of Common Shares;
- internal controls cannot provide absolute assurance with respect to the reliability of financial reporting and financial statement preparation;
- upon becoming a reporting issuer, the Company will be subject to costly reporting requirements;
- the Company may be unable to implement its business strategy;
- the Company may be unable to manage its growth;
- risks associated with security breaches;
- the Company's failure to maintain, promote and enhance its brand status;
- the Company's business now or in the future may be adversely affected by risks outside the control of the Company;
- risks associated with the Company's reliance on strategic partnerships;
- reputational risk; and
- risks associated with protection of intellectual property.

Should one or more of these risks or uncertainties, or a risk that is not currently known to us, materialize, or should assumptions underlying those forward-looking statements prove incorrect, actual results may vary materially from those described herein. These forward-looking statements are made as of the date of this MD&A and we do not intend, and do not assume any obligation, to update these forward-looking statements except as required by applicable securities laws. Investors are cautioned that forward-looking statements are not guarantees of future performance and are inherently uncertain. Accordingly, investors are cautioned not to put undue reliance on forward-looking statements.

1 Overview of the Company

Gemina Laboratories Ltd. (the “Company” or “Gemina”) operates under the name “Gemina Labs.” The Company was incorporated under the laws of British Columbia on October 10, 2017. On February 10, 2021, the Company changed its name from “D1 Capital Corp.” to “Gemina Laboratories Ltd.”. The Company's head office is located at Unit 302 - 3600 Gilmore Way, Burnaby, BC, Canada, V5G 4W8, and its registered office and records are located at 10th floor, 595 Howe Street, Vancouver, British Columbia. The Company is traded on the Canadian Securities Exchange under the symbol GLAB.

The Company is a biotechnology company that currently operates in the *In Vitro* Diagnostics (“**IVD**”) and human wellness monitoring markets under the name “Gemina Labs”. The Company has developed novel surface functionalization chemistries for the detection of pathogens and biomarkers (the “**Gemina Surface Chemistry**”) with a focus on respiratory diseases. The Company recently completed the development of its first lateral flow test, the Legio X™ COVID-19 Rapid Antigen Test (“Legio X™”), validating the Gemina Surface Chemistry on this platform. The Company is pursing extensions to its lateral flow test pipeline to include a combination Flu A/B and Covid 19 antigen test and a Streptococcus respiratory test. Additionally, the Company, in collaboration with ReadyGo Diagnostics (a UK Company), is investigating a new platform that utilizes the Gemina Surface Chemistry for molecular assays for diagnosis, the first target being Tuberculosis.

Given the broad, potential application of the Gemina Surface Chemistry, the Company plans to enter into strategic commercial partnerships in respect of applications outside its core respiratory diagnostic focus.

2 Recent developments

LEGIO-X™ COVID RAPID ANTIGEN TEST

The Company’s first product developed, the Legio-X™ COVID Rapid Antigen Test, is a Point of Care (“POC”) COVID Rapid Antigen Test that embeds the Gemina Surface Chemistry in a lateral flow assay test strip and is used to determine if a person is infected with COVID-19. An antigen test is designed to confirm whether a pathogen is present in the subject to a detectable level, providing a very good indication of infection. Unlike nucleic acid-based tests such as PCR, which detect the presence of genetic material, the Company’s POC COVID Antigen Test detects a protein found on the surface of the COVID-19 virus.

The development path for Legio-X™ COVID Rapid Antigen Test involved: the development of a prototype (June 2021) and the protype transfer to a manufacturing partner (IPOC) for manufacturing process development and small scale production for Phase 1 studies; the completion of Phase 1 (September 2021) demonstrating that the test was able to detect 1 ng/mL of SARS-CoV-2 N protein in pooled human saliva; the completion of sensitivity and specificity trials utilizing more than 500 human clinical samples culminating in the grant of the CE Mark for the European Union (May 2022); and the completion of a large-scale, manufacturing process development, suitable for commercial manufacturing of Legio-X™ COVID Rapid Antigen Test (Dec 2022).

In 2023, the market for Covid tests has reduced significantly but the market for Covid/Flu combination tests is growing, and evidence is that the Covid and Flu testing markets will combine. With Gemina’s progress on the development of their Flu test the Company is well positioned to take advantage of this. Gemina is currently investigating various manufacturing and distribution plans before launching these respiratory combination tests commercially.

Pipeline

In 2022, the Company initiated the development of a pipeline of products for the diagnosis of infectious respiratory diseases. The completion of Gemina's prototype Flu A/B test in December 2022 triggered the full development phase of this project and allowed for the commencement of feasibility studies for a new Streptococcus respiratory test, the next target in our respiratory panel.

To date, Gemina's focus has been on developing tests using the lateral flow assay ("LFA's") platform, but the Company recognised that lateral flow technology would not be suitable for diagnosing all respiratory disorders. To address this, the Company established a master services and license agreement with ReadyGo Diagnostics ("ReadyGo" of the United Kingdom. Under this agreement the two companies will work together using the ReadyGo Geo and Gemina chemistries to develop and launch a tuberculosis ("TB") test for primary care screening. This programme is designed to deliver Gemina's first molecular assay (i.e. DNA based test). The agreement gives Gemina the rights to market and sell the resulting TB diagnostic test globally, on an exclusive basis.

In June 2023, the Company announced, that in collaboration with ReadyGo, the successful feasibility testing for the detection of Mycobacterium Tuberculosis ("MTB") in a saliva matrix using the ReadyGo GEO platform. This breakthrough in MTB detection paves the way for affordable testing which will have the potential to significantly impact MTB eradication efforts in countries such as India, Indonesia, and other affected regions worldwide.

The Company is also investigating Wellness testing concepts in targeted areas (for instance, in applications such as sports and fitness). Unlike the conventional point-of-care diagnostics market, the market for wellness monitoring is nascent. As such, Gemina's approach is to work with significant customers and research counterparties to help define strong product-market matches.

Research and development

The Gemina research team continues to innovate and further develop our chemistry platform, and during 2022 the Company filed important extensions to its existing patents. These filings include the application of the chemistry to enable the use of novel materials, such as cellulose, in LFA's that are far more environmentally friendly than the current materials used worldwide. Such innovations open the prospect of developing fully bio-degradable lateral flow devices. Gemina foresees a major evolution in test design that includes the use of sustainable materials which, as far as the Company is aware, are only made possible by the versatility and strength of Gemina's chemistry platform.

The patent filings also cover Gemina's "Universal Test Platform" which allows for the creation of an extremely versatile lateral flow test, which is not only more stable, but much more responsive and adaptive to changing needs and diagnostic requirements around the world.

In May 2023 the Company announced that its proprietary surface chemistry reduced the amount of antibody required for nitrocellulose binding, a standard material used in lateral flow assays, by 75%, without affecting the limit of detection, compared to the standard physisorption methods currently used in production.

In July 2023, Gemina deployed cellulose (paper) test strips in the lateral flow assay format, a fully biodegradable, environmentally friendly alternative to the industry-standard nitrocellulose strip. The Gemina team solved this critical challenge by utilizing the Gemina Bridge molecule to anchor antibodies (and other biomolecules) to test strips made from a variety of cellulose materials, all of which are fully biodegradable alternatives to nitrocellulose. Developed in the 1800's, nitrocellulose is formed by treating cellulose with a mixture of nitric and sulfuric acids to produce a flammable compound that only degrades slowly in the environment, releasing nitric acid in the process.

Strategic partnerships and investments

Gemina has established a commercial strategy to exploit non-competitive diagnostic product development opportunities. During the second half of 2022, the Company began to nurture several relationships with parallel non-competitive global diagnostic market participants to explore mutually beneficial opportunities to deploy Gemina's platform chemistry.

On January 17, 2023, the Company made an investment in RAPIvD Ltd acquiring 19% of the outstanding shares of RAPIvD with an option to acquire the remaining 81%. Securing this strategic stake in RAPIvD was the first step in a process that aligns the Gemina chemistry platform with accelerated product feature diagnostic device designs, which Gemina plans to bring to market in the future.

The Company, pursuant to a share exchange agreement, purchased 19% of the issued and outstanding shares of RAPIvD in exchange for £259,259 in cash and the issuance of 1,086,956 common shares of the Company with a fair value of $0.52 per common share. Total consideration was valued at $994,423.

The exclusive option allows the Company to purchase all of the remaining RAPIvD shares for the following consideration:

a) £800,000 in cash;
b) the closing cash balance of RAPIvD as at the time the option is exercised;
c) the issuance of 4,347,826 common shares of the Company; and
d) earn-out payments equivalent to 25% of RAPIvD profits for each year for three years after completion of the acquisition.

This option expires on the earlier of: i) June 7, 2024 and; ii) 10 days after the Company gives notice that the acquisition would not qualify as a significant acquisition within the meaning of National Instrument 51-102.

On November 6, 2023, Gemina announced that it had appointed the global investment bank Stifel as its sole and exclusive financial advisor to the Company, as it considers strategic licensing and partnership opportunities for its breakthrough diagnostics technology.

Personnel

The focus has been and continues to be on strengthening the team with highly experienced diagnostic, clinical and strategy professionals who have proven track records of scaling companies to commercial success. Most notably:

The hiring of Brian Firth, a veteran diagnostics executive, who joined Gemina as Chief Executive Officer in September 2022.

The appointment of Dr. Mike Shannon in December 2022, as Chair of the Company's Clinical Advisory Board as the Company focuses on respiratory infections.

The appointment of Dr. Stefan Hamill as Vice President, Strategy, in January 2023. Dr. Hamill is a successful and respected sell-side analyst in the UK healthcare sector known for identifying promising technologies and business models at an early stage and working to attract growth capital for Life Science companies throughout their lifecycle.

The appointment of Dr. Bola Grace to the board of directors January 2023. Dr. Grace is a leader in the biotech/healthcare industry who has delivered award winning diagnostics to the consumer diagnostic marketplace.

The appointment of Martha Najib to the board of directors in March 2023. Ms. Najib is highly recognized and respected for her accomplishments in new product launches, sales, go-to-market, global commercialization and strategic partnerships.

Dr. Robert Porter did not stand for re-election as a director at the Company's recent AGM on May 13, 2024 and no longer holds the position of president.

Financings

Prospectus/Private Placement
During the 2023 fiscal year, the Company closed two equity offerings: a brokered, prospectus supplement offering on June 30, 2022 ("Prospectus Offering"), and a non-brokered private placement on July 11, 2022 ("Private Placement Offering"). The terms of both offerings were identical.

Under the Prospectus Offering, the Company issued 5,626,735 Units at $0.60 per Unit for gross proceeds $3,376,041 and under the Private Placement Offering the Company issued 1,536,200 Units at $0.60 per Unit for gross proceeds of $921,720.

Each Unit consisted of one common share and one warrant to purchase a common share at $0.80 with a term of 5 years from the date of closing, subject to acceleration in certain circumstances. The acceleration clause allows the Company to accelerate the expiry date of the share purchase warrants in the event that the volume weighted average trading price of the common shares on the Canadian Securities Exchange exceeds $1.20 for 10 consecutive trading days.

The aggregate gross proceeds from both offerings, $4,297,761, was allocated to share capital and reserves based on the relative fair value of the common share and the warrant. The fair value allocation to share capital was $2,458,285 and to reserves was $1,839,476. The warrants were fair valued using the Black-Scholes pricing model with the following input assumptions:

Expected life – 5 years
Risk free interest rate – 3.10-3.16%
Volatility – 107%
Dividend yield – nil

In connection with the Prospectus Offerings the Company incurred share issuance costs totalling $576,092 and issued 393,871 compensation warrants to the brokers. In connection with the Private

Placement Offering the Company incurred share issuance costs of $15,974 and issued 51,356 compensation warrants to finders.

The compensation warrants allow the holders to purchase common shares for an exercise price of $0.60 and expire five years from the date of closing. The compensation warrants were valued using a Black-Scholes pricing model with the following input assumptions:

Expected life – 5 years
Risk free interest rate – 3.10-3.16%
Volatility – 107%
Dividend yield – nil

The aggregate fair value of the compensation warrants was $205,362 and was recorded as share issuance costs and presented as a reduction in share capital and an increase in reserves.

Warrant exercises
In March 2023, 4,000,000 outstanding warrants were exercised for cash proceeds to the Company of $600,000.

Private placement
On March 27, 2023 the Company completed a private placement offering issuing 3,472,994 common shares at a price of $0.75 per Common Share for gross proceeds of $2,604,745. The Company paid $111,352 in expenses related to this financing, including finder's fees of $95,413 to an eligible finder in connection with the offering.

Short term loan
On October 10, 2023, the Company entered into a short-term, secured, loan agreement with two creditors. Under the terms of the agreement the Company received aggregate proceeds of $200,000 from the creditors, re-payable on June 30, 2024. The loan is secured by the assets of the Company.

As interest for the loan, the Company is required to issue an aggregate 100,000 common shares to the creditors on repayment of the loan. On receipt of the loan, the Company recognized an obligation to issue shares of $45,000 and a corresponding deferred financing expense based on the trading price of the Company's common shares on the date the funds were received. As at January 31, 2024, the Company had recognized $19,261 as a finance expense and the remaining amount will be recognized over the term of the loan.

Private placement of convertible notes
On March 18, 2024, the Company raised gross proceeds of $910,000 under its non-brokered private placement of unsecured convertible notes ("Notes") of the Company. The Notes have a maturity date (the "Maturity Date") of 12 months from the date of issuance, unless earlier converted in accordance with the terms of the Notes. At the option of the Note holder, any principal amount (the "Principal") may be converted into common shares in the capital of the Company ("Common Shares") at a price per Common Share equal to:

(i) $0.50 (the "Standard Conversion Price"); or

(ii) in the event the Company completes an equity financing prior to the maturity date (the "Future Offering").

The Note holder may elect to convert the outstanding principal into common shares at any time prior to the maturity date. If the Note holder elects not to convert the outstanding principal into common shares until after completion of the Future Offering, the conversion price will be equal to the Standard Conversion Price, subject to an 8% increase every 30-days up to a maximum price that is equal to the issue price (the "Future Issue Price") of the securities offered in the Future Offering. If at any time after completion of the Future Offering, the 10-day volume-weighted-average-price of the common shares is equal to or greater than the price which is 10% higher than the Future Issue Price, there will be a forced conversion of principal into common shares at the Future Issue Price.

Interest on the Notes will accrue at a rate of 10% per annum, payable in cash on the maturity date or in the case of conversion of the entire principal, at the time of conversion. The Note holder may elect to have the interest repaid in cash or converted into common shares at the applicable conversion price, in accordance with the terms of the Note and by providing the Company with written notice of such election.

The Company intends to use the proceeds from the Private Placement for general working capital and corporate purposes.

All securities issued in connection with the private placement will be subject to a four-month hold period from the date of issue under applicable Canadian securities laws, in addition to such other restrictions as may apply under applicable securities laws of jurisdictions outside Canada.

On May 3, 2024, the Company received proceeds of $81,777 following the exercise of 181,727 warrants.

3 Selected Financial Information

The financial information reported here-in has been derived from the consolidated financial statements prepared in accordance with IFRS as issued by the IASB. The Company uses the Canadian dollar as its functional and presentation currency. From time to time, the Company may deal with several research and development contractors, consultants and suppliers in other countries. Our financial results may be subject to fluctuations between the Canadian dollar and other international currencies.

The table below sets forth unaudited quarterly results prepared by management for the eight previous quarters to January 31, 2024:

	January 31, 2024	October 31, 2023	July 31, 2023	April 30, 2023
Research and development expenses	$534,174	$278,020	$883,350	$896,644
General and administration expenses	$504,370	$593,966	$694,771	$812,233
Finance expense	($276,872)	$296,133	-	-
Loss and comprehensive loss	$761,672	$1,168,119	$1,578,121	$1,708,877

Basic and diluted loss per share	$0.01	$0.02	$0.02	$0.02

	January 31, 2023	**October 31, 2022**	**July 31, 2022**	**April 30, 2022**
Research and development expenses	$1,312,374	$691,794	$1,567,560	$577,975
General and administration expenses	$643,683	$559,784	$422,653	$203,200
Finance expense	-	-	-	-
Loss and comprehensive loss	$1,956,057	$1,251,578	$1,990,213	$781,175
Basic and diluted loss per share	$0.03	$0.02	$0.03	$0.01

The following table represents selected financial information for the Company's quarters and years ended January 31, 2024 and January 31, 2023.

Selected Consolidated Statement of Loss and Comprehensive Loss:

	Quarter ended January31, 2024	**Quarter ended January 31, 2023**	**Year ended January 31, 2024**	**Year ended January 31, 2023**
Loss and comprehensive loss	($761,672)	($1,956,057)	($5,216,789)	($5,979,027)
Weighted average number of shares Basic and diluted	72,453,309	60,190,253	72,453,309	60,190,253
Basic and diluted loss per share	($0.01)	($0.03)	($0.07)	($0.10)

The Company incurred a loss and comprehensive loss for the quarter ended January 31, 2024, of $761,672 compared to a loss and comprehensive loss of $1,956,057 in the corresponding period of the prior period. The decreased loss reflects decreased net operating expenses as described below.

The Company incurred a loss and comprehensive loss for the year ended January 31, 2024, of $5,216,789 compared to a loss and comprehensive loss of $5,979,027 in the corresponding period of the prior period.

Selected Consolidated Statements of Financial Position:

	January 31, 2024 $	January 31, 2023 $
Cash	990	83,095
Current assets	92,667	562,861
Total assets	1,456,288	1,874,984
Current liabilities	2,835,500	1,748,473
Total liabilities	3,041,482	1,946,795
Total shareholders' equity (deficiency)	(1,585,194)	(71,811)

During the year ended January 31, 2024, cash decreased to $990 (January 31, 2023 - $83,095) primarily reflecting funds used in operations offset by private placements during the year.

Results of Operations:

	Three months ended January 31, 2024	Three months ended January 31, 2023	Year ended January 31, 2024	Year ended January 31, 2023
	$			
Operating expenses				
Research and development	534,174	1,312,374	2,592,188	4,149,707
General and administrative	504,370	643,683	2,605,340	1,829,320
Finance expense	(276,872)	-	19,261	-
Loss and comprehensive loss	(761,672)	(1,956,057)	(5,216,789)	(5,979,027)

Operating expenses - Research and Development

Our research and development expenses consist primarily of personnel compensation, research and development contractors, materials and supplies, and intellectual property expenses net of grant funding.

Research and development expenses were $534,174 for the quarter ended January 31, 2024 compared to $1,312,374 for the corresponding period last year. The decrease in research and development expenses related primarily to reduced spending on contract research, R&D contractors and R&D materials. The Company reduced its spending to conserve cash until additional funds are available.

Research and development expenses were $2,592,188 (net of $nil government assistance) for the year ended January 31, 2024, compared to $4,149,707 (net of $311,326 government assistance) in the prior year period. The decrease in research and development expenses related primarily to reduced spending on R&D contractor fees and contract research.

The Company expects to continue pursuing the following ***activities as funding allows***:

- development of our first molecular assay in TB with our collaborator ReadyGo Geo
- investigation of potential wellness applications utilizing Gemina Surface Chemistry
- investigation of Gemina Surface Chemistry in conjunction with affimers as an alternative to antibody based tests.

- development of protein production technologies and manufacturing processes.

Operating expenses - General and Administrative

Our general and administration expenses consist primarily of personnel expenses, professional fees, G&A contractors, office related expenses and share-based compensation.

General and administration expenses for the quarter ended January 31, 2024, were $504,370 compared to $643,683 for the corresponding quarter of the prior year.

General and administration expenses for the year ended January 31, 2024, were $2,605,340 compared with $1,829,320 for the prior year. The increase in the current year expenses reflects higher G&A contractor fees, salaries and benefits, stock-based compensation and investor outreach costs.

In its up coming fiscal year, the Company expects is general and administrative expenses will be consistent with current the current year.

4 Liquidity, Capital Resources and Outlook

	January 31, 2024 $	January 31, 2023 $
Cash	990	83,095
Working capital (deficit)	(2,742,833)	(1,185,612)
Shareholders' equity (deficiency)	(1,585,194)	(71,811)

As at January 31, 2024, the Company had cash of $990 and net working capital (deficit) ($2,742,833) of compared to cash of $83,095 and net working capital (deficit) of ($1,185,612) at January 31, 2023. The decrease in the cash balance reflects the cash used in operations partially offset by the cash from financing activities.

The decrease in working capital reflects primarily cash used in operations and an increase in accounts payable and accrued liabilities related to manufacturing process development required for full scale manufacturing.

Management of Cash Resources

The Company uses cash flow forecasts to estimate cash requirements for the ensuing twelve-month period. Based on these requirements, we seek to raise equity capital as required to provide the necessary financial resources for operations, ideally for a minimum of twelve months. The timing of equity financings will depend on market conditions and the Company's cash requirements. The Company's cash flow forecasts are updated on a regular basis to reflect actual cash inflows and outflows so as to monitor the requirements and timing for additional financial resources.

The Company monitors opportunities to raise equity capital and/or secure additional funding through non-dilutive sources such as government grants and additional license agreements. However, it is possible that our cash and working capital position may not be enough to meet our business objectives in the event of unforeseen circumstances.

Cash Flows for the Year Ended January 31, 2024

Cash flows from financing activities

Cash from financing activities was $3,202,929 for the year ended January 31, 2024, compared to $3,941,359 in the prior year period. In the current period, the cash from financing activities relates primarily to the net proceeds of $3,093,394 from the equity offerings completed during the year. See “Recent Developments - Financing”.

Cash flows from investing activities

Cash flow used in investing activities was $41,354 primarily related to the purchase of equipment, compared to cash used investing activities in the prior year of $505,069 primarily for the investment in RAPIvD (See “Recent Developments – Strategic partnerships and investment) and the purchase of equipment.

Cash flows used in operations

Cash flows used in operations for the year was $3,243,682 compared to $4,509,583 in the prior year. In the current year, cash flow used in operations primarily reflect the net loss and comprehensive loss discussed above, adjusted for non-cash items, primarily the add back of share-based compensation and finance expense and the addition of changes in non-cash working capital because of higher accounts receivable and lower accounts payable and accrued liabilities balances at January 31, 2024.

5 Going Concern

The ability of the Company to continue as a going concern is dependent on its ability to generate future cash flows from operations and obtain additional financing. As at January 31, 2024, the Company had a working capital deficit of $2,742,833 (January 31, 2023 – deficit of $1,185,612), had not yet achieved profitable operations and had accumulated a deficit of $16,764,882 since its inception and will require additional funding to maintain its operations. These events and conditions indicate that a material uncertainty exists that may cast significant doubt on the Company’s ability to continue as a going concern.

The Company completed: a private placement March 27, 2023, for gross proceeds of $2,604,746; closed a short-term loan for $200,000 on October 10, 2023 and a private placement of convertible notes for gross proceeds of $910,000 on March 18, 2024 (see “Recent developments – financing”) and is actively seeking additional financing. In the meantime, the Company continues to defer payments to its vendors to manage its liquidity.

The consolidated financial statements do not give effect to any adjustments, which would be necessary should the Company be unable to continue as a going concern and, therefore, be required to realize its assets and discharge its liabilities in other than the normal course of business and at amounts different from those reflected in the accompanying consolidated financial statements. These adjustments could be material.

There are many external factors that can adversely affect general workforces, economies and financial markets globally. Examples include, but are not limited to, the COVID-19 global pandemic and political conflict in other regions. It is not possible for the Company to predict the duration or magnitude of adverse results of such external factors and their effect on the Company’s business or ability to raise funds.

6 Long-Term Obligations and Other Contractual Commitments

The Company has entered into a lease agreement with Thermo Fisher Financial Services Inc., with respect to laboratory equipment. The lease commenced on September 1, 2021, with monthly lease payments of $307 until August 1, 2024.

The Company has entered into a sublease agreement with Anodyne Chemistries Inc, a related party, with respect to its laboratory in Burnaby, British Columbia. The lease commenced on October 1, 2022, with monthly lease payments of $5,291 until September 30, 2024, $5,452 from October 1, 2024 to September 30, 2026 and $5,612 from October 1, 2026 to September 30, 2027.

The Company has entered into a lease agreement with Omnimar Enterprises Inc, to provide additional space for its laboratory in Burnaby, British Columbia. The lease commenced on July 1, 2023, with monthly lease payments of $3,414 until June 30, 2025 and $3,517 from July 1, 2025 to June 30, 2026.

7 Transactions with Related Parties

During the years ended January 31, 2024, and 2023, the Company entered into the following transactions with related parties:

- Paid or accrued salaries and benefits of $250,000 (2023 - $104,167) to the Chief Executive Officer ("CEO") of the Company and recognized share-based compensation of $431,174 (2023 - $205,977) in relation to stock options granted to the CEO.
- Paid or accrued professional fees of $66,103 (2023 - $57,139) to a company controlled by the Chief Financial Officer ("CFO") of the Company and recognized share-based compensation of $nil (2023 - $8,820) in relation to stock options granted to the CFO.
- Paid or accrued salaries and benefits of $150,000 (2023 - $155,661) to the Chief Technology Officer ("CTO") and director of the Company and recognized share-based compensation of $12,009 (2023 - $26,882) in relation to stock options granted to the CTO and director.
- Paid or accrued contractor fees of $97,875 (2023 - $89,250) to a company controlled by a director of the Company.
- Paid or accrued contract research and contractor fees of $493,139 (2023 - $103,212) to a company controlled by the President and director of the Company.
- Recognized share-based compensation of $148,446 (2023 - $39,809) in relation to stock options granted to directors of the Company.

As at January 31, 2024, $6,343 (January 31, 2023 - $5,628) was included in accounts payable and accrued liabilities owing to the CTO and director of the Company in relation to accrued wages and reimbursement of expenses.

As at January 31, 2024, $286,440 (January 31, 2023 - $239,279) was included in accounts payable and accrued liabilities owing to a company owned by the President and director of the Company in relation to contract research and reimbursement of expenses.

As at January 31, 2024, $66,512 (January 31, 2023 - $20,970) was included in accounts payable and accrued liabilities owing to the CEO of the Company in relation to reimbursement of expenses.

As at January 31, 2024, $48,479 (January 31, 2023 - $17,435) was included in accounts payable and accrued liabilities owing to the company controlled by the CFO of the Company in relation to professional fees.

As at January 31, 2024, $57,417 was included in accounts payable and accrued liabilities owing to a director of the Company in relation to reimbursement of expenses $1,542 (January 31, 2023 - $nil) and director compensation $55,875 (January 31, 2023 - $18,000).

As at January 31, 2024, $91,765 (January 31, 2023 - $109,003) was included in accounts payable and accrued liabilities in relation to advisory fees owed to a company controlled by a director of the Company.

As at January 31, 2024, $71,509 was included in accounts payable and accrued liabilities owing to directors of the Company in relation to director compensation $63,750 (January 31, 2023 - $30,054) and reimbursement of expenses $7,759 (January 31, 2023 - $nil).

As at January 31, 2024, $32,222 was included in accounts payable and accrued liabilities (January 31, 2023 - $4,279) due to EcoMine, a majority shareholder of the Company.

As at January 31, 2024, $14,529 was included in receivables (January 31, 2023 - $14,299) due from Brokkr Mineral Resources Corporation (formerly 3R Circuits Solutions Corp.), a company controlled by directors of the Company.

As at January 31, 2024, $15,898 was included in accounts payable and accrued liabilities (January 31, 2023 - $30,604) due from Anodyne Chemistries Inc., a company controlled by directors of the Company.

As part of the equity offerings during the year ended January 31, 2023, officers and directors of the Company purchased 155,000 units for aggregate proceeds of $85,425 and a company that controls EcoMine purchased 3,333,300 units for gross proceeds of $1,999,980.

8 Off Balance Sheet Arrangements

The Company has no material undisclosed off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on our results of operations or financial condition.

9 Critical Accounting Estimates and Judgments

The preparation of financial statements in compliance with IFRS Accounting Standards requires the Company's management to make certain estimates and assumptions that they consider reasonable and realistic. Despite regular reviews of these estimates and assumptions, based in particular on past achievements or anticipations, facts and circumstances may lead to changes in these estimates and assumptions which could impact the reported amount of the Company's assets, liabilities, income and expenses. Actual results may differ from those estimates.

Significant judgements

Level of control or influence over investments - The accounting for investments in other companies can vary depending on the degree of control and influence over those other companies. Management is required to assess at each reporting date the Company's control and influence over these other companies. Management has used its judgment to determine which companies are controlled and require consolidation and those which are significantly influenced and require equity accounting. As at January 31, 2024 the Company's only investment is in RAPIvD which it has determined it does not have significant influence or control and has therefore accounted for it as an investment at FVOCI.

Research versus development expenses – The accounting for research and development expenses differs with research expenses recognized in the statements of loss and comprehensive loss during the period incurred, whereas development expenses are recognized as an intangible asset in the statements of financial position when incurred. The Company's operations, from time to time, may include both research and development activities. Management has used judgement to determine whether activities should be recognized as research expenses or as an intangible asset for development expenses. To date, management has determined that its activities are research activities and has not incurred any expenses that would qualify as recognition as an intangible asset in the statements of financial position.

Significant estimates

Share-based compensation - The Company generally utilizes the Black-Scholes option pricing model to determine the fair values of the share-based payments and warrants issued in unit offerings. The Company uses significant estimates in the evaluation of the input variables in the Black-Scholes calculation which includes: risk free interest rate, expected stock price volatility, expected life and expected dividend yield.

Fair value of RAPIvD investment - The Company has elected to classify its investment in RAPIvD as FVOCI. In determining the fair value, the Company utilizes unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. According, management uses significant estimates in the evaluation of RAPIvD's fair value.

10 Financial Instruments and Financial Risk Management

Fair value

Financial instrument disclosures establish a fair value hierarchy that requires the Company to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The Company primarily applies the market approach for recurring fair value measurements. This section describes three input levels that may be used to measure fair value:

Level 1 – unadjusted quoted prices in active markets for identical assets or liabilities. An active market for the asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide information on an ongoing basis.

Level 2 – quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying values of cash, receivables, deposits, accounts payable and accrued liabilities and short-term loan approximate their fair values due to their short-term maturity. The carrying value of lease liabilities approximate its fair value due to being discounted with a rate of interest that approximates market rates. The Company's investment in RAPIvD is measured at fair value using Level 3 inputs.

For Level 3 inputs, specific valuation techniques are used to fair value financial instruments, specifically those that are not quoted in an active market, as such the Company utilized a market approach:

- The use of quoted market prices in active or other public markets.
- The use of most recent transactions of similar instruments.
- Changes in expected technical milestones of the investee.
- Changes in management, strategy, litigation matters or other internal matters.
- Significant changes in the results of the investee compared with the budget, plan, or milestone.

As at January 31, 2024, the Company's private company investment of $994,423 (2023 - $994,423) was recorded at fair value which was equivalent to the amount paid to acquire the investment. There were no transfers between levels 2 and 3 during the year ended January 31, 2024 and 2023.

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices, will affect the Company's income or valuation of its financial instruments.

a) Foreign exchange risk

Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Company's foreign exchange risk is not considered significant.

b) Interest rate risk

The Company has cash balances and no interest-bearing debt. The interest rate risk on cash is not considered significant.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in raising funds to meet cash flow requirements associated with financial instruments. As indicated in Note 1, a material uncertainty exists that may cast significant doubt regarding the Company's ability to continue as a going concern.

The Company continues to manage its liquidity risk by monitoring its cash flows regularly, comparing actual results with budgets and future cash requirements.

The following table summarizes the relative maturities of the financial liabilities of the Company:

	Maturity less than one year	Maturity greater than one year
	$	$
Accounts payable and accrued liabilities	2,556,156	-
Short-term loan	200,000	-
Lease liability	79,344	205,982
Total	2,835,500	205,982

Credit risk

Credit risk is risk of financial loss to the Company if a counterparty to a financial instrument fails to meet its contractual obligations. The Company's cash is held in large Canadian financial institutions and its receivables mostly consist of amounts due from the Canadian government. As such, the Company determined that it is not exposed to significant credit risk.

11 Risks and Uncertainties

The primary risk factors affecting the Company are set forth in our Annual Information Form. A copy of our Annual Information Form is available on SEDAR at www.sedar.com.

12 Outstanding Share Capital

As at the date of this MD&A, the Company had the following common shares, warrants and stock options outstanding:

Common shares

There were 73,325,878 common shares issued and outstanding.

Warrants

Number of Warrants	Exercise Price	Expiry Date
3,882,562	$0.45	July 16, 2024*
5,626,735	$0.80	June 30, 2027**
393,871	$0.60	June 30, 2027**
1,536,200	$0.80	July 11, 2027**
51,356	$0.60	July 11, 2027**
11,490,724		

* The share purchase warrants are subject to an acceleration clause that allows the Company to accelerate the expiry date of the share purchase warrants in the event that the volume weighted average trading price of the common shares on the Canadian Securities Exchange exceeds $1.00 for 10 consecutive trading days.

** The share purchase warrants are subject to an acceleration clause that allows the Company to accelerate the expiry date of the share purchase warrants in the event that the volume weighted average trading price of the common shares on the Canadian Securities Exchange exceeds $1.20 for 10 consecutive trading days.

Stock options

Exercise Price	Number Outstanding	Number Exercisable	Expiry Date
$			
0.30	1,850,000	1,850,000	February 19, 2031
0.30	250,000	250,000	April 1, 2027
0.45	440,000	293,304	September 10, 2026
0.45	200,000	200,000	September 10, 2026
0.45	200,000	200,000	September 14, 2026
0.45	100,000	100,000	November 17, 2026
0.45	250,000	83,333	March 9, 2027
0.60	2,000,000	1,000,000	September 6, 2032
0.54	50,000	50,000	January 25, 2028
0.60	285,000	260,000	April 1, 2027
0.46	300,000	-	April 5, 2029
	5,925,000	4,286,637	

13 Additional Information

Additional information about the Company, including the Annual Information Form, is available on SEDAR+ at www.sedarplus.ca.