SUMMARY FINANCIAL INFORMATION AND MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

June 2, 2021

Statement of Management Responsibility

The following "Summary Financial Information and Management's Discussion and Analysis of Financial Condition and Results of Operations" ("MD&A") for the three- and six-month periods ended April 30, 2021 and April 30, 2020 was prepared by management of Avivagen Inc. ("Avivagen" or the "Corporation") and approved by the Board of Directors on June 2, 2021.

Management is responsible for ensuring that processes are in place to provide sufficient knowledge to support the representations made in these filings. The Audit Committee and Board of Directors provide an oversight role with respect to all public financial disclosures by the Corporation, and have reviewed this MD&A and the accompanying unaudited interim financial statements.

The Chief Executive Officer (the "CEO"), and the Chief Financial Officer (the "CFO"), in accordance with National Instrument 52-109, have both certified that they have reviewed the unaudited interim financial statements and this MD&A (the "filings") and that, based on their knowledge having exercised reasonable diligence, that:

i) the filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by the filings; and

ii) the financial statements together with the other financial information included in the filings fairly present in all material respects the financial condition, financial performance and cash flows of the Corporation, as of the date of and for the period presented in the filings.

Investors should be aware that inherent limitations on the ability of certifying officers of a venture issuer to design and implement, on a cost-effective basis, the disclosure controls and procedures and internal control over financial reporting as defined in National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* (NI 52-109) will result in additional risks to the quality, reliability, transparency and timeliness of interim filings, annual filings, and other reports provided under securities legislation.

In contrast to the certification required for non-venture issuers under NI 52-109, the Corporation does not include representations relating to the establishment and maintenance of disclosure controls and procedures and internal control over financial reporting, as defined in NI 52-109. In particular, the CEO and CFO filing this MD&A are not making any representations relating to the establishment and maintenance of:

i) Controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the Corporation in its filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and/or reported within the time periods specified in securities legislation; and

ii) A process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's International Financial Reporting Standards ("IFRS") reporting.

This MD&A discusses material changes in the Corporation's financial condition, results of operations and cash flows for the three- and six-month periods ended April 30, 2021. Such discussion and comments on liquidity and capital resources should be read in conjunction with the unaudited interim financial statements dated April 30, 2021 and related notes which have been prepared in accordance with IFRS. The reader should also refer to the Corporation's Annual Information Form dated December 15, 2020, Risk Factor section (the "AIF Risk Factors"), which risk factors are incorporated herein by reference. To the extent there is any conflict between the AIF Risk Factors and risks identified in this MD&A, the risks identified in this MD&A will govern.

This discussion and the comments contained hereunder include both historical information and forward-looking information. Statements including expressions such as "anticipate", "believe", "estimate", "expect", "foresee", "intend", "plan", "will", and similar expressions are forward-looking statements. The forward-looking statements are not historical facts but reflect the Corporation's current assumptions and expectations regarding future events. The forward-looking information, which is generally information stated to be anticipated, expected, or projected by the Corporation, involves known and unknown risks, uncertainties and other factors that may cause the actual results and performance of the Corporation to be materially different from any future results and performance expressed or implied by such forward-looking information.

Forward-looking statements in this MD&A include, without limitation:

- Statements about the Corporation's expectations with respect to future revenues, expenses, assets, and liabilities;
- The Corporation's intention to pursue additional funds through government funding, long-term debt or equity financings;
- The ability of the Corporation's products to reduce the development of antibiotic resistant pathogens that are widely thought to occur as a result of food animal production and can threaten human health or to replace antibiotics in food-animal applications;
- The expectation that the Corporation will expand its patent portfolio;
- The Corporation's expectations as to the potential size of various markets;
- The ability to market and sell human supplements or applications;
- The Corporation's long term goals and expectations with respect to its products and the application thereof;
- The Corporation's planned efforts with respect to regulatory approval in additional jurisdictions, the expected timing of such approval processes and the funding required for such processes;
- The Corporation's plans to expand into additional geographic markets;
- The continuation of and the anticipated success of the Corporation's joint venture with Mimi's Rock Corp. and the benefits to the Corporation anticipated therefrom;
- The impacts of the COVID-19 pandemic on current and future operations; and
- The expected impacts on the Corporation of future IFRS accounting pronouncements.

In addition to the AIF Risk Factors, potential risks and uncertainties include, without limitation:

- The uncertainties inherent in the early revenue stage of the Corporation and the development of biotechnology products for use in animals and humans;
- The ability to continue as a going concern;
- The need for significant additional funding;
- Extensive government regulation of the Corporation's products;
- The ability of the Corporation to obtain third-party regulatory support;
- The success of Corporation-sponsored and customer-sponsored product trials;
- The ability of the Corporation to obtain and enforce patent protection;
- The risk of product liability claims and product recalls;
- The Corporation's sensitivity to unfavourable publicity and consumer perception;
- The political and legal risk associated with the Corporation's major markets being located outside of Canada;
- The Corporation's dependence on international advisors and consultants;
- The volatility of the Corporation's share price;
- The Corporation's susceptibility to global economic stress;
- Rapid developments in technology and acquisition of future technology, including developments by competitors;
- The introduction of products to market;
- Protection of intellectual property;
- Dependence on key employees;
- Dependence on partners for development, regulatory and commercial advancement of products;
- Significant portions of revenue from a small number of clients;
- Reliance on a sole source for manufacturing;
- Reliance on third parties for marketing and distribution of products;
- Outbreaks of virus or disease that impact livestock animals worldwide could have a negative impact on the Corporation and its customers; and
- Orders for the Corporation's products may be cancelled or not fulfilled for many reasons.

The COVID-19 pandemic has spread across the globe and is impacting worldwide economic activity. Conditions surrounding the pandemic continue to rapidly evolve and government authorities have implemented emergency measures to mitigate the spread of the virus. The Corporation's business, operations and financial condition could be materially adversely affected by the COVID-19 pandemic or the outbreak of other epidemics, pandemics or other health crises. However, as conditions surrounding the pandemic continue to evolve, the Corporation may in the future experience unexpected negative impacts from the COVID-19 pandemic. Such impacts could include, with respect to its operations, its suppliers' operations and its customers' operations, forced closures, mandated social distancing, isolation and/or quarantines, impacts of declared states of emergency, public health emergency and similar declarations and could include other increased government regulations, a material reduction in demand for the Corporation's products, reduced sales, higher costs for new capital, licencing delays, increased operating expenses, delayed performance of contractual obligations, product shipping delays, and potential supply and staff shortages, all of which would be expected to negatively impact the business, financial condition and results of operations of the Corporation and its ability to satisfy its obligations. The risks to the Corporation of such public health crises also include risks to employee health and safety and a slowdown or temporary suspension of operations in the Corporation's facilities or a supplier's facilities. Should an employee or visitor in any of the Corporation's facilities or a supplier's facilities become infected with a serious illness that has the potential to spread rapidly, this could place the Corporation's workforce at risk.

Corporation Overview

Avivagen is domiciled in Canada and is located at 100 Sussex Drive, Ottawa, Ontario, Canada K1A 0R6. The Corporation is a life-sciences company that is developing and commercializing products that help support animal health, including antibiotic alternatives in livestock feeds. Avivagen discovered the source of β-carotene's overlooked, previously difficult-to-reproduce ability, independent of β-carotene's vitamin A activity, to support an animal's own health defences. The Corporation's unique proprietary technology, known as OxC-beta™ (fully-oxidized beta-carotene) Technology, is based on Avivagen's utilization of the propensity of the β-carotene micronutrient to naturally undergo oxidation to generate a mixture of a polymeric compound and breakdown oxidation products, known as norisoprenoids, that have flavour and fragrance properties. This previously unrecognized mix of a polymeric compound and norisoprenoids, possesses a unique combination of health benefits that accounts for β-carotene's activity beyond being a source of vitamin A.

Avivagen has further discovered that the health benefits of the OxC-beta™ Technology afford the Corporation the opportunity to provide its lead product, OxC-beta™ Livestock, as an entirely new and novel, non-drug alternative product for in-feed antibiotics for livestock that are used widely for growth promotion and disease prevention. The use of antibiotics as growth promoters in the feedstock of cattle, swine and poultry has been banned for over 10 years in Europe. Their use has more recently become a source of urgent concern to health authorities, governments and consumers, leading them to demand changes now being supported by leading international food processors, retailers and restaurant chains. The OxC-beta™ Livestock product has completed multiple trials as a non-antibiotic feed additive that successfully helps optimize health and productivity in swine, poultry and dairy cattle. By enabling the removal of antibiotics from feeds, the OxC-beta™ Livestock product is expected to help reduce the development of antibiotic resistant pathogens that are widely thought to occur as a result of antibiotic use in food animal production and can threaten human health. Significant potential commercial opportunities also exist where in-feed antibiotic use is either precluded, such as for dairy cattle during lactation, or is not applicable, such as for periparturient sows.

The health benefits observed in livestock have given rise to one of Avivagen's goals, which is to access the human supplement markets for OxC-beta™ Technology.

A major milestone for the Corporation was the publication in April 2016 in the American Chemical Society's Journal of Agricultural and Food Chemistry of a peer-reviewed scientific publication "Discovery and Characterization of Carotenoid-Oxygen Copolymers in Fruits and Vegetables with Potential Health Benefits". The paper reported the important discovery that counterparts of fully oxidized beta carotene ("OxBC"), containing the β-carotene-oxygen copolymer and norisoprenoids of OxC-beta™ Livestock, occur naturally in a variety of foods at levels that are expected to beneficially affect health. This new knowledge is of major importance to the Corporation in gaining regulatory acceptance throughout the world for the use of the Corporation's OxC-beta™ Technology in animals and humans. The discovery also has provided the Corporation with the opportunity to expand its patent portfolio by filing for intellectual property protection for the natural forms and counterparts of OxBC.

The Corporation believes that OxC-beta™ Livestock in its food-animal applications has the potential, by supporting the animals' own immune system, to replace antibiotics used for growth promotion and in situations in which antibiotic use is precluded. Field trials have established that the product helps maintain optimal health and, in this regard, thereby provides similar benefits to in-feed antibiotics. The Corporation is pursuing additional sales of OxC-beta™ Livestock in species such as poultry, swine and dairy cattle where data can be rapidly generated with a focus on jurisdictions with high motivation to eliminate the use of antibiotics and/or that have lower regulatory hurdles for products of this nature. In pursuit of such sales, the Corporation has conducted confirmatory trials with major livestock integrators and exploratory trials with qualified universities or research institutes. Identities of some trial collaborators and certain summary trial results have been disclosed in Avivagen's news releases.

Details on the volume in kilograms (kg) of OxC-beta™ Livestock 10% premix sold according to the geographic region of revenues are as follows:

Volumes of OxC-beta™ Livestock sold by country:	**6 months ended April 30, 2021**	**12 months ended October 31, 2020**	**12 months ended October 31, 2019**
Philippines	2,000 kg	7,250 kg	6,000 kg
Mexico	1,200 kg	2,450 kg	-
Thailand	300 kg	350 kg	-
Taiwan	355 kg	79 kg	200 kg
Brazil	-	125 kg	-
Malaysia	-	110 kg	-
China	-	-	100 kg
Total sales volumes (OxC-beta™ Livestock)	**3,855 kg**	**10,364 kg**	**6,300 kg**
Total revenues (OxC-beta™ Livestock)	$ 418,265	$ 1,148,967	$ 896,345
Total revenues (companion animal)	$ 3,336	$ 28,890	$ 81,106
Total revenues	**$ 421,601**	**$ 1,177,857**	**$ 977,451**

OxC-beta™ Livestock

The Corporation believes that the total global animal feed production in Avivagen's target species of poultry, swine and cattle to which OxC-beta™ Livestock could be added is approximately 1 billion tons[1]. Asia, the Corporation's target market for initial commercialization, is the largest single region representing some 35% of total world animal feed consumption.

In February 2020, the Corporation signed a sales and distribution agreement with INPHILCO, Inc., a corporation in the Philippines. This agreement does not replace the current and ongoing relationship Avivagen has with UNAHCO, Inc.

In June 2020, the Corporation signed a marketing and distribution agreement with Meyenberg International Group, a corporation in Mexico. The marketing activities under this agreement have resulted in certain sales and purchase orders with and from Meyenberg International Group for their clients in Mexico.

In February 2019, the Corporation signed a sales and distribution agreement with CSA Animal Nutrition ("CSA"), an entity based in the United States. The agreement granted an exclusive right to CSA to distribute and sell OxC-beta™ Livestock for swine, poultry, and dairy cattle within the United States. On May 7, 2021, the Corporation terminated this agreement.

Registration of OxC-Beta™ Livestock

In all major markets in which the Corporation plans commercial operations there is a regulatory requirement prior to offering OxC-beta™ Livestock for sale. There is very little consistency, other than proof of efficacy and safety, for regulatory filings among countries, which necessitates the Corporation to custom prepare a registration dossier for each market that it wishes to enter. The filing of the registration dossiers could involve various studies and trials, which entail various costs.

The review time before regulators confirm no objection to sale can range from one to several years, depending on the country and registration process required. Due to the uncertain nature, extent and timing of the regulatory process in each country, there is no guarantee that the Corporation can register in all countries within the time frames projected.

Avivagen has, as of the date of this report, received approval for sale of OxC-beta™ Livestock for major livestock species, including poultry, swine, and cattle where appropriate, in New Zealand, the Philippines, Malaysia, Brazil, Mexico, Australia, Taiwan, and Thailand.

[1] [1]*Alltech 2019 Annual Global Feed Survey, ALLTECH, Nicholasville, Kentucky, USA 40356*

Avivagen has self-affirmed its Generally Regarded As Safe (GRAS) status for OxC-beta™ Livestock, which permits sales of the product in the U.S. This action by Avivagen is based on the positive opinion of a panel of independent experts assembled to evaluate the safety and efficacy of OxC-beta™ Livestock.

Self-affirmation of GRAS provides federal level approval for sale of OxC-beta Livestock in the U.S. However, many individual states require either an AAFCO (American Association of Feed Control Officials) definition for OxC-beta™ Livestock or GRAS with FDA notification of no objection for sales within the particular states. Application for GRAS with Notification is in progress.

Registration activity is ongoing in several Asian countries, such as South Korea, China, and Vietnam, as this area of the world has been in the forefront in reducing antibiotic use in food animals and has a high demand for livestock production. A number of these Asian countries export poultry and pork to countries in the European Union, which has a policy of no antibiotics in food animals.

Regulatory approvals in China, Canada, the European Union, and Latin America continue to be priorities for Avivagen. To help guide the Corporation through the regulatory process, regulatory consultants have been engaged. Consultants have been engaged for the Chinese, Latin American, and Canadian markets. The regulatory requirements for OxC-beta™ Livestock in China are being addressed through partnerships with a Chinese company and consultants which will be coordinating the submission on behalf of the Corporation. The anticipated approval time for China is approximately one to two years. A consultant has been engaged to assist the Corporation with registration activities in Costa Rica, Peru, Colombia, Argentina, and Uruguay. Regulatory activities are underway in other markets, including Canada, with a time frame of one to several years.

The timing and cost of regulatory registration can be very significant, and the Corporation anticipates requiring additional funds to support the above regulatory registration process. The Corporation will attempt to supplement the cost from sales in the countries for which it is registered to date, but additional funding by way of equity and or debt will be required.

Companion Animal Products

For companion animals, the Corporation has created a branded line of OxC-beta™ Technology product, Vivamune™ Health Chews, intended to improve or maintain quality of life in companion animals. This product is in a class of non-drug nutritional supplements for the United States, which are regulated by the United States National Animal Supplement Council (NASC).

In July 2018, the Corporation received regulatory approval for fully oxidized beta carotene, which will allow the marketing and sale in Canada of Vivamune and other companion animal products containing OxC-beta™ Technology.

On June 13, 2019, the Corporation entered into a Joint Venture agreement with Mimi's Rock Corp. for the companion animal market. Under the terms of the agreement, Avivagen will supply its proprietary OxC-beta™ Technology and Mimi's Rock Corp. will market and sell the product as Dr. Tobias™ All-in-One Dog Chews through its e-commerce platform and online global channels. This joint venture will be the exclusive channel through which Avivagen sells nutritional supplements for cats and dogs online. All online sales will be conducted through a corporation jointly owned by the Corporation and Mimi's Rock Corp. The profits or losses will be shared equally between the two companies.

Human Health Products

In March 2020, the Corporation announced its intent to accelerate its long-standing plans to enter into the human use market in anticipation of a general need for novel immune-supporting supplements in relation to the COVID-19 pandemic. The Corporation retained the services of Bloom Burton & Co.'s strategic consultancy group in order to optimize the launch of the product into the U.S. market, initially, including confirming the regulatory path, commercial strategy and timing. On January 25, 2021, the Corporation launched its human use product through its existing joint venture with Mimi's Rock Corp. Avivagen is supplying its proprietary OxC-beta™ Technology and Mimi's Rock Corp. is marketing and selling the product as Dr. Tobias™ Beta Blend through its e-commerce platform and online global channels. This joint venture will be the exclusive channel through which Avivagen sells human-use nutritional supplements online. The profits or losses will be shared equally between the two companies.

Liquidity, Capital Resources, Outlook, and Going Concern

The Corporation is an early-revenue stage corporation and accordingly has not generated significant revenue from its principal products. The Corporation has incurred significant accumulated deficit to date of $(38,289,785) (October 31, 2020: $(35,136,696)). The ability of the Corporation to continue operations is dependent upon obtaining sufficient funding to sustain operations through the early-revenue stage, successfully bring technologies to market and achieve profitable operations. The Corporation manages its capital, which consists of cash provided from financing, government funding, and long-term debt, with the primary objective being safeguarding sufficient working capital to sustain operations. The Board of Directors has not established capital benchmarks or other targets.

As at April 30, 2021, the Corporation had cash and cash equivalents of $4,246,074 (October 31, 2020: $664,169).

The Corporation will need to obtain additional financial resources through revenues, operations, additional equity and/or debt financing or by selling products or licensing technology for cash proceeds.

The Corporation may raise capital through the issuance of additional equity or debt financing. The Corporation's short-term plans are dependent on its ability to access funding to continue operations and development of the principal products. If the Corporation is unable to obtain funding through the issuance of common shares, warrants or stock options exercised, issuance of debt, receipt of government funding, proceeds from product sales and/or a licensing arrangement in a timely manner, then these programs and operations in general could be delayed or cease altogether. The Corporation will pursue additional funding to offset its financing and operating expenses. The Corporation expects expenditures for regulatory approvals (including research expenditures on trials and efficacy studies in support of registration) to continue or increase for the foreseeable future. As the Corporation moves further into the commercialization and revenue phase, these registration and trial expenditures may ultimately begin to decrease.

Continued uncertainty in the financial and business markets may impact the Corporation's ability to raise additional financing proceeds and it may impact the terms and conditions related to any financing.

The Corporation's ultimate success depends on its ability to bring technology and resulting products to market. Regulation by government is a significant factor in the registration, research, development, manufacture, and marketing of the Corporation's products.

Most of the Corporation's OxC-beta™ Technology applications require regulatory approval before they can be commercialized. Animal feed products, such as OxC-beta™ Livestock, can take many years to receive regulatory approvals in multiple countries and face a significant degree of uncertainty of receiving approval and subsequent market success. With New Zealand, Australia, Taiwan, Thailand, Mexico, Malaysia, Brazil, and the Philippines approved for distribution for major livestock species as of the date of this report and self-affirmed GRAS status in the U.S., the Corporation is actively working to gain approval in other jurisdictions such as Costa Rica, Peru, Colombia, Argentina, Uruguay, South Korea, China, and Vietnam. The Corporation's self-affirmed GRAS status allows the product to be sold in the U.S. In concert with this strategy, the Corporation has retained consultants whose primary focus is to help expedite the approval process within Canada, and China. Other applications for OxC-beta™ Technology, such as pet supplements, may require less data for regulatory approval but need marketing resources and an effective marketing campaign to attain commercial success.

Given the uncertainty, extensive time, and financial expenditures involved in moving the products based on OxC-beta™ Technology through the regulatory process from development to market, the Corporation may never be able to successfully develop commercially-viable products. If the Corporation is unable to do so, its business, financial condition, and results of operations would be materially adversely affected. At this time, while the Corporation has demonstrated its ability to raise equity capital and long-term debt, there can be no assurance that further financing would be available to the Corporation when needed, on commercially reasonable terms, or at all. In the absence of an ability to raise sufficient additional funds there is significant doubt regarding the Corporation's ability to continue. In addition, any equity financing will involve substantial dilution to the Corporation's existing shareholders.

The Corporation has not obtained profitable operations to date. For the three-month period ended April 30, 2021, the Corporation had a net loss from all operations of $(2,197,649) (three-month period ended April 30, 2020: $(1,393,497)). For the six-month period ended April 30, 2021, the Corporation had a net loss from all operations of $(3,463,949) (six-month period ended April 30, 2020: $(2,725,277)). Whether and when the Corporation can attain profitability and positive cash flow is uncertain. The accumulated deficit is $(38,289,785) as of April 30, 2021 (October 31, 2020: $(35,136,696)). These circumstances cast significant doubt as to the ability of the Corporation to meet its obligations as they come due, and accordingly, the ultimate appropriateness of the use of accounting principles applicable to a going concern. Management is actively pursuing the commercialization of its products and is continuously evaluating the availability of additional debt or equity financing to provide adequate cash resources to carry out its business objectives. The Corporation has been successful in raising additional equity and debt financing in the current and prior fiscal years; nevertheless there is no assurance that these ongoing initiatives will continue to be successful.

The Corporation's ability to continue as a going concern is dependent upon the Corporation's ability to obtain the ongoing support of its lenders and investors, obtain profitable operations, generate significant sales and/or raise additional capital. The Corporation's financial statements do not reflect adjustments in the carrying values of assets and liabilities, the reported revenues and expenses, and the classifications used on the statement of financial position that would be necessary if the Corporation were unable to realize its assets and settle its liabilities as a going concern in the normal course of operations. Such adjustments could be material.

Financial Position of the Corporation
Selected Balance Sheet Data

		As at April 30, 2021		As at October 31, 2020
Cash and cash equivalents	$	4,246,074	$	664,149
Total assets	$	5,985,104	$	2,176,142
Current liabilities	$	5,828,039	$	2,351,892
Non-current portion of debt	$	1,335,268	$	4,591,860
Total liabilities	$	7,163,307	$	6,943,752
Total shareholders' equity (deficiency)	$	(1,178,203)	$	(4,767,610)

COVID-19

The Corporation assessed possible and future impacts to its financial reporting as a result of the COVID-19 pandemic (COVID-19). The Corporation has not impaired or changed the useful life of non-current assets in the reporting period. Current assets were assessed for expected credit losses and / or impairment and any required adjustments from the carrying amounts were recorded within the reporting period. Certain prepaid expenses increased due to services being deferred as a result of COVID-19. These expenses were refunded with vouchers or future credits. The Corporation remains in compliance with its debt agreements and contractual obligations. Except for normal operational requirements such as account payables and accrued liabilities, no provisions or contingent liabilities are recognized or disclosed in the reporting period as a direct impact of COVID-19. As disclosed in the notes to the financial statements for the three- and six-month periods ended April 30, 2021, the Corporation has applied for and received funding from a government grant. Remaining funding under this and other grants programs, if any, will be recognized when there is reasonable assurance that the grant will be received. As disclosed within the notes to the financial statements for the three- and six-month periods ended April 30, 2021 and prior periods, ACOA deferred the collection of the prior period obligation to June 30, 2021. The National Research Council has provided rent concessions by deferring and reducing certain rent payments.

On March 18, 2020, the Corporation took the decision to temporarily close the physical offices and require all staff to work from home in compliance with guidance from the Governments of Ontario and Prince Edward Island. Most of the Corporation's operations allowed for all staff to work from home and the disruption to operations by COVID-19 was not significant for the Corporation. However, business development has continued to be challenging due to restrictions on travel, shelter at home orders, and other operational disruptions affecting our current and potential customers. The Corporation will continue working primarily in this remote fashion until such time as management believes, based on the stages of COVID-19 and the advice of government health authorities, that the risk to staff, suppliers, customers and stakeholders is reduced sufficiently. At such time, all government guidance and recommended safety precautions, including physical distancing measures, will continue to be implemented.

As noted, the Corporation is conducting business with substantial modifications to employee travel, employee work locations and virtualization or cancellations of such activities as business development, marketing, and investor relations events. The Corporation has substantially altered its interactions with customers and suppliers, among other modifications. Management has taken further actions that alter business operations as may be required by various levels of government, or that it determines are in the best interest of the Corporation's employees, customers, partners, suppliers, and shareholders. However, there is no certainty that such measures will be sufficient to mitigate the direct and indirect effects of COVID-19 and the Corporation's financial condition and results of operations could be affected. The degree to which COVID-19 will affect results and operations will depend on future developments that are highly uncertain and cannot currently be predicted, including, but not limited to, the duration, extent and severity of the COVID-19 pandemic, actions taken to contain COVID-19, the impact of the pandemic and related restrictions on economic activity and the extent of the impact of these and other factors on the Corporation's employees, partners, suppliers and customers. COVID-19 has also caused heightened uncertainty and volatility in the global economy. If economic growth slows further or if a recession develops, customers may not have the financial means to purchase the Corporation's products, negatively impacting the statement of comprehensive loss and the statement of financial position. Since the impact of COVID-19 is ongoing, the effect of the COVID-19 outbreak and the related impact on the global economy may not be fully reflected in the Corporation's statement of comprehensive loss and statement of financial position until future periods. Further, volatility in the capital markets has been heightened since March 2020 and such volatility may continue, which may cause declines in the price of the Corporation's shares and may affect its ability to raise working capital through equity or debt transactions.

Atlantic Canada Opportunities Agency Agreements

The Corporation entered into two agreements to obtain loans from the Atlantic Canada Opportunities Agency (ACOA). Under the first agreement, which was dated August 15, 2006, the Corporation drew $2,052,131 of which $37,693 was repaid for a remaining obligation of $2,014,438. Under the second agreement, which was dated March 24, 2010, the Corporation drew $1,334,400 of which $122,474 was repaid for a remaining obligation of $1,211,926.

The ACOA loans were initially recognized at their fair value, and are subsequently carried at amortized cost as determined by using a discounted cash flow analysis, which requires a number of assumptions. The significant assumptions used in determining the fair value using discounted cash flows include estimating the amount and timing of future revenue for the Corporation and the discount rate. As the loans are repayable based on a percentage of gross revenue, the determination of the amount and timing of future revenue significantly impacts the initial fair value of the loan, as well as the carrying value of the loans at each reporting date. Management recalculates the carrying amount by computing the present value of the estimated future cash flows at the original effective interest rate of 35%. Any adjustments are recognized in the consolidated statement of total comprehensive loss as accreted interest after initial recognition.

For the three month period ended April 30, 2021, the Corporation has recorded an adjustment to the present value of the ACOA loans of $534,553 on Project 1 and $130,650 on Project 2, for a total adjustment recorded in finance cost of $665,203. This adjustment represents the updated cash outflows related to the repayment of the ACOA loans based on the Corporation's revised forecast of expected future revenues, which represents a significant management judgment.

The Corporation commenced repayment on June 30, 2014. Yearly repayments are capped at 10% of product revenues of the prior year from the resulting product. The ACOA repayment originally due on June 30, 2020 is currently recorded as $97,745 based on OxC-beta product sales of $977,451 in the twelve-month period ended October 31, 2019. Due to COVID-19, ACOA has agreed to delay the repayment to June 30, 2021. The ACOA repayment of $117,786 based on OxC-Beta product sales of $1,177,857 in the fiscal year ended October 31, 2020 is due on June 30, 2021. A combined total of $215,531 is due on June 30, 2021.

In the three-month period ended April 30, 2021, the Corporation repaid $10,391 of the outstanding principal of the ACOA loans.

The Corporation has recognized the repayment related to year-to-date revenues for the 2021 fiscal year as $42,160, which is due on June 30, 2022.

Senior Secured Debentures

On March 28, 2019, the Corporation closed an offering of Senior Secured Debentures (the "First Closing Debentures") in the aggregate principal amount of $5,264,000 for gross proceeds in the same amount. A second closing of Senior Secured Debentures (the "Second Closing Debentures" and together with the First Closing Debentures the "Senior Secured Debentures") took place on April 9, 2019 in the aggregate principal amount of $114,000 for gross proceeds in the same amount. The Senior Secured Debentures bear interest at 10% per year, payable quarterly in cash. The Corporation will also pay an annual credit maintenance fee of 2% (in cash or shares at the Corporation's discretion). The First Closing Debentures will mature on March 27, 2022 and the Second Closing Debentures will mature on April 8, 2022, at which time the principal amount and all accrued and unpaid interest will be repayable in cash.

Purchasers of First Closing Debentures also received an aggregate of 1,316,000 common shares of the Corporation, being an amount equal to 20% of the principal amount of the First Closing Debentures divided by $0.80 per share.

The principal amount of the First Closing Debentures and any accrued and unpaid interest may be repaid in full after March 28, 2020. Between March 28, 2020 and March 28, 2021 an early repayment is subject to a 2% fee and between March 28, 2021 and March 27, 2022 an early repayment is subject to a 1% fee. The early repayment fee may be paid in cash or shares at the Corporation's discretion.

The Corporation paid agent fees in connection with the First Closing Debentures of $180,300 and issued 225,375 agent warrants. Each agent warrant entitles the agent to purchase one common share of the Corporation for two years at $0.80. The warrants were recognized at a fair value of $72,796 using a Black-Scholes-Merton calculation with the following inputs: stock price of $0.74, exercise price of $0.80, expected life of 2 years, annual risk-free interest rate of 1.49% based on the Bank of Canada benchmark 2-year bond yield, and expected annualized volatility of 84.6%. The warrants were charged to the contributed surplus account until such time as the warrants are exercised or expired.

Under IAS 32 *Financial Instruments: Presentation*, an entity is required to separate a financial instrument that contains a financial liability and an equity component using the residual method. The common shares are considered to be an equity component and the First Closing Debentures are considered a financial liability. Therefore, the financial liability is measured at the discount rate that a market participant would require without the equity component. Initial recognition of the debt component of the First Closing Debentures was at its fair value at a discount rate of 20.8%. $4,211,200 was recognized as debt and $1,052,800 was recognized as equity. Subsequent recognition of the debt component will use the effective interest method at a rate of 23.6% to also account for transaction costs allocated on a pro-rata basis to the debt portion of the First Closing.

Purchasers of Second Closing Debentures also received an aggregate of 26,206 common shares of the Corporation, being an amount equal to 20% of the principal amount of the Second Closing Debentures divided by $0.87 per share. The principal amount of the Second Closing Debentures and any accrued and unpaid interest may be repaid in full after April 9, 2020. Between April 9, 2020 and April 9, 2021 an early repayment is subject to a 2% fee and between April 9, 2021 and April 8, 2022 an early repayment is subject to a 1% fee. The early repayment fee may be paid in cash or shares at the Corporation's discretion.

The Corporation paid agent fees in connection with the Second Closing Debentures of $6,840 and issued 7,862 agent warrants. Each agent warrant entitles the agent to purchase one common share of the Corporation for two years at $0.87. The warrants were recognized at a fair value of $3,137 using a Black-Scholes-Merton calculation with the following inputs: stock price of $0.87, exercise price of $0.87, expected life of 2 years, annual risk-free interest rate of 1.60% based on the Bank of Canada benchmark 2-year bond yield, and expected annualized volatility of 84.5%. The warrants were charged to the contributed surplus account until such time as the warrants are exercised or expired.

Under IAS 32 *Financial Instruments: Presentation*, an entity is required to separate a financial instrument that contains a financial liability and an equity component using the residual method. The common shares are considered to be an equity component and the Second Closing Debentures are considered a financial liability. Therefore, the financial liability is measured at the discount rate that a market participant would require without the equity component. Initial recognition of the debt component of the Second Closing Debenture was at its fair value at a discount rate of 20.2%. $91,200 was recognized as debt and $22,800 was recognized as equity. Subsequent recognition of the debt component will use the effective interest method to also account for transaction costs allocated on a pro-rata basis to the debt portion of the Second Closing.

Transaction costs associated with the Senior Secured Debentures in the amount of $412,180 have been recorded to equity and long-term debt on a pro-rata basis. The liability's transaction costs are expensed using the effective interest method up to the maturity date of the Senior Secured Debentures.

Except for a $35,000 term deposit for which RBC holds a lien against and which the Corporation can release upon the cancellation of the credit cards, the Corporation has pledged all of the assets of the Corporation in connection with the Senior Secured Debentures.

Promissory Note

The Corporation has received a total of $850,000 in debt funding via an unsecured promissory note issued by the Bloom Burton Healthcare Lending Trust. The promissory note bears interest at a rate of 12% per annum and is payable on demand. The promissory note has no conversion or equity features. The principal amount of the promissory note was drawn down in two instalments: $500,000 on October 14, 2020 and $350,000 on November 24, 2020.

On February 18, 2021, the Corporation repaid the $850,000 principal owing on the promissory note as well as $30,773 in accrued interest.

Canadian Emergency Business Account (CEBA) Loan

On May 11, 2020, the Corporation obtained $40,000 in revolving credit from the Government of Canada under the Canada Emergency Business Account (CEBA) COVID-19 Economic Response Plan. The funding was initially granted in the form of an interest-free revolving credit line of which up to $40,000 may be drawn. On January 6, 2021, an additional $20,000 in funding was made available and drawn from the credit line.

On July 1, 2021, any balance remaining on the revolving credit line will automatically convert to a non-revolving term loan. Effective January 1, 2023, any outstanding balance on the term loan shall bear interest at a rate of 5% per annum. The term loan matures on December 31, 2025. If 66 $^{2}/_{3}$% of the outstanding balance of the non-revolving term loan is repaid on or before December 31, 2022, the remaining 33 $^{1}/_{3}$% of the balance shall be forgiven. The Corporation intends to repay 66 $^{2}/_{3}$% or $40,000 of the outstanding balance on or before December 31, 2022.

The Corporation used the assumption of a 20% discount rate to determine the fair value of the interest-free period. The difference between the amount received in cash and the related fair value was considered a government grant and was recognized as an item of income in the statements of total comprehensive loss.

The Corporation drew the full $40,000 initially available to it under the CEBA program on May 11, 2020. Initial recognition of the $40,000 was at its fair value at a discount rate of 20%, representing the Corporation's estimated unsecured credit risk. $17,677 was recognized as debt and $22,323 was recognized as a government grant in the statement of total comprehensive loss. On January 6, 2021, an additional $20,000 in funding was made available and drawn from the credit line. $6,725 was recognized as debt and $13,275 was recognized as a government grant in the statement of total comprehensive loss.

Regional Relief and Recovery Fund (RRRF) Loan

On July 23, 2020, the Corporation obtained access to $210,000 in repayable funding from the Federal Economic Development Agency for Southern Ontario through the Regional Relief and Recovery Fund. The funding was granted in the form of an interest-free loan of up to $210,000 to offset fixed operating costs. Repayment of the principal amount of the loan will take place in 60 monthly instalments of $3,500 beginning on January 15, 2023 and concluding on December 15, 2027. The Corporation used the assumption of a 20% discount rate to determine the fair value of the interest-free loan. The difference between the amount received in cash on each drawdown date and the related fair value was considered a government grant and was recognized as an item of income in the statements of total comprehensive loss.

$168,000 was received on July 23, 2020. Recognition of the initial $168,000 drawdown of the loan was at its fair value using a discount rate of 20%, representing the Corporation's unsecured credit risk. $65,439 was recognized as debt and $102,561 was recognized as a government grant in the statement of total comprehensive loss. The remaining $42,000 of funding was received on August 11, 2020, at which time $16,632 was recognized as debt and $25,368 was recognized as a government grant in the statement of comprehensive loss.

Summary of Debt Obligations

The undiscounted future repayments of principal and interest per fiscal year on the Corporation's debt obligations as at April 30, 2021 are as follows:

	ACOA loans	Senior Secured Debentures	CEBA loan	RRRF loan	Lease liabilities	
2021	$ 215,531	$ 271,110	$ -	$ -	$ 59,705	$ 546,346
2022	42,160[1]	5,702,528	-	-	84,148	5,828,836
2023		-	40,000	35,000	24,815	99,815
2024		-	-	42,000	-	42,000
2025		-	-	42,000	-	42,000
2026		-	-	42,000	-	42,000
2027		-	-	42,000	-	42,000
2028		-	-	7,000	-	7,000
Indeterminate[1]	2,968,673	-	-	-	-	2,968,673
Total	**$ 3,226,364**	**$ 5,973,638**	**$ 40,000**	**$ 210,000**	**$ 168,668**	**$ 9,618,670**

Note 1: The ACOA repayable funding is based on 10% of prior years' revenue. It is not possible to estimate the future payments at this time.

Other Outstanding Obligations

In addition to the Corporation's debt obligations, the Corporation's major outstanding obligations include accounts payable and accrued liabilities of $602,821 which are due within the current period, and mostly within 30 days.

The Corporation has approximately $2,560,000 of unrecognized contractual commitments as at April 30, 2021 (October 31, 2020: $600,000 of unrecognized contractual commitments).

The Corporation also has unrecognized contractual obligations for which future cash commitments cannot be estimated, up to 7% of certain future revenues.

Lease Obligations

The Corporation holds a lease for office and laboratory space with a term expiring in March 2023. The Corporation previously also held a lease for laboratory space which expired in March 2021. Information on leases for which the Corporation is a lessee is presented below.

The Corporation has adopted IFRS 16 *Leases* retrospectively from November 1, 2019 but has not restated comparatives for the October 31, 2019 reporting period, as permitted under the specific transition provisions in the IFRS 16 *Leases* standard. The reclassifications and the adjustments arising from the new leasing rules are therefore recognized in the opening balance sheet on November 1, 2019.

Leases classified as operating leases under IAS 17

As at November 1, 2019, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Corporation's incremental borrowing rate of 8%.

The Corporation used the following practical expedients when applying IFRS 16 *Leases* to leases previously classified as operating leases under IAS 17 *Leases*: excluded initial direct costs from measuring the right-of-use asset at the date of initial application and chose not to restate prior periods.

Impacts on financial statements

On transition to IFRS 16 *Leases* on November 1, 2019, the Corporation recognized $54,912 of right-of-use assets and $43,591 of lease liabilities.

The Corporation discounted the lease payments using its incremental borrowing rate as at November 1, 2019 of 8%.

Operating lease commitments as at October 31, 2019	**$**	**70,167**
Subtract: exemption for short-term leases		(14,100)
Operating lease commitments less exemption as at October 31, 2019		56,067
Effect of discounting at the incremental borrowing rate of 8%		(1,155)
Discounted lease liability as at November 1, 2019 before deposits and rent prepayments		54,912
Subtract: deposits and rent prepayments		(11,321)
Lease liability as at November 1, 2019		**43,591**
Add: present value of modification of leases within the reporting period		251,061
Add: interest accretion during the reporting period		19,594
Subtract: lease payments during the reporting period		(52,864)
Lease liability as at October 31, 2020	**$**	**261,382**
Add: interest accretion during the reporting period		3,529
Lease liability as at January 31, 2021	**$**	**264,911**
Add: interest accretion during the reporting period		3,124
Subtract: present value of modification of leases within the reporting period		(16,523)
Subtract: lease payments during the reporting period		(93,313)
Subtract: abatements recognized as a government grant during the reporting period		(9,155)
Lease liability as at April 30, 2021	**$**	**149,044**

Right-of-use assets as at November 1, 2019 (see above liability before deposits and prepayments)	**$**	**54,912**
Add: present value of modification of leases within the reporting period		251,061
Subtract: depreciation charge during the reporting period		(120,299)
Right-of-use assets as at October 31, 2020	**$**	**185,674**
Subtract: depreciation charge during the reporting period		(30,075)
Right-of-use assets as at January 31, 2021	**$**	**155,599**
Subtract: depreciation charge during the reporting period		(23,791)
Subtract: present value of modification of leases within the reporting period		(16,523)
Right-of-use assets as at April 30, 2021	**$**	**115,285**

In February 2021, the Corporation entered into COVID-19 related rent abatements and deferral agreements with its landlord, the National Research Council of Canada (NRC), for its two lease properties in Ottawa, Ontario and Charlottetown, Prince Edward Island. The Corporation's landlord deferred and waived certain lease payments related to 2020.

The lease in Charlottetown, PEI, which expired in March 2021, was allowed to terminate without renewal. As a result, the Corporation fully depreciated the remaining $8,754 net value of lease and derecognized the corresponding right-of-use asset. The Corporation recorded $88 in interest expense and a cash payment of $39,554 to extinguish the liability, with a resulting $13,492 government grant in the form of rent abatements as discussed above.

A lease modification on the remaining lease was recorded to account for the rent abatements and deferrals referenced above. This modification was measured at a discount rate of 7%, resulting in a reduction of the existing right-of-use asset and corresponding lease liability by $16,523.

Key management compensation

$30,000 in future compensation was paid in advance to an officer and director of the Corporation.

China JV

On July 24, 2018, the Corporation entered into an agreement to wind up Shaanxi Jintai China-Canada Beta-carotene Oxidation Biological Company, its joint venture in China (the "China JV"). Upon the completion of the wind-up, the Corporation issued $300,000 in common shares, being 500,000 common shares of the Corporation at $0.60 per share, as reimbursement to the China JV partner for expenses incurred.

Consulting Agreement

On July 24, 2018, the Corporation entered into a two-year consulting agreement with the former China JV partner to provide business advice in the China market. Under the terms of the agreement, the consultant was issued common shares of the Corporation equal in value to $50,000 per year, valued at the closing share price on the date of each anniversary of the agreement.

For each of the fiscal years ended October 31, 2020 and October 31, 2019, the Corporation recognized $50,000 in consulting fees. In settlement of the consulting fees, the Corporation agreed to issue common shares to the consultant. On November 25, 2019, the Corporation issued 80,645 common shares at a price of $0.62 per share in settlement of the 2019 fees. On August 27, 2020, the Corporation issued 112,359 common shares at a price of $0.445 per share in settlement of the 2020 fees.

Centre Beach Joint Venture

On June 13, 2019, the Corporation signed a Shareholder's Agreement with Mimi's Rock, Corp. ("MRC") to create a joint venture, Centre Beach, Inc. ("Centre Beach") for the purposes of marketing and selling Vivamune Health Chews or a similar brand through internet sales world-wide. MRC and the Corporation each hold 50% of the outstanding shares of Centre Beach.

Under the terms of the Shareholder's Agreement, the Corporation is responsible for providing Centre Beach with the active ingredient, OxC-Beta, and providing for necessary registrations in various countries. MRC is responsible for the administration of Centre Beach as well as the production, marketing, and sale of Vivamune Health Chews under the brand name of Dr. Tobias™ All-in-One Dog Chews and a human dietary supplement marketed as Dr. Tobias™ Beta Blend.

The Corporation and MRC will fund Centre Beach on a pro rata basis (based on shareholdings) of the expenses of Centre Beach through shareholder loans. The amounts of the loans shall be determined by the Board of Directors of Centre Beach. All shareholder loans shall rank pari passu with one another in right of repayment.

Since decisions that impact the variable returns require the unanimous consent of both Avivagen and MRC, as each hold 50% of the voting rights, Avivagen and MRC have joint control over the entity on the basis of Board of Directors seats or shareholder voting rights. The entity is a joint venture and equity accounting will be applied under IAS 28 *Investments in Associates and Joint Ventures*. For the three-month period ended April 30, 2021 the Corporation recognized $25,000 (three-month period ended April 30, 2020: $9,992) in expenses related to the activity of the joint venture and its financial obligation to fund the joint venture. For the six-month period ended April 30, 2021 the Corporation recognized $40,000 in expenses related to the activity of the joint venture (six-month period ended April 30, 2020: $34,992).

Summary of Quarterly Results

3 Months Ended with year-to-date (YTD)

			April 30, 2021	January 31 2021	YTD Total 2021
Total Revenue			$159,614	$261,987	$421,601
Total Comprehensive Loss			$(2,197,649)	$(1,266,300)	$(3,463,949)
Net Loss per Share (Basic and Diluted)			$(0.04)	$(0.03)	$(0.07)

	October 31 2020	July 31 2020	April 30, 2020	January 31 2020	YTD Total 2020
Total Revenue	$287,627	$612,530	$29,625	$247,805	$1,177,857
Total Comprehensive Loss	$(1,238,586)	$(787,424)	$(1,393,497)	$(1,331,780)	$(4,751,287)
Net Loss per Share (Basic and Diluted)	$(0.03)	$(0.02)	$(0.03)	$(0.04)	$(0.12)

	October 31, 2019	July 31 2019	April 30 2019	January 31 2019	YTD Total 2019
Total Revenue	$338,858	$12,484	$303,984	$322,125	$977,451
Total Comprehensive Loss	$(1,123,019)	$(1,278,685)	$(1,292,919)	$(1,141,797)	$(4,836,420)
Net Loss per Share (Basic and Diluted)	$(0.03)	$(0.04)	$(0.04)	$(0.03)	$(0.14)

Selected Financial Information

	Three-month period ended	
	April 30, 2021	April 30, 2020
Revenue	$ 159,614	$ 29,625
Operating expenses	$ 1,237,047	$ 1,117,959
Finance cost, net	$ 1,021,404	$ 290,470
Total loss	$ (2,197,649)	$ (1,393,497)
Basic and diluted loss per share	$ (0.04)	$ (0.03)

	Six-month period ended	
	April 30, 2021	April 30, 2020
Revenue	$ 421,601	$ 277,430
Operating expenses	$ 2,234,115	$ 2,273,294
Finance cost, net	$ 1,393,741	$ 568,210
Total loss	$ (3,463,949)	$ (2,725,277)
Basic and diluted loss per share	$ (0.07)	$ (0.07)

Results of Operations

Three-month period ended April 30, 2021 compared to three-month period ended April 30, 2020

	3 months ended April 30, 2021	3 months ended April 30, 2020	Variance
Revenues	$ 159,614	$ 29,625	$ 129,989
Cost of products sold	98,812	14,693	(84,119)
Gross margin	**60,802**	**14,932**	**45,870**
Salaries, board fees, and benefits	398,491	380,087	(18,404)
Professional fees and other	674,855	632,380	(42,475)
Share-based payments	123,817	94,487	(29,330)
Government grants	(19,155)	(30,220)	(11,065)
Depreciation of equipment and right-of-use assets	34,039	31,233	(2,806)
Investment loss in associate	25,000	9,992	(15,008)
Total operating expenses before finance cost and income taxes	**1,237,047**	**1,117,959**	**(119,088)**
Finance cost, net	1,021,404	290,470	(730,934)
Total loss before income taxes	**(2,197,649)**	**(1,393,497)**	**(804,152)**
Income Taxes			
Current and deferred income tax	-	-	-
Total comprehensive loss for the period	**$ (2,197,649)**	**$ (1,393,497)**	**$ (804,152)**

Revenue for the three-month period ended April 30, 2021 totaled $159,614 compared to $29,625 for the three-month period ended April 30, 2020. The difference of $129,989 is due mainly to sales of OxC-Beta™ Technology product into Mexico.

Operating expenses for the three-month period ended April 30, 2021 totaled $1,237,047 compared to $1,117,959 for the three-month period ended April 30, 2020. The difference of $119,088 is due mainly to increased salaries and investor relations expenses compared to the prior year as well as a decrease in government grants recognized in the period.

Total comprehensive loss for the three-month period ended April 30, 2021 totaled $2,197,649 compared to a total comprehensive loss of $1,393,497 for the three-month period ended April 30, 2020. The difference of $804,152 is due mainly to increased sales of OxC-Beta™ Technology product offset by increased finance cost due to the adjustment to the ACOA loans as described above.

Six-month period ended April 30, 2021 compared to six-month period ended April 30, 2020

	6 months ended April 30, 2021	6 months ended April 30, 2020	Variance
Revenues	$ 421,601	$ 277,430	$ 144,171
Cost of products sold	257,694	161,203	(96,491)
Gross margin	**163,907**	**116,227**	**47,680**
Salaries, board fees, and benefits	787,806	720,677	(67,129)
Professional fees and other	1,209,840	1,332,427	122,587
Share-based payments	171,067	152,951	(18,116)
Government grants	(42,430)	(30,220)	12,210
Depreciation of equipment and right-of-use assets	67,832	62,467	(5,365)
Investment loss in associate	40,000	34,992	(5,008)
Total operating expenses before finance cost and income taxes	**2,234,115**	**2,273,294**	**39,179**
Finance cost, net	1,393,741	568,210	(825,531)
Total loss before income taxes	**(3,463,949)**	**(2,725,277)**	**(738,672)**
Income Taxes			
Current and deferred income tax	-	-	-
Total comprehensive loss for the period	**$ (3,463,949)**	**$ (2,725,277)**	**$ (738,672)**

Revenue for the six-month period ended April 30, 2021 totaled $421,601 compared to $277,430 for the six-month period ended April 30, 2020. The difference of $144,171 is due mainly to sales of OxC-Beta™ Technology product into various Asian and Mexican markets.

Operating expenses for the six-month period ended April 30, 2021 totaled $2,234,115 compared to $2,273,294 for the six-month period ended April 30, 2020. The difference of $39,179 is due mainly to a decrease in professional fees related to registration expenses and studies and trials in the prior year offset by an increase in salaries and benefits expenses.

Total comprehensive loss for the six-month period ended April 30, 2021 totaled $3,463,949 compared to a total comprehensive loss of $2,725,277 for the six-month period ended April 30, 2020. The difference of $738,672 is due mainly to increased salaries, wages, and benefits and increased finance cost due to an adjustment to the Corporation's ACOA obligations.

Finance cost for the three- and six-month periods ended April 30, 2021 and April 30, 2020 consists of the following:

	Three months ended		Six months ended	
Finance cost, net	April 30, 2021	April 30, 2020	April 30, 2021	April 30, 2020
Interest accretion on ACOA loans	$ 59,302	$ 32,898	$ 113,703	$ 63,078
Adjustment to present value of ACOA loans	665,203	-	665,203	-
Interest on debentures	283,459	258,886	569,646	502,360
Interest on lease liabilities	3,124	5,196	6,653	10,845
Interest accretion on government loans	5,997	-	11,508	-
Interest on promissory note	5,030	-	27,978	-
Deposit interest on short-term investments and demand accounts	(711)	(6,510)	(950)	(8,073)
Total finance cost, net	**$ 1,021,404**	**$ 290,470**	**$ 1,393,741**	**$ 568,210**

Finance cost for the three-month period ended April 30, 2021 increased by $730,934 compared to the three-month period ended April 30, 2020. This is due mainly to an adjustment to the present value of the ACOA liabilities and government loans obtained within the 2021 fiscal year. The adjustment to the ACOA loans represents the updated expected cash outflows related to the repayment of the ACOA loans based on the Corporation's revised forecast of expected future revenues, which represents a significant management judgment.

Finance cost for the six-month period ended April 30, 2021 increased by $825,531 compared to the six-month period ended April 30, 2020. This is due mainly to an adjustment to the present value of the ACOA liabilities, the interest accretion on the Senior Secured Debentures that were obtained on March 28, 2019 and April 9, 2019, and government and demand loans obtained within the 2020 fiscal year.

Comparison of Cash Flows

	3 months ended April 30, 2021	3 months ended April 30, 2020	6 months ended April 30, 2021	6 months ended April 30, 2020
Cash Flows from (used in) Operating Activities				
Net loss	$ (2,197,649)	$ (1,393,497)	$ (3,463,949)	$ (2,725,277)
Items not affecting cash and non-cash adjustments:				
Depreciation of equipment and right-of-use asset	34,039	31,233	67,832	62,467
Share-based payments	123,817	94,487	171,067	152,951
Government grants	(9,155)	-	(22,430)	-
Finance cost, net of deposit interest	914,553	189,422	1,287,129	468,724
Maintenance fees on long-term debt settled in equity	107,560	107,560	107,560	107,560
Equity investment in associate	22,952	34,992	37,952	34,992
Net effect of foreign exchange rates on cash and cash equivalents	(12,393)	(5,719)	4,478	(13,688)
Changes in operating working capital items:				
Trade and other receivables	(36,488)	36,564	354,945	(7,746)
Inventories	(683,333)	58,291	(522,817)	87,369
Prepaid expenses	(120,037)	25,201	(143,540)	(139,935)
Accounts payable and accrued liabilities	(109,495)	(156,898)	(185,406)	17,521
Net Cash Flows used in Operating Activities	**(1,965,629)**	**(978,364)**	**(2,307,179)**	**(1,955,062)**
Cash Flows used in Investing Activities				
Purchase of equipment	-	(20,961)	-	(44,295)
Net Cash Flows used in Investing Activities	**-**	**(20,961)**	**-**	**(44,295)**
Cash Flows from (used in) Financing Activities				
Proceeds from the issuance of units	7,500,000	-	7,500,000	3,000,000
Share issuance cost	(667,671)	-	(732,671)	(236,472)
Proceeds from the exercise of common share purchase warrants	7,400	-	7,400	-
Proceeds from the issuance of debt	-	-	350,000	-
Proceeds from government loans and grants	-	-	20,000	-
Repayment of interest on debt	(161,908)	(132,246)	(297,463)	(267,619)
Repayment of principal on debt	(860,391)	-	(860,391)	-
Payment of lease liabilities	(93,313)	(31,982)	(93,313)	(75,017)
Net Cash Flows from (used in) Financing Activities	**5,724,117**	**(164,228)**	**5,893,562**	**2,420,892**
Increase (decrease) in cash and cash equivalents during the period	3,758,488	(1,163,553)	3,586,383	421,535
Net effect of foreign exchange rate changes on cash and cash equivalents	12,393	5,719	(4,478)	13,688
Cash and cash equivalents, beginning of period	475,193	2,679,002	664,169	1,085,945
Cash and cash equivalents, end of period	**$ 4,246,074**	**$ 1,521,168**	**$ 4,246,074**	**$ 1,521,168**

For the three-month period ended April 30, 2021, the net increase in cash of $3,758,488 is the result of $1,965,629 used in operating activities, consisting mainly of $2,197,649 in losses from operations, offset by $(949,353) in changes in working capital, $123,817 in share-based payments, $34,039 in depreciation of assets, $914,553 in finance cost, and $107,560 in maintenance fees on the Senior Secured Debentures which were settled in equity offset by $9,155 in government grants. Cash flows from financing activities of $5,724,117 consisted of $1,022,299 in interest and principal paid on the Corporation's long-term debt, $93,313 in lease payments, and $667,671 in share issuance cost offset by $7,500,000 in proceeds from the issuance of common shares. There were no investing activities within the period.

For the three-month period ended April 30, 2020, the net decrease in cash of $1,163,553 is the result of $978,364 used in operating activities, consisting mainly of $1,393,497 in losses from operations offset by $(36,842) in changes in working capital, $94,487 in share-based payments, $189,422 in finance cost, and $107,560 in maintenance fees on the Senior Secured Debentures which were settled in equity. Cash flows used financing activities of $164,228 consisted of $132,246 in interest paid on the Senior Secured Debentures. Investing activities consist of $20,961 in costs to purchase laboratory equipment.

For the six-month period ended April 30, 2021, the net increase in cash of $3,586,383 is the result of $2,307,179 used in operating activities, consisting mainly of $3,463,949 in losses from operations, offset by $(496,818) in changes in working capital, $171,067 in share-based payments, $67,832 in depreciation of assets, $1,287,129 in finance cost, and $107,560 in maintenance fees on the Senior Secured Debentures which were settled in equity offset by $22,430 in government grants. Cash flows from financing activities of $5,893,562 consisted of $1,157,854 in interest and principal paid on the Corporation's long-term debt, $93,313 in lease payments, and $732,671 in share issuance cost offset by $7,500,000 in proceeds from the issuance of debt, $350,000 from the issuance of debt, and $20,000 in proceeds from government loans. There were no investing activities within the period.

For the six-month period ended April 30, 2020, the net increase in cash of $421,535 is the result of $1,955,062 used in operating activities, consisting mainly of $2,725,277 in losses from operations offset by $(42,791) in changes in working capital, $152,951 in share-based payments, $468,724 in finance cost, and $107,560 in maintenance fees on the Senior Secured Debentures which were settled in equity. Cash flows from financing activities of $2,420,892 consisted of $3,000,000 in proceeds from the issuance of private placement units offset by $236,472 in share issue costs and $267,619 in interest paid on the

Senior Secured Debentures. Investing activities consist of $44,295 in costs to purchase laboratory equipment.

The Corporation may continue efforts to raise funds by way of generating revenues and/or through the issuance of debt, warrants, and/or common shares. As of April 30, 2021, the Corporation has issued 56,959,495 common shares and has 16,923,301 total warrants outstanding. As at June 2, 2021, the Corporation has 56,959,495 common shares and 14,148,310 total warrants outstanding. The Corporation has also granted 3,500,662 stock options.

Shareholders' Equity

The authorized share capital of the Corporation consists of unlimited voting common shares.

On March 28, 2019, the Corporation issued 1,316,000 common shares of the Corporation in connection with a private placement of Senior Secured Debentures.

On April 9, 2019, the Corporation issued 26,206 common shares of the Corporation in connection with a private placement of Senior Secured Debentures.

On November 25, 2019, the Corporation issued 80,645 common shares at a price of $0.62 per share in settlement of a $50,000 consulting fee.

On January 2, 2020, the Corporation completed a non-brokered private placement, issuing 2,500,000 investor units at an issue price of $0.50 per unit for aggregate gross proceeds of $1,250,000. Each investor unit consisted of one common share and one-half of one common share purchase warrant. Each whole warrant entitles the holder to acquire one common share of the Corporation at $0.75 for a period of three years. The investor warrants were assigned a relative fair value of $263,238 based on a Black-Scholes-Merton calculation with the following assumptions: share price of $0.58, exercise price of $0.75, time to maturity of 3 years, annual risk-free interest rate of 1.66% based on Canada three-year benchmark bond yield, and a historical 3-year stock volatility of 93.3%.

In connection with the private placement, the Corporation paid cash finder's fees of $100,000 and issued 200,000 compensation finder's warrants. The finder's warrants were assigned a fair value of $83,100 based on a Black-Scholes-Merton calculation with the following assumptions: share price of $0.58, exercise price of $0.50 for the overlying warrants and $0.75 for the underlying warrants, time to maturity of 2 years, annual risk-free interest rate of 1.66% based on Canada two-year benchmark bond yield, and a historical 2-year stock volatility of 87.7%. Each finder's warrant (or the overlying warrant) entitles the holder to purchase one finder unit at $0.50 per finder unit for a period of 2 years. Each finder unit issuable on exercise of the finder's warrants consists of one common share and one-half common share purchase warrant (or the underlying warrant). Each whole warrant underlying the finder units will be exercisable at $0.75 only during the period ending 2 years from January 2, 2020.

On January 27, 2020, the Corporation completed a non-brokered private placement, issuing 3,500,000 investor units at an issue price of $0.50 per unit for aggregate gross proceeds of $1,750,000. Each investor unit consisted of one common share and one-half of one common share purchase warrant. Each whole warrant entitles the holder to acquire one common share of the Corporation at $0.75 for a period of three years. The investor warrants were assigned a relative fair value of $329,710 based on a Black-Scholes-Merton calculation with the following assumptions: share price of $0.56, exercise price of $0.75, time to maturity of 3 years, annual risk-free interest rate of 1.41% based on Canada three-year benchmark bond yield, and a historical 3-year stock volatility of 82.4%.

In connection with the private placement, the Corporation paid cash finder's fees of $94,620 and issued 189,240 compensation finder's warrants. The finder's warrants were assigned a fair value of $73,709 based on a Black-Scholes-Merton calculation with the following assumptions: share price of $0.56, exercise price of $0.50 for the overlying warrants and $0.75 for the underlying warrants, time to maturity of 2 years, annual risk-free interest rate of 1.44% based on Canada two-year benchmark bond yield, and a historical 2-year stock volatility of 86.9%. Each finder's warrant (or the overlying warrant) entitles the holder to purchase one finder unit at $0.50 per finder unit for a period of 2 years. Each finder unit issuable on exercise of the finder's warrants consists of one common share and one-half common share purchase warrant (or the underlying warrant). Each whole warrant underlying the finder units will be exercisable at $0.75 only during the period ending 2 years from January 27, 2020.

The Corporation incurred transaction costs in connection with the January 2, 2020 and January 27, 2020 private placements of $41,852.

Two related parties to the Corporation participated in the placement for a total of $54,750.

On March 28, 2020, the Corporation issued 162,122 common shares at $0.6493 per share to holders of the Corporation's Senior Secured Debentures. These shares were issued in settlement of maintenance fees of $105,280 payable on the First Closing Debentures.

On April 9, 2020, the Corporation issued 3,752 common shares at $0.6076 per share to holders of the Corporation's Senior Secured Debentures. These shares were issued in settlement of maintenance fees of $2,280 payable on the Second Closing Debentures.

On August 27, 2020, the Corporation issued 112,359 common at $0.445 per share in settlement of a $50,000 consulting fee.

On February 16, 2021, the Corporation completed a "bought-deal" financing, issuing 15,000,000 investor units at an issue price of $0.50 per unit for aggregate gross proceeds of $7,500,000. Each investor unit consisted of one common share and one-half of one common share purchase warrant. Each whole warrant entitles the holder to acquire one common share of the Corporation at $0.75 for a period of three years. The investor warrants were assigned a relative fair value of $1,485,420 based on a Black-Scholes-Merton calculation with the following assumptions: share price of $0.66, exercise price of $0.75, time to maturity of 3 years, annual risk-free interest rate of 0.26% based on Canada three-year benchmark bond yield, and a historical 3-year stock volatility of 82.11%.

In connection with the private placement, the Corporation paid cash finder's fees of $525,000 and issued 1,050,000 compensation broker warrants. Each broker warrant entitles the holder to purchase one common share of the Corporation at $0.50 per common share for a period of 2 years. The broker warrants were assigned a fair value of $345,450 based on a Black-Scholes-Merton calculation with the following assumptions: share price of $0.66, exercise price of $0.50, time to maturity of 2 years, annual risk-free interest rate of 0.21% based on Canada two-year benchmark bond yield, and a historical 2-year stock volatility of 77.32%. The Corporation incurred transaction costs in connection with the financing of $207,671, of which $65,000 was recognized within equity as at January 31, 2021.

On February 17, 2021, 14,000 outstanding broker warrants were exercised at $0.50 per warrant for proceeds of $7,000. In settlement of the warrants, the Corporation issued 14,000 common shares. As a result of this exercise and as per the original terms of the warrant issue, 7,000 underlying broker warrants are now exercisable at an exercise price of $0.75 and will remain exercisable until January 27, 2022.

On March 17, 2021, 800 outstanding broker warrants were exercised at $0.50 per warrant for proceeds of $400. In settlement of the warrants, the Corporation issued 800 common shares.

On March 28, 2021, the Corporation issued 174,552 common shares at $0.603 per share to holders of the Corporation's Senior Secured Debentures. These shares were issued in settlement of maintenance fees of $105,280 payable on the First Closing Debentures. On April 9, 2021, the Corporation issued 3,931 common shares at $0.58 per share to holders of the Corporation's Senior Secured Debentures. These shares were issued in settlement of maintenance fees of $2,280 payable on the Second Closing Debentures.

Summary of Outstanding Shares and Dilutive Instruments

As of April 30, 2021, the Corporation had 56,959,495 common shares outstanding. The Corporation also had issued 15,304,241 subscriber warrants, 1,424,440 agent warrants, and 194,620 underlying warrants for a total of 16,923,301 warrants outstanding.

Date of Issue	Subscriber Warrants	Agent Warrants	Underlying Warrants	Term (Years)	Date of Expiry	Exercise Price
1-Jun-2016	2,774,991			5.0	1-Jun-2021[1]	$ 0.90
30-Nov-2017	2,029,250			3.6	30-Jun-2021[2]	$ 1.20
2-Jan-2020	1,250,000			3.0	2-Jan-2023	$ 0.75
2-Jan-2020[3]		186,000		2.0	2-Jan-2022	$ 0.50
2-Jan-2020[3]			100,000	2.0	2-Jan-2022	$ 0.75
27-Jan-2020	1,750,000			3.0	27-Jan-2023	$ 0.75
27-Jan-2020[3]		189,240		2.0	27-Jan-2022	$ 0.50
27-Jan-2020[3]			94,620	2.0	27-Jan-2022	$ 0.75
16-Feb-2021	7,500,000			3.0	16-Feb-2024	$ 0.75
16-Feb-2021		1,049,200		2.0	16-Feb-2023	$ 0.50
	15,304,241	**1,424,440**	**194,620**			

Note 1: On March 17, 2020, the Corporation received approval from the TSX.V to extend the expiry date of 2,774,991 subscriber warrants from March 31, 2021 to June 1, 2021.

Note 2: On November 17, 2020, the Corporation received approval from the TSX Venture Exchange to extend the expiry date of 2,029,250 subscriber warrants from November 30, 2020 to June 30, 2021.

Note 3: Each of the 186,000 outstanding agent warrants issued on January 2, 2020 and 189,240 agent warrants issued on January 27, 2020 entitle the holder to purchase one finder unit, which consists of one common share of the Corporation and one additional half-share purchase warrant (or the underlying warrant).

As at June 2, 2021, the Corporation had 56,959,495 common shares outstanding. The Corporation also had 12,529,250 investor warrants 1,424,440 agent warrants, and 194,620 underlying warrants for a total of 14,148,310 warrants outstanding..

The Corporation adopted a stock option plan (the "Plan") on August 4, 2005 which is administered by the Board of Directors. The Board of Directors establishes exercise prices, at not less than market price at the date of grant, and vesting periods, which to date have been set between one day and three years. Options under the Plan remain exercisable for one year or five years from the date of grant. The maximum number of common shares reserved for issuance for options that may be granted under the Plan is 5,600,000.

As at April 30, 2021 and June 2, 2021, the Corporation had 3,500,662 options outstanding, of which 2,282,225 were vested and exercisable.

<u>Other Critical Accounting Estimates</u>

The preparation of the financial statements requires management to make judgments, estimates, and assumptions that affect the reported amounts of revenues, expenses, assets, and liabilities, and the disclosures of contingent assets and liabilities, at the end of the reporting periods. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods. In the process of applying the Corporation's accounting policies, management has made the following judgments, which have the most significant effects on the amounts recognized in the financial statements.

Carrying amount of ACOA loans

The significant assumptions used in determining the discounted cash flows include estimating the amount and timing of future revenue for the Corporation and the discount rate. As the ACOA loans are repayable based on a percentage of gross revenue, the determination of the amount and timing of future revenue significantly impacts the initial fair value of the loan, as well as the carrying value of the loans at each reporting date. The Corporation is in the commercialization and early-revenue stages for its products; accordingly, determination of the amount and timing of revenue requires significant judgment by management. Management's estimate of future revenues assumes some revenue growth in the near future. The discount rate determined on initial recognition of the loans is used to determine the present value of estimated future cash flows expected to be required to settle the debt. In determining the appropriate discount rates, the Corporation considered the interest rates of similar long-term debt arrangements, with similar terms. The loans are repayable based on a percentage of gross revenue, accordingly finding financing arrangements with similar terms is difficult and management was required to use significant judgment in determining the appropriate discount rates. Management used a discount rate of 35% to discount the loans.

If the weighted average discount rate used in determining the initial fair value and the carrying value at each reporting date of the ACOA loans, with repayment terms based on future revenue, had been determined to be higher by 10% (45%) or lower by 10% (25%), the carrying value of the ACOA loans at April 30, 2021 would have been an estimated $253,369 lower or $340,630 higher, respectively. A 10% increase or decrease in the total forecasted revenue would result in the carrying value at April 30, 2021 being an estimated $47,614 higher or $64,078 lower, respectively. If the total forecasted revenue were reduced to $nil, the repayable amount of the ACOA loan at April 30, 2021 would be $257,691, which would be a reduction in the ACOA loan by $1,114,768.

The ACOA loans are repayable each year on June 30 based on 10% of the gross revenues reported in the prior fiscal year.

The ACOA loans were initially recognized at their IFRS 13 fair value (Level 3) and are subsequently carried at amortized cost as determined by using a discounted cash flow analysis, which requires a number of assumptions. The significant assumptions used in determining the discounted cash flows include estimating the amount and timing of future revenue for the Corporation and thus the amount and timing of the cash outflows issued in repayment of the ACOA loans. The determination of the amount and timing of future revenue significantly impacted the initial fair value of the loans, as well as the carrying value of the loans at each reporting date.

The discount rate used under the amortized cost method to assess the present value of the future cash outflows is the initial 35%.

For the three-month period ended April 30, 2021, the Corporation has recorded an adjustment to the present value of the ACOA loans of $534,553 on Project 1 and $130,650 on Project 2, for a total adjustment recorded in finance cost of $665,203. This adjustment represents the updated expected discounted cash outflows related to the repayment of the ACOA loans based on the Corporation's revised forecast of the expected future increase of revenues, which represents a significant management judgment.

Carrying value of government loans
To determine the fair value of the RRRF and CEBA government loans and the related government grants, management used a discount rate of 20% for each loan, representing the Corporation's unsecured credit risk.

Share-based payments
Share-based payments are estimated using a Black-Scholes pricing model. This model requires management estimates and assumptions on the life of the instrument and the volatility.

Future accounting pronouncements - Standards issued but not yet effective
As at the date the Corporation's Board of Directors approved the financial statements and MD&A, certain new standards, amendments, and interpretations to existing IFRS standards have been published but are not yet effective and have not been adopted by the Corporation and in certain cases have been early-adopted.

All new standards, amendments, and annual improvements were early adopted where possible and/or had no significant impact on the financial statements of the Corporation.

In certain cases, new standards, amendments, and annual improvements were not relevant to the Corporation.

Events after the end of the reporting period
Between May 10, 2021 and May 13, 2021, the Corporation shipped 4,400kg of OxC-Beta Livestock to the Philippines in settlement of a purchase order.

On June 1, 2021, 2,774,991 subscriber warrants with an exercise price of $0.90 per warrant expired.

Additional information relating to the Corporation may be found at www.sedar.com