# PASCAL BIOSCIENCES INC. (formerly BIOMMUNE TECHNOLOGIES INC.) Suite 1780 – 400 Burrard Street, Vancouver, BC, Canada

#### Form 51-102F1

# Management's Discussion & Analysis of Financial Condition and Results of Operations for the Financial Three Months Ended February 28, 2017

Date: April 28, 2017

#### Management's Discussion and Analysis

The following management discussion and analysis (MD&A) of the financial information of bioMmune Technologies Inc. (the "Company") and results of operations should be read in conjunction with the Company's condensed consolidated interim financial statements for the three months ended February 28, 2017 and February 29, 2016 and the audited consolidated financial statements and accompanying notes for the year ended November 30, 2016. These documents are intended to provide investors with a reasonable basis for assessing the financial performance of the Company as well as forward-looking statements relating to future performance. The financial statements are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and include the operating results of the Company.

This MD&A was reviewed by the Audit Committee and approved and authorized for issue by the Board of Directors on April 28, 2017. The information contained within this MD&A is current to April 28, 2017.

The Company's critical accounting estimates, significant accounting policies and risk factors have remained substantially unchanged and are still applicable to the Company unless otherwise indicated. All amounts are expressed in Canadian Dollars unless noted otherwise.

## **Forward-Looking Statements**

Certain statements contained in this MD&A may constitute forward-looking statements. These forward-looking statements can generally be identified as such because of the context of the statements, including such words as "believes", "anticipates", "expects", "plans", "may", "estimates", or words of a similar nature. Such forward-looking statements involve a number of known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements of the Company to be materially different from anticipated future results and/or achievements expressed or implied by such forward-looking statements, which speak only as of the date the statements were made. Readers are therefore advised to consider the risks associated with any such forward-looking statements, which speak only as of the date the statements were made, and readers are advised to consider such forward-looking statements in light of the risks set forth herein.

## Overview

The Company was incorporated on January 28, 2011 pursuant to the *Business Corporations Act*, British Columbia, under the name MC Partners Inc. as a capital pool company as defined by Policy 2.4 (the "CPC Policy") of the TSX Venture Exchange (the "Exchange"). On May 24, 2013, the Company acquired all of the issued and outstanding shares of bioMmune Advanced Technologies Inc. (formerly bioMmune Technologies Inc.) ("BAT"), a private company formed to commercially exploit a number of patents and patent applications that surround three technologies. The acquisition constituted the Company's Qualifying Transaction pursuant to the CPC Policy of the Exchange. On May 22, 2013, the Company changed its name to bioMmune Technologies Inc. On March 30, 2017, the Company changed its name to Pascal Biosciences Inc. The Company is a Tier 2 Research and Development Issuer engaged in the research and development of products for the treatment of cancers and for improvement of the immune system, trading on the Exchange under the trading symbol "PAS".

Additional information relating to the Company can be found on the SEDAR website at www.sedar.com.

## **Overall Performance**

Research and Development

Please refer to "Intangible Assets" below for updates on the Company's research and development.

## Appointment of Chief Scientific Officer, New Chief Executive Officer and President

Effective December 2, 2015, the Company appointed Dr. Patrick W. Gray as Chief Scientific Officer to oversee the scientific operations of the Company. On April 22, 2016, the Company appointed Dr. Gray to serve as Chief Executive Officer and President. Dr. Gray has worked in the biotechnology industry for the past 35 years and gained extensive experience in drug discovery at Genentech, ICOS and Macrogenics. He also has previous executive experience as Chief Scientific Officer, as CEO and as a director on several Boards. His previous efforts led to the development of multiple drugs (such as Interferongamma and other immunomodulatory agents) and drug targets (CCR5 and PI3 Kinase p110delta) and to development of a Hepatitis B vaccine and Cialis. Dr. Gray will lead the Company's R&D programs and financing activities.

#### **Appointment of Director**

On September 20, 2016, the Company appointed Thomas Gadek, PhD, to its Board of Directors. Dr. Gadek has had an illustrious career in the biotechnology industry spanning 33 years. He discovered and developed several novel first in class molecules addressing emerging protein therapeutic targets. These efforts have been chronicled with Dr. Gadek as an author of 54 peer reviewed publications and as an inventor on 64 issued and 76 pending United States patents. Dr. Gadek initially gained experience and expertise at larger companies, 5 years at Syntex and 15 years at Genentech. He founded the venture backed startup SARcode, where he was CEO. Dr. Gadek engineered the target identification, lead discovery, and clinical proof of concept for the development of Lifitegrast, a treatment for dry eye. This resulted in the acquisition of SARcode by Shire, and the approval of Lifitegrast by the FDA in 2016. Throughout his career, Dr. Gadek has gained experience in many critical aspects of modern drug discovery and development. His expertise covers the realm of immunology and inflammation, particularly in the fields of ophthalmology and dermatology. As a renowned medicinal chemist, he has pioneered the understanding of the transfer of protein epitopes to small molecule scaffolds for the identification of inhibitors of protein-protein interactions. Dr. Gadek obtained his PhD in Chemistry from the University of California, Berkeley following a Bachelors degree from the University of Colorado and a Masters degree from MIT.

#### **Executive Chairman**

Effective December 22, 2015, the Company terminated, without cause, its consulting agreement with Mr. Robin Hutchison in his role as Executive Chairman. Pursuant to his consulting agreement with the Company, Mr. Hutchison received a lump sum payment of \$72,000, equal to nine months' compensation.

## **Stock Options and Warrants**

In December, 2016, 1,883,000 share purchase warrants were exercised for total consideration of \$564,900.

During the year ended November 30, 2016, 725,000 incentive stock options were exercised for total consideration \$156,000 and 3,116,668 share purchase warrants were exercised for total consideration of \$1,001,667.

During the year ended November 30, 2016, 400,000 incentive stock options were cancelled or expired, unexercised.

On April 1, 2016, the Company granted 820,000 incentive stock options to directors and officers of the Company. The stock options are exercisable at a price of \$0.36 per share for a period of five years. The options will vest quarterly over the period of one year.

On October 5, 2016, the Company granted 392,000 stock options to directors and officers of the Company, exercisable at a price of \$0.72 for a period of five years. The options will vest quarterly over the period of one year.

#### **Financial Position**

The condensed consolidated statement of financial position as at February 28, 2017 indicates a cash position of \$1,276,694 (November 30, 2016: \$1,028,055). Other current assets are comprised of prepaid expenses of \$86,713 (November 30, 2016: \$44,332) and GST receivable of \$23,292 (November 30, 2016: \$18,314). Non-current assets at February 28, 2017 are comprised of computer equipment of \$2,587 (November 30, 2016: \$3,000) and intangible assets of \$849,003 (November 30, 2016: \$870,453).

Current liabilities at February 28, 2017 total \$87,740 (November 30, 2016: \$113,055) are comprised of audit fees of \$18,000 (November 30, 2016: \$18,000), research and development fees of \$23,977 (November 30, 2016: \$8,828), legal fees of \$21,647 (November 30, 2016: \$63,247), consulting fees of \$11,750 (November 30, 2016: \$nil), payroll income taxes and CPP of \$1,500 (November 30, 2016: \$81,579), travel of \$1,191 (November 30, 2016: \$nil), listing fees of \$8,190 (November 30, 2016: \$nil) and general administrative expenses of \$1,109 (November 30, 2016: \$4,401).

Shareholders' equity is comprised of share capital of \$6,378,406 (November 30, 2016: \$5,813,506), reserves of \$586,197 (November 30, 2016: \$511,481) and an accumulated deficit of \$4,814,054 (November 30, 2016: \$4,473,888).

Option reserves increased \$74,716 in connection with options granted vesting during the period.

As at February 28, 2017, the Company had working capital of \$1,298,958 (November 30, 2016: \$977,646).

The weighted average number of common shares outstanding, basic and diluted, as at February 28, 2017 was 37,232,547 (November 30, 2016: 32,437,139).

# **Intangible Assets**

intangible Assets	
Cost	\$
Balance, November 30, 2015 and 2016	1,172,516
Additions	-
Balance, February 28, 2017	1,172,516
Accumulated Amortization	\$
Balance, November 30, 2015	216,263
Charge for the year	85,800
Balance, November 30, 2016	302,063
Charge for the period	21,450
Balance, February 28, 2017	323,513
Carrying Value	\$
Balance, November 30, 2016	870,453
Balance, February 28, 2017	849,003

Pursuant to the terms of the October 2012 patent assignment agreement with the University of British Columbia ("UBC"), the Company paid UBC an assignment fee of \$300,000 applied to three technologies involved in research projects on cancer proteins. On May 24, 2013, the Company acquired BAT and the difference between the purchase considerations and the fair values of BAT's net assets has been assigned to intangible assets (\$17,689), the amount of which is \$854,827.

The asset is amortized over its estimated useful life, using the straight-line method. From the date of acquisition of the above patents, the estimated useful life is 13.7 years.

## **Core Technologies**

1. Novel Histone Deacetylase Inhibitors (HDACis) that are able to increase antigen expression on the surface of tumour cells, making them more visible to the immune system. These HDACis will be useful as cancer therapeutics by enabling the immune system to attack and eliminate cancers.

Many cancer cells, including those that are metastatic, escape immune recognition and elimination after selection by immune editing whereby tumour antigens are not properly displayed on the cell surface. These escape variants have deficiencies in the endogenous Antigen Processing Pathway (APP) and do not express sufficient Major Histocompatibility Complex I (MHC I) molecules and their associated tumour antigen peptides at the cell surface. Thus these tumour cells evade recognition by host immune surveillance mechanisms, making them resistant to most immunotherapeutic approaches for elimination of cancer. The Company showed that by restoring the function of the Transporter of Antigen Processing 1 (TAP1) molecule in the APP, the presentation of tumour antigens at the cancer cell surface was restored and immune responses were enhanced in metastatic disease. Research revealed that the mechanism leading to the TAP1 defect and poor antigen presentation is not regulated by mutations in the TAP-1 gene, but that it is epigenetically regulated and can be restored by treatment with HDACis. By developing a high-throughput screening assay applied to extracts from deep-sea sponges, bioMmune has identified several unique HDACis that induce antigen presentation in metastatic prostate and lung carcinomas.

In February 2014, the Company entered into an agreement with UBC whereby UBC conducted research to identify compounds that increase the expression of the TAP1 protein, a part of the APP, thus increasing expression of MHC 1 molecules on the surface of metastatic tumour cells, thereby increasing tumour antigen expression and rendering them visible to the immune system.

Much of the initial screening process has been completed and positive hits from the screening of the library of marine extracts were obtained. Initial results showed that several extracts increased TAP-1 and MHC I expression. From these extracts, new chemical structures that exhibit efficient restoration of the APP were identified. Subsequently, screening of additional extracts and purified compounds was performed and several more active compounds were identified. One compound, curcuphenol, was identified as a single active compound. Curcuphenol and four new analogues have been synthesized and shown to induce high cell-surface expression of MHC 1. These analogues are being produced in sufficient quantities to start testing them for anti-tumour activity in animals.

One of the analogues of curcuphenol (PC-02-113) has been tested *in vivo* and did not show any apparent acute toxicity, or any cumulative, chronic toxicity over the course of the treatment. PC-02-113 was shown to be as effective as another well-known HDAC inhibitor, Trichostatin A (TSA) in inhibiting the growth of tumours. TSA is an organic compound that serves as an antifungal antibiotic and selectively inhibits the class I and II mammalian histone deacetylase (HDAC) families of enzymes. Further work in 2016 and into 2017 involved testing curcophenol, the other 3 curcuphenol analogs and newly identified HDACis for anti-tumour activity *in vivo*.

During fiscal 2014, the Company paid UBC an aggregate of \$130,000 to cover the cost of the research under the agreement, which terminated on January 31, 2015. On August 12, 2015, the Company entered into a collaborative research agreement with UBC to further this research and advanced UBC \$50,000 to cover the scope of this research. On December 21, 2015, the Company amended the collaborative research agreement to continue the research and advanced a further \$50,000 to UBC in March, 2016. In September, 2016, the Company and UBC extended the agreement to March 31, 2018 under which the Company will pay UBC an additional \$132,000 to continue the research. In September, 2016, the Company advanced \$33,000 (25%) to UBC and a further \$33,000 was advanced in December, 2016. A further \$33,000 was advanced in March 2017. A final payment of \$33,000 is payable on June 1, 2017.

2. Regulation of immune system activity involved in diseases such as allergy, autoimmunity and cancer by antibody-mediated modulation of selected calcium channel activity.

In January, 2014, the Company entered into an agreement with UBC whereby UBC conducted research to derive monoclonal antibodies (mAbs) that modulate the activation of specific calcium channels which are associated with the proliferation and induction of cells of the immune system. These antibodies were selected for their ability to modulate the function of specialized white blood cells (lymphocytes) that are involved in a variety of human diseases and in transplantation of tissues and organs. The calcium channels on lymphocytes are a multi-member family comprised of more than 10 different proteins. The activity of these channels is regulated to control intracellular concentrations of calcium (Ca) which determines the proliferation and activity of cells involved in immune responses. Antibodies generated against different forms of the calcium channels may act as new calcium channel regulators and in some cases have been shown to inhibit the proliferation and functional differentiation of lymphocytes. Such antibodies may allow modulation of the immune system to combat cancers and infections and to control autoimmune diseases, allergy and transplantation responses. A large number of mAbs were derived against specific external domains of voltage-dependent calcium channel isoforms Cav 1-1, Cav1-2, Cav1-3 and Cav1-4. These mAbs were evaluated for binding to Jurkat cells and several were found to inhibit Jurkat cell growth *in vitro*. In ongoing work, testing for inhibition of Jurkat cell growth will also be performed *in vivo*. The same mAbs will be used *in vivo* to determine their effect on modulation of immune responses, including anti-cancer immune activity.

During fiscal 2014, the Company paid UBC \$130,000 to cover the scope of this research. In June 2015, an additional service agreement was finalized with UBC. The Company paid a total of \$100,000 to UBC to continue research to identify anti-Cav1-4 mAbs for use in the treatment of leukaemias and for the modulation of the immune reaction in auto-immune disorders. In June, 2015, \$50,000 was paid to UBC and in January 2016, a final payment of \$50,000 was made. In September, 2016, the Company and UBC amended the agreement, extending it to March 31, 2018 and agreed to pay UBC an additional \$132,000 to continue the research. In September, 2016, the Company advanced \$33,000 (25%) to UBC and a further \$33,000 was advanced in December, 2016. A further \$33,000 was advanced in March 2017. A final payment of \$33,000 is payable on June 1, 2017.

3. Use of CD74 protein to control antigen presentation for regulation of the immune system.

CD74 is a protein that is centrally involved in initiation of immune responses. The use of compounds that regulate CD74 activity will allow modulation of the immune system to combat cancers and infections and to control allergy, autoimmune diseases and graft rejection.

Dendritic cells are part of the innate immune system and are the principal antigen-presenting cells that initiate adaptive immune responses. Dendritic cells take up dead cells and cellular debris containing antigenic proteins and process these exogenously derived antigens for ultimate display on the cell surface in the Major Histocompatibility Complex class I (MHC I) molecules. This process is essential for induction of immune responses against cancers and for a variety of infectious organisms. Down-regulation of this processing will allow dampening of immune responses in autoimmune diseases, in allergic reactions and in transplantation. The discovery that CD74 mediates trafficking of MHC I to compartments for loading with peptides from exogenously derived antigens offers new avenues for controlling this activity, for example by engineering of hybrid molecules composed of CD74 and antigenic molecules, to be used for enhancing vaccine efficacy.

Derivation of recombinant DNA constructs consisting of the CD74 gene combined with DNA sequences encoding a variety of antigenic molecules is underway. These constructs will be transfected into specific cells for expression of the protein. CD74 gene constructs including DNA encoding peptides from viruses such as HIV and Influenza were made and introduced into adenovirus vectors. These modified viruses will be used to infect and produce proteins in dendritic cells (the supreme antigen presenting cells). In a first test of this system, expression of ovalbumin with CD74 increased the expression of MHC class I containing a specific antigenic peptide at the cell surface of dendritic cells. Data obtained confirmed that expression of antigenic proteins with CD74 increased the immune reaction against viral infection *in vivo*. These antigen-presenting cells will thus be used to test their effect on increased immune responses *in vivo*. This approach may lead to the development of more efficient and better vaccines.

During fiscal 2014, the Company paid UBC \$130,000 to cover the scope of this research. In June 2015, an additional service agreement was finalized with UBC to continue research to develop new, more efficient vaccines against viral infections. In June, 2015, \$50,000 was paid to UBC and in January 2016, a payment of \$50,000 was made. In September, 2016, the Company and UBC amended the agreement, extending it to March 31, 2018 and the Company agreed to pay UBC an additional \$50,000 to continue the research. In September, 2016 the Company advanced \$25,000 to UBC. The balance of \$25,000 was paid in December, 2016.

During the three months ended February 28, 2017, the Company incurred research and development costs of \$85,595 (2016: \$100,378) comprised of UBC lab work of \$53,134 (2016: \$33,332) pursuant to research agreements as described above and legal fees of \$32,641 (2016: \$67,046) associated with filing patent continuities and with maintaining protection of patent applications currently owned by the Company.

### **Patents**

In June, 2016, the Company was awarded its first patent for monoclonal antibodies that modulate voltage gated calcium channels in immune cells. The patent was awarded from China for a period of 20 years. Voltage gated calcium channels are validated drug targets for blood pressure, pain, and heart arrhythmia. However, all currently approved calcium channel drugs are small molecules, while the Company's patent covers monoclonal antibodies specific for immune cell targets. Monoclonal antibodies offer excellent safety profiles and have several additional advantages over small molecules, including high specificity, long half-life, and the ability to deliver chemical payloads to target cells.

The Company has been very active on the patent "Methods and compositions for modulating voltage-gated calcium channel function" and has initiated worldwide patent applications for this technology.

The Company also holds a patent in Australia for a separate related technology covering novel compounds that restore immune recognition of cancer cells and increasing their subsequent destruction.

## **Results of Operations**

During the three months ended February 28, 2017, the Company reported a net loss of \$340,166 (\$0.01 basic and diluted loss per share) compared to a net loss of \$351,654 (\$0.01 basic and diluted loss per share for the same period in Fiscal 2016).

## **Summary of Quarterly Results**

The following table presents selected quarterly financial information of the Company for the eight most recently completed quarters of operation prepared in accordance with IFRS and expressed in Canadian Dollars.

	2017	2016			2015			
	Q1	Q4	Q4 Q3 Q2 Q1			Q4	Q3	Q2
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	-	ı	•	-	-	1	•	-
Net Loss	340,166	410,546	383,783	413,018	351,654	472,239	195,632	176,737
Basic and diluted								
Loss per share	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.00

Share-based payments impacts expenses and net and comprehensive loss as follows: Q1 2017: \$71,716, Q4 2016: \$96,997, Q3 2016: \$75,649, Q2 2016: \$80,369, Q1 2016: \$52,306, Q4 2015: \$87,712, Q3 2015: \$985, and Q2 2015: \$1,372.

The net loss for quarter four of the year ended November 30, 2015 was higher than quarter four of November 30, 2016 primarily as a result of increased consulting fees related to termination pay of \$72,000 payable to a director of the Company, which was paid in fiscal 2016.

The Company's significant accounting policies are set out in Note 3 of the audited annual consolidated financial statements as at and for the year ended November 30, 2016.

#### **Analysis of Quarterly Results**

		February 28,	February 29.	
For the three months ended:	Notes	2017	2016	
		\$	\$	
General and administrative expenses				
Administrative and general office		9,898	14,348	
Amortization		21,863	21,862	
Bank charges and interest		530	401	
Consulting fees		99,250	101,135	
Foreign exchange loss/(gain)	a)	(1,210)	26,090	
Insurance		2,548	2,042	
Investor relations and marketing		-	8,438	
Legal fees	b)	31,809	1,200	
Research and development		85,595	100,378	
Share-based payments	c)	74,716	52,306	
Travel and entertainment	d)	12,854	19,069	
Transfer agent, listing and filing fees		3,069	5,497	

- a) Foreign exchange was low during the period ended February 28, 2017 due to adjustments to accrued foreign exchange.
- b) Legal fees legal fees increased during the three months ended February 28, 2017 due to corporate consulting during the period.
- c) Share-based payments the increase year over year is due to vesting of option grants during the three months ended February 28, 2017 with a higher fair value compared to the same period in fiscal 2016.
- d) Travel and conferences expenses for the three months ended February 29, 2016, include increased travel by directors to attend conferences and meetings.

## **Liquidity & Capital Resources**

The Company has financed its operations to date through the issuance of common shares.

	February 28, 2017		February 29, 2016	
Working capital	\$	1,298,958	\$	749,427
Deficit	\$	4,814,054	\$	3,298,640

During the three months ended February 28, 2018, net cash used in operating activities was \$316,261 (2016: \$344,019), comprised of a loss of \$340,166 (2016: \$318,983) net of amortization expense of 21,863 (2016: \$21,862) and share-based payments of \$74,716 (2016: \$52,306), an increase in prepaid expenses of \$42,381 (2016: \$68,531), an increase in GST receivable of \$4,978 (2016: a decrease of \$15,313) and a decrease in accounts payable and accrued liabilities of \$25,315 (2016: \$13,315).

Cash from investing activities was \$nil (2016: \$2,394).

Cash from financing activities was \$564,900 (2016: \$32,200). During the three months ended February 28, 2017, 1,883,000 share purchase warrants were exercised at a price of \$0.30 for total consideration of \$564,900.

The Company does not expect its current capital resources to be sufficient to cover its operating costs and future research and development expenditures through the next twelve months. As such, the Company will seek to raise additional capital and believes it will be able to do so, but recognizes the uncertainty attached thereto. If the Company is unable to obtain additional financing, management may be required to further curtail certain discretionary expenses. Funding requirements may vary from those planned due to a number of factors, including the progress on research and development initiatives.

## **Off-Balance Sheet Arrangements**

The Company has no off-balance sheet arrangements that would potentially affect current or future operations or the financial condition of the Company.

## **Related Party Transactions**

The following is a summary of related party transactions that occurred during the three months ended February 28, 2017 and February 29, 2016:

## Key management compensation:

Services provided by:		2017	2016
		\$	\$
Robin Hutchison (RBH Consulting Inc.)	a)	-	5,885
Dr. Patrick Gray (MolaQule LLC)	b)	30,000	30,000
Judi Dalling	c)	16,250	16,250
Jens Biertumpel	d)	6,500	2,500
Dr. Reinhard Gabathuler (Cydweli Consultants Inc.)	e)	24,000	24,000
Share-based payments		74,716	36,484
		151,466	115,119

- a) Robin Hutchison, a former director and Executive Chairman of the Company provided consulting services to the Company in December, 2016.
- b) Dr. Patrick Gray, a director and Chief Scientific Officer of the Company, provided consulting services to the Company.
- c) Judi Dalling, the CFO of the Company, provided consulting services to the Company.
- d) Jens Biertumpel, a director of the Company, provided consulting services to the Company.
- e) Dr. Reinhard Gabathuler, a director of the Company, provided consulting services to the Company.

Other related party transactions include:

A sum of \$8,067 (2016: \$16,186) is included in accounts payable and accrued liabilities for disbursements payable to officers and directors of the Company.

## **Proposed Transactions**

The Company does not currently have any proposed transactions approved by the Board of Directors. All current transactions are fully disclosed in the condensed consolidated interim financial statements for the three months ended February 28, 2017.

## Commitments

Commitments over the next five years are as follows:

	\$
2017	488,000
2018	341,000
2019	341,000
2020	341,000
2021	341,000
2022	85,000
	1,937,000

Effective June 1, 2103, the Company entered into consulting agreements as follows:

- a) Consulting agreement with Cydweli Consultants Inc., a privately held corporation controlled by Dr. Reinhard Gabathuler, to provide consulting services to the Company for a fee of \$96,000 per year (See also "Related Party Transactions above);
- b) Consulting agreement with Judi Dalling, CFO of the Company, to provide consulting services to the Company for a fee of \$65,000 per year (See also "Related Party Transactions above);
- c) Consulting agreement with 442668 BC Ltd. to provide consulting services to the Company for a fee of \$60,000 per year.

During the year ended November 30, 2015:

- d) The Company entered into a consulting agreement with MolaQule LLC, to provide consulting services to the Company for a fee of \$120,000 per year commencing December 2, 2015. MolaQule LLC is owned by Dr. Patrick W. Gray, who became Chief Scientific Officer of the Company during the year ended November 30, 2015 (See also "Related Party Transactions above); and
- e) The Company entered into three collaborative research agreements ("CRAs") with UBC to pursue research work on its technologies. The Company was required to make two \$50,000 payments, for a total of \$100,000, to UBC on January 1, 2016 (paid). During the year ended November 30, 2016, the Company and UBC amended one of the CRAs to include an additional \$50,000 payment due January 22, 2016 (paid). During the year ended November 30, 2016, the Company and UBC amended the CRAs to continue to pursue research work on the Company's technologies. Under the terms of the new agreements, the Company is required to pay an additional \$223,000 as follows:

Date	Amount
	\$
December 1, 2016	91,000 (paid)
March 1, 2017	66,000 (paid subsequent to February 28, 2017)
June 1, 2017	66,000

Each of the consulting agreements includes an automatic renewal clause, unless notification is provided by either party. In addition to the fees set forth above, incentive bonuses may be granted at the discretion of the Board of Directors.

#### Accounting standards not yet implemented

Certain new standards, interpretations and amendments to existing standards are not yet effective as of February 28, 2017 and have not been applied in preparing these consolidated financial statements. The Company is assessing the impact of this standard on its consolidated financial statements:

#### **IFRS 9 Financial Instruments**

Issued by the IASB July 2014

Effective for annual periods beginning December 1, 2018

IFRS 9 will replace IAS 39 Financial Instruments: Recognition and Measurement and IFRIC9 Reassessment of Embedded Derivatives. The final version of this new standard supersedes the requirements of earlier versions of IFRS 9.

The main features introduced by this new standard compared with predecessor IFRS are as follows:

## Classification and measurement of financial assets:

Debt instruments are classified and measured on the basis of the entity's business model for managing the asset and its contractual cash flow characteristics as either: "amortized cost", "fair value through other comprehensive income", or "fair value through profit or loss" (default). Equity instruments are classified and measured as "fair value through profit or loss" unless upon initial recognition elected to be classified as "fair value through other comprehensive income".

#### Classification and measurement of financial liabilities:

When an entity elects to measure a financial liability at fair value, gains or losses due to changes in the entity's own credit risk is recognized in other comprehensive income (as opposed to previously profit or loss). This change may be adopted early in isolation of the remainder of IFRS 9.

#### Impairment of financial assets:

An expected credit loss impairment model replaced the incurred loss model and is applied to financial assets at "amortized cost" or "fair value through other comprehensive income", lease receivables, contract assets or loan commitments and financial guarantee contracts. An entity recognizes twelve-month expected credit losses if the credit risk of a financial instrument has not increased significantly since initial recognition and lifetime expected credit losses otherwise.

# Hedge accounting:

Hedge accounting remains a choice, however, is now available for a broader range of hedging strategies. Voluntary termination of a hedging relationship is no longer permitted. Effectiveness testing now needs to be performed prospectively only. Entities may elect to continue to applying IAS 39 hedge accounting on adoption of IFRS 9 (until the IASB has completed its separate project on the accounting for open portfolios and macro hedging).

## **Financial Instruments & Other Instruments**

#### (a) Fair values

Financial instruments recognized at fair value on the consolidated statements of financial position must be classified in one of the following three fair value hierarchy levels:

Level 1 - measurement based on quoted prices (unadjusted) observed in active markets for identical assets or liabilities;

Level 2 – measurement based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability; or

Level 3 – measurement based on inputs that are not observable (supported by little or no market activity) for the asset or liability.

As at February 28, 2017, the Company's financial instruments are comprised of cash and cash equivalents and accounts payable and accrued liabilities. With the exception of cash and cash equivalents and short-term investments, all financial instruments held by the Company are measured at amortized cost.

#### (b) Credit risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist primarily of cash and cash equivalents and short-term investments. The Company limits its exposure to credit loss by placing its cash and cash equivalents and short-term investments with high credit quality financial institutions. The carrying amount of financial assets represents the maximum credit exposure.

## (c) Liquidity risk

Liquidity risk is the risk that the Company will not be able to meets its financial obligations as they become due. The Company's approach to managing liquidity is to ensure that it will have sufficient funds to meet its liabilities when due.

At February 28, 2017, the Company had cash and cash equivalents of \$1,276,694 (November 30, 2016: \$1,028,055) available to apply against short-term business requirements and current liabilities of \$87,740 (November 30, 2016: \$113,055). All of the liabilities presented as accounts payable and accrued liabilities are due within 90 days of February 28, 2017.

## (d) Currency risk

The Company is exposed to currency risk to the extent expenditures incurred or funds received and balances maintained by the Company are denominated in currencies other than the Canadian dollar. The Company does not manage currency risks through hedging or other currency management tools.

As at February 38, 2017 and February 29, 2016, the Company's net exposure to foreign currency risk is as follows:

US dollars	2017	2016
	\$	\$
Cash	4,337	-
Accounts payable	(26,961)	(63,106)
Net exposure to foreign currency risk	(22,624)	(63,106)
Canadian dollar equivalent	(31,255)	(85,414)

Based on the above net foreign currency exposure, and assuming all other variables remain constant, a 7% weakening or strengthening of the Canadian dollar against the US dollar would not have a material effect on the Company's net loss and comprehensive loss.

### (e) Other price risk

Other price risk is the risk that future cash flows of a financial instrument will fluctuate due to changes in market prices, other than those arising from interest rate risk or foreign currency risk. The Company is not exposed to significant other price risk.

#### **Changes in Accounting Policies**

The Company has not made any changes to accounting policies during the three months ended February 28, 2017. Refer to note 3 in the audited consolidated financial statements for the year ended November 30, 2016 for the Company's significant accounting policies. Certain pronouncements were issued by the IASB that are mandatory for annual years beginning after January 1, 2016. The changes have not been early adopted are being evaluated to determine if there will be an impact on the Company.

# **Risks and Uncertainties**

### Overview

An investment the Company'shares should be considered highly speculative due to the nature of the the Company's business and the present stage of its development. In evaluating the company and its business, shareholders should carefully consider, in addition to the other information contained in this management discussion and analysis, the following

risk factors. These risk factors are not a definitive list of all risk factors associated with the Company. It is believed that these are the factors that could cause actual results to be different from expected and historical results. Investors should not rely upon forward-looking statements as a prediction of future results.

#### Competition

The market for the Company's technology is highly competitive. The Company competes with other research teams who are also examining potential therapeutics with regards to autoimmune diseases and disorders. Many of its competitors have greater financial and operational resources and more experience in research and development than the Company. These and other companies may have developed or could in the future develop new technologies that compete with the Company's technologies or even render its technologies obsolete.

Competition in the Company's markets is primarily driven by:

- timing of technological introductions;
- ability to develop, maintain and protect proprietary products and technologies; and
- expertise of research and development team.

#### **Litigation to Protect Company's Intellectual Property**

The Company's future success and competitive position depends in part upon its ability to maintain its intellectual property portfolio. There can be no assurance that any patents will be issued on any existing or future patent applications. Even if such patents are issued, there can be no assurance that any patents issued or licensed to the Company will not be challenged. The Company's ability to establish and maintain a competitive position may be achieved in part by prosecuting claims against others who it believes to be infringing its rights. In addition, enforcement of the Company's patents in foreign jurisdictions will depend on the legal procedures in those jurisdictions. Even if such claims are found to be invalid, the Company's involvement in intellectual property litigation could have a material adverse effect on its ability to distribute any products that are the subject of such litigation. In addition, the Company's involvement in intellectual property litigation could result in significant expense, which could materially adversely affect the use responsibilities, whether or not such litigation is resolved in the Company's favour.

#### **Clinical testing and Regulatory approval**

Since the Company's success is dependent on the successful completion of a third party pre-clinical trials, regulatory approval and introduction of its technology into the market and since the Company has completed none of the tasks at this time, the Company does not know if it will be able to complete them.

The timing of these events can vary dramatically due to factors such as delays or failures in the Company's clinical trials and the uncertainties inherent in the regulatory approval process. The Company might not be able to obtain the necessary results from its pre-clinical trials or to gain regulatory approval necessary for licensing its technology. The Company's failure to achieve these objectives will mean that an investor will not be able to recoup their investment or to receive a profit on their investment.

## **Intellectual Property**

The Company's success depends to a significant degree upon its ability to develop, maintain and protect proprietary products and technologies. The Company files patent applications in the United States, Canada, Europe, and selectively in other foreign countries as part of its strategy to protect its proprietary products and technologies. However, patents provide only limited protection of the Company's intellectual property. The assertion of patent protection involves complex legal and factual determinations and is therefore uncertain and expensive. The Company cannot provide assurances that patents will be granted with respect to any of its pending patent applications, that the scope of any of its patents will be sufficiently broad to offer meaningful protection, or that it will develop additional proprietary technologies that are patentable. The Company's current patents could be successfully challenged, invalidated or circumvented. This could result in the Company's patent rights failing to create an effective competitive barrier. Losing a significant patent or failing to get a patent to issue from a pending patent application that the Company considers significant could have a material adverse effect on its business. The laws governing the scope of patent coverage in various countries continue to evolve. The laws of some foreign countries may not protect the Company's intellectual property rights to the same extent as the laws of Canada and the United States. The Company holds patents only in selected countries. Therefore, third parties may be able to replicate technologies covered by the Company's patents in countries in which it does not have patent protection.

#### **Legal Proceedings**

In the course of the Company's business, the Company may from time to time have access to confidential or proprietary information of third parties, and these parties could bring a claim against the Company asserting that it has misappropriated their technologies and had improperly incorporated such technologies into its products. Due to these factors, there remains a constant risk of intellectual property litigation affecting the Company's business. In the future, the Company may be made a party to litigation involving intellectual property matters and such actions, if determined adversely, could have a material adverse effect on the Company.

#### **Dependence upon Management**

Although the Company Issuer is expected to have experienced senior management and personnel, it will be substantially dependent upon the services of a few key personnel, particularly Drs. Patrick Gray, Wilfred Jefferies and Reinhard Gabathuler, for the successful operation of its business. The loss of the services of any of these personnel could have a material adverse effect on the business of the Company. The Company may not be able to attract and retain personnel on acceptable terms given the intense competition for such personnel among high technology enterprises, including biotechnology, and healthcare companies, universities and non-profit research institutions. If it loses any of these persons, or is unable to attract and retain qualified personnel, its business, financial condition and results of operations may be materially and adversely affected.

## **Going Concern**

The ability of the Company to continue as a going concern is dependent on its ability to generate future profitable operations and to obtain additional debt or equity financing. There can be no assurance that the Company's operations will achieve profitability in the future or that the the Company will be able to successfully obtain financing on commercially reasonable terms or at all.

### **Substantial Capital Requirements and Liquidity**

Substantial additional funds for the Company's research and development programs will be required. No assurances can be given that the the Company will be able to raise the additional funding that may be required for such activities. To meet such funding requirements, the Company may be required to undertake additional equity financing, which would be dilutive to shareholders. Debt financing, if available, may also involve restrictions on financing and operating activities. There is no assurance that additional financing will be available on terms acceptable to the Company or at all. If the Company is unable to obtain additional financing as needed, it may be required to reduce the scope of its operations, or even cease its operations.

# **Reliance on Third Parties**

The Company is relying on a third party to assist it in conducting both pre-clinical and clinical trials. If this third party does not successfully carry out their contractual duties or meet expected deadlines, the Company may not be able to obtain regulatory approval for or commercialize its technology.

#### **Unproven market**

The Company believes that there will be many different applications for its technologies and that the anticipated market for these technologies will continue to expand. However, no assurance can be given that these beliefs will be correct owing, in particular, to competition from existing technologies or new technologies and the yet to be established replication of the Company's pre-clinical results.

#### **Limited Operating History**

The Company has neither a history of earnings nor has it paid any dividends and it is unlikely to pay dividends or enjoy earnings in the immediate or foreseeable future.

## **Conflicts of Interest**

Certain of the directors and officers of the Company are engaged in, and will continue to engage in, other business activities on their own behalf and on behalf of other companies (including research and development companies) and, as a result of these and other activities, such directors and officers may become subject to conflicts of interest. The *Business Corporations Act*, (British Columbia) ("BCBCA") provides that in the event that a director has a material interest in a contract or proposed contract or agreement that is material to an issuer, the director shall disclose his interest in such contract or agreement and shall refrain from voting on any matter in respect of such contract or agreement, subject to and in accordance with the BCBCA. To the extent that conflicts of interest arise, such conflicts will be resolved in accordance with the provisions of the BCBCA.

#### Market risk

The Company's securities trade on public markets and the trading value thereof is determined by the evaluations, perceptions and sentiments of both individual investors and the investment community taken as a whole. Such evaluations, perceptions and sentiments are subject to change, both in short term time horizons and longer term time horizons. An adverse change in investor evaluations, perceptions and sentiments could have a material adverse outcome on the Company and its securities.

#### **Share Price Volatility and Price Fluctuations**

In recent years, the securities markets in Canada have experienced a high level of price and volume volatility, and the market prices of securities of many companies, particularly junior mineral exploration companies like the Company, have experienced wide fluctuations which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that these price fluctuations and volatility will not continue to occur.

## Other MD&A requirements

#### Information available on SEDAR

As specified by National Instrument 51-102, the Company advises readers of this MD&A that important additional information about the Company is available on the SEDAR website – www.sedar.com.

## Disclosure by venture issuer

An analysis of the material components of the Company's general and administrative expenses is disclosed in the financial statements to which this MD&A relates.

#### **Outstanding share data**

Common shares issued and outstanding as at February 28, 2017 are described in detail in Note 7 to the condensed consolidated interim financial statements for the three months ended February 28, 2017.

As at the date of this document, April 28, 2017, the Company had the following number of securities outstanding:

	Number of shares	\$	Number of options	Exercise price	Expiry date
Issued and outstanding	37,398,085	6,378,4069			
			575,000	\$0.23	June 19, 2018
			150,000	\$0.20	September 24, 2018
			750,000	\$0.31	August 4. 2020
			820,000	\$0.35	April 1, 2021
			392,000	\$0.72	October 3, 2021
			Number of		
			share purchase		
			warrants		
			1,333,332	\$0.40	November 18, 2017