# 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 Year Ended November 30, 2017

### Date: April 2, 2018

# Management's Discussion and Analysis

The following management discussion and analysis (MD&A) of the financial information of Pascal Biosciences Inc. (formerly bioMmune Technologies Inc.) (the "Company") and results of operations should be read in conjunction with the Company's audited consolidated financial statements and accompanying notes for the years ended November 30, 2017 and 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 2, 2018. The information contained within this MD&A is current to April 2, 2018.

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 communicate 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 communicate only as of the date the statements, which communicate 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. ("BAT"), a private company (incorporated on July 5, 2012) 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 27, 2017, the Company incorporated Pascal Biosciences (US), Inc., a wholly-owned subsidiary, in Seattle, Washington. On March 30, 2017, the Company changed its name to Pascal Biosciences Inc. The Company is a Tier 2 Biotechnology 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

In March 2017, Pascal Biosciences (US), Inc. began operating a research lab in Seattle, Washington. On April 10, 2017, three employees were hired to work in the lab.

On September 11, 2017, Pascal announced that the Company has executed an exclusive, worldwide license option agreement with STC.UNM, the University of New Mexico's technology-transfer and economic-development organization, to acquire a therapeutic monoclonal antibody for B-cell precursor acute lymphoblastic leukemia (BCP-ALL). BCP-ALL is the most common childhood cancer, with the incidence peaking around two to five years of age, and is also seen in older adults above age fifty. Current immunotherapies for this leukemia are imperfect thus there is a need for new approaches for treatment. The monoclonal antibody originally identified by the New Mexico laboratory has properties that suggests its suitability for delivering cytotoxic agents to tumour cells in the form of an antibody-drug conjugate, thus killing the cancer cells (details below: *"Core Assets – "Modulating the Immune System"*, pages 3-6).

On February 21, 2018, the Company announced that it has discovered certain cannabinoids that enhance the immunogenicity of tumour cells, rendering them more susceptible to recognition by the immune system. This discover is important because the leading class of new cancer fighting agents, termed "checkpoint inhibitors", activates the immune system to destroy cancer cells. The Company is looking forward to continuing to translate the results of the findings into clinical studies.

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

## Share Capital, Stock Options and Warrants

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

On June 26, 2017, the Company granted an aggregate of 640,000 stock options to directors, officers, consultants and employees of the Company, exercisable at a price of \$0.33 per optioned share for a period of five years, vesting over a period from 12 to 24 months.

On January 29, 2018, the Company granted an aggregate of 250,000 stock options to directors of the Company, exercisable at a price of \$0.29 per optioned share for a period of five years, vesting quarterly over one year.

On November 3, 2017, the Company extended the exercise date of 1,333,332 share purchase warrants, which had been exercisable until November 18, 2017, to May 18, 2018.

On February 22, 2018, 200,000 stock options were exercised at a price of \$0.23 per share for gross proceeds of \$46,000.

On March 8, 2018, the Company closed a non-brokered private placement of 12,875,000 units at a price of \$0.40 per unit for gross proceeds of \$5,150,000. Each unit consists of one common share and one common share purchase warrant to purchase one additional common share at a price of \$0.60 per share for a period of 12 months up to and including March 12, 2019. Under the exercise acceleration clause, if the Company's shares are trading at or above a volume weighted average price of \$0.80 for 10 consecutive trading days, the warrants will expire upon 30 days from the date the Company provides notice in writing to the Warrant holders via a news release. The private placement closed on March 8, 2018. The Company paid a finders fees of \$387,280 and issued finders' warrants 986,600 finders' warrants. Each finders' warrant entitles the holder to purchase one common share of the Company at a price of \$0.60 per share for a period of twelve months up to and including March 12, 2019, subject to an exercise option clause.

On March 8, 2018, the Company also closed a private placement of 387,594 units at a price of \$0.32 per unit for gross proceeds of \$124,030. Each unit consists of one common share and one full common share purchase warrant. Each warrant entitles the holder to purchase one additional common share of the Company at a price of \$0.40 per share for a period of twenty four months, subject to an exercise acceleration clause. Under the exercise acceleration clause, if the Company's shares are trading at or above a volume weighted average price of \$0.50 for 10 consecutive trading days, the warrants will expire upon 30 days from the date the Company provides notice in writing to the Warrant holders via a news release.

### Board of Directors

On December 5, 2017, the Company appointed Dr. Graeme I. Bell to its Board of Directors. Dr. Bell received his BSc and MSc degrees from the University of Calgary and his PhD from the University of California, San Francisco. He is currently the Kovler Family Distinguished Service Professor in Medicine, and Human Genetics at the University of Chicago. Dr. Bell is a member of the National Academy of Medicine and the American Academy of Arts and Sciences. For his pioneering work on the genetics of diabetes, he was awarded the 2013 Banting Medal for Scientific Achievement Award, the highest scientific honor from the American Diabetes Association. This prize is awarded annually in memory of the Canadian medical scientist Sir Frederick Banting, Nobel laureate who was one of the key investigators that discovered insulin.

# **Financial Position**

The consolidated statement of financial position as at November 30, 2017 indicates a cash position of \$114,698 (November 30, 2016: \$1,028,055). Other current assets are comprised of prepaid expenses of \$72,303 (November 30, 2016: \$44,332) and receivables of \$17,235 (November 30, 2016: \$18,314). Non-current assets at November 30, 2017 are comprised of computer equipment of \$56,004 (November 30, 2016: \$3,000) and intangible assets of \$784,653 (November 30, 2016: \$870,453).

Current liabilities at November 30, 2017 total \$85,249 (November 30, 2016: \$113,055) and are comprised of research and development fees of \$23,497 (November 30, 2016: \$8,828), audit fees of \$18,000 (November 30, 2017: \$18,000), legal fees of \$36,808 (November 30, 2016: \$63,247), payroll income taxes and CPP of \$nil (November 30, 2016: \$18,579), transfer agent fees of \$721 (November 30, 2016: \$1,514), investor relations and marketing of \$6,223 (November 30, 2016: \$nil) and general administrative expenses of \$nil (November 30, 2016: \$2,887).

Shareholders' equity is comprised of share capital of \$6,378,406 (November 30, 2016: \$5,813,506), reserves of \$712,141 (November 30, 2016: \$511,481) and an accumulated deficit of \$6,130,903 (November 30, 2016: \$4,473,888).

Option reserves increased \$200,660 in connection with options granted vesting during the period.

As of November 30, 2017, the Company had working capital of \$118,987 (November 30, 2016: \$977,646).

The weighted average number of common shares outstanding, basic and diluted, as of November 30, 2017 was 37,361,873 (November 30, 2016: 32,437,139).

## **Intangible Assets**

Cost	<u> </u>
Cost	\$
Balance, November 30, 2015 and 2016	1,172,516
Additions	-
Balance, November 30, 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 year	85,800
Balance, November 30, 2017	387,863
Carrying Value	\$
Balance, November 30, 2016	870,453
Balance, November 30, 2017	784,653

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 involving cancer proteins. On May 24, 2013, the Company acquired bioMmune Advanced Technologies Inc. and the difference between the purchase considerations and the fair values of the net assets has been assigned to intangible assets (\$17,689), the amount of which is \$854,827. The assets are amortized over their estimated useful lives, using the straight-line method. From the date of acquisition of the above patents, the estimated useful life is 13.7 years.

# **Core Assets**

1. Novel natural compounds that are able to increase antigen expression on the surface of tumour cells, making them more visible to the immune system. These molecules 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. In February 2014, the Company entered into an agreement with UBC whereby UBC conducted research to identify compounds that increase the expression of the Transporter of Antigen Processing (TAP1) protein, a part of the APP. The research revealed that several identified compounds restored the function of the TAP1 molecule in the APP, thus restoring the presentation of tumour antigens at the cancer cell surface. Most exciting was that the anti-cancer immune responses were enhanced in metastatic disease in lab rodents. Research revealed that in some cases 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 histone deacetylase inhibitors. By developing a high-throughput screening assay applied to extracts from deep-sea sponges, the Company has identified several unique molecules that induce antigen presentation in metastatic prostate and lung carcinomas.

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.

Searching of the chemical structure of curcuphenol against large chemical databases revealed that some structural elements of curcuphenol are found in certain cannabinoids, compounds found in extracts of the *Cannabis sativa* plant. A number of the cannabinoids have been tested for their ability to induce MHC-I expression in human cancer cell lines. Five distinct cannabinoids registered positive in this assay, with the best inducing MHC-I expression levels to within half of the levels induced by interferon gamma, a physiologic inducer of MHC-1. Additional natural cannabinoids as well as a library of more than 300 synthetic cannabinoid-like molecules will be screened for even more potent MHC-I inducers. The best hits will provide the basis for any necessary further optimization for potency and pharmacologic properties, with the goal being to generate a therapeutic compound that will render the tumor more visible to immune surveillance. Such a molecule has the potential to dramatically increase the efficacy of checkpoint inhibitors, which depend of detection of the cancer cell by cytolytic T cells.

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 new 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 and a final payment of \$33,000 was paid in July, 2017.

2. **Monoclonal antibody regulation of selected calcium channel activity:** Application to regulation of immune system activity involved in diseases such as allergy, autoimmunity and cancer.

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 autoimmune diseases and cancer 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. The Company (through UBC) derived a large number of mAbs 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 human T lymphocyte leukemia (Jurkat) cells and several were found to inhibit Jurkat cell growth *in vitro*. Preliminary data suggest that one of the Cav1-4 antibodies slows growth of mouse P388 cells in a mouse model of leukemia.

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 leukemias and for the modulation of the immune reaction in autoimmune 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 that UBC would receive 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 and a final payment of \$33,000 was paid in July, 2017.

## 3. VpreB antibody for the treatment of acute lymphoblastic leukaemia and other leukaemias and lymphomas.

In September 2017, the Company executed an exclusive, worldwide license option agreement with STC.UNM ("STC"), the University of New Mexico's ("UNM") technology-transfer and economic-development organization, to acquire a therapeutic monoclonal antibody for B-cell precursor acute lymphoblastic leukaemia (BCP-ALL).

BCP-ALL is the most common childhood cancer, with the incidence peaking around two to five years of age, and is also seen in older adults above age fifty. On an annual basis, more than 5,500 people in the United States, and approximately 40 cases/1,000,000 worldwide present with the disease. Current treatment practices call for the implementation of chemotherapy regimens that are informed by complex treatment algorithms. While cure rates for BCP-ALL have improved significantly in recent decades, relapsed disease is a common problem, especially for patients with persistent minimal residual disease (MRD), unfavourable NCI clinical features, specific cytogenetic abnormalities, or for reasons that are not understood. Furthermore, the near- and long-term consequences of chemotherapy can be disabling. Because CD19 is ubiquitously expressed on BCP-ALL and B-cell lymphomas, it has been a logical target for immunotherapies against all B-cell neoplasms. Bi-specific T-cell engaging therapy or chimeric antigen receptor T (CAR T) cells, both with recombinantly-engineered specificity against CD19, show promise in the clinic. Unfortunately, in patients for whom anti-CD19 immunotherapies have failed, the relapsing clones either no longer express CD19, or escape immune surveillance for a variety of other reasons. Therefore, there is a need for new strategies to address relapsed disease and ultimately replace chemotherapy as a frontline treatment.

BCP-ALL is caused by genetic lesions that arise during the earliest – the pro- and pre-B cell – stages of B lymphocyte development. Unique to these early stages is the expression of the pre-B cell receptor (pre-BCR), which comprises a  $\mu$  heavy chain and a surrogate light chain, along with the accessory pre-BCR components Ig $\alpha$  and Ig $\beta$ . The surrogate light chain is made up of VpreB and  $\lambda$ 5, which are analogous to the variable and constant regions of the immunoglobulin  $\lambda$  light chain, respectively, of the mature BCR. This surrogate light chain acts as a developmental checkpoint to ensure that cells that progress from the pre-B stage to the next stage, the naïve B cell, express a functional  $\mu$  heavy chain. Because the surrogate light chain is only needed during the pro- and pre-B cell stages, it is no longer expressed during all subsequent stages of B cell development. This expression profile contrasts with those of other B cell markers such as CD19, CD20, and CD22 that are targeted by therapeutic antibodies currently in clinical development or marketed for the treatment of BCP-ALL or B-cell lymphomas. These antibodies severely deplete the B cell compartment, causing a transient humoral immune deficiency. In contrast, an antibody against VpreB would only deplete the earliest stages of the developing B cell, leaving the more mature B cells available to combat infection.

Careful examination of large gene expression databases as well as the scientific literature revealed the unexpected expression of VpreB mRNA by tumour cells of subsets of acute myelogenous leukaemia (AML) and non-Hodgkin lymphoma (NHL) patients. Experiments to screen cancer cells from large panels of these patients by immunocytochemistry using the VpreB antibody are planned. If the molecular data are confirmed at the protein level, a

VpreB biomarker assay will be developed for identifying AML and NHL patients that may also benefit from VpreB antibody treatment.

Dr. Bridget Wilson of UNM in collaboration with Sea Lane Biotechnologies, identified sixteen fully human monoclonal antibodies specific for human VpreB. Characterization of the antibodies led to the selection of a lead antibody with subnM affinity for VpreB. A monovalent form of the antibody prevents pre-BCR dimerization and signalling, which ultimately leads to cell death by apoptosis. The bivalent antibody is rapidly internalized upon binding VpreB on BCP-ALL cell lines. This property suggests the suitability of the antibody for delivering cytotoxic agents to tumour cells in the form of an antibody-drug conjugate.

The intellectual property for the VpreB antibodies was established for both UNM and Sea Lane Biotechnologies. Subsequent to the discovery of the antibodies, Sea Lane was acquired by i2 Pharmaceuticals. Therefore, discussions are underway with i2 Pharmaceuticals to establish a partnership for developing the VpreB antibody for clinical testing. The initial priority will be to develop an antibody-drug conjugate. CAR-T and T cell-recruiting bispecific antibodies will also be explored.

### 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 (HAT acetylation promoters and uses of compositions thereof in promoting immunogenicity) covering novel compounds that restore immune recognition of cancer cells and increasing their subsequent destruction.

### **Results of Operations**

During the year ended November 30, 2017, the Company reported a net loss of \$1,629,152 (\$0.04 basic and diluted loss per share) compared to a net loss of \$1,559,001 (\$0.05 basic and diluted loss per share for year ended November 30, 2016.

### Selected Annual Information

The following table provides a brief summary of the Company's financial operations for the three most recently completed financial years.

	Year Ended November 30, 2017	Year Ended November 30, 2016	Year Ended November 30, 2015
Total Revenues	\$nil	\$nil	\$nil
Net Loss and Comprehensive Loss	\$(1,657,015)	\$(1,559,001)	\$(1,145,747)
Net Loss per share, basic and diluted	\$(0.04)	\$(0.05)	\$(0.04)
Total Assets	\$1,044,893	\$1,964,154	\$2,078,308
Weighted Average Number of Shares Outstanding	37,361,893	32,437,139	26,577,948
Shareholders' Equity	959,644	1,851,099	\$1,947,162

During the year ended November 30 2017, 1,883,000 share purchase warrants were exercised for proceeds of \$564,900. Please refer to "Analysis of Annual and Quarterly Results" below for further explanations.

## 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					20	016	
	Q4 Q3 Q2 Q1		Q4 Q3 Q2 Q1 Q4		Q4	Q3 Q2		Q1
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	-	-	-	-	-	-	-	-
Net loss	356,671	569,085	391,093	340,166	410,546	383,783	413,018	351,654
Comprehensive loss	463,839	443,079	409,931	340,166	410,546	373,783	413,018	651,654
Basic and diluted								
Loss per share	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02

Share-based payments impacts expenses and net and comprehensive loss as follows: Q4 2017: \$61,182, Q3 2017: \$31,805, Q2 2017: \$35,957, Q1 2017: \$71,716, Q4 2016: \$96,997, Q3 2016: \$75,649, Q2 2016: \$80,369 and Q1 2016: \$52,306.

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, 2017.

## **Analysis of Quarterly Results**

		Year en	ded	Three month	ns ended
		Novembe	er 30,	Novembe	er 30,
	Notes	2017	2016	2017	2016
		\$	\$	\$	\$
General and administrative expenses					
Accounting and audit fees		18,320	18,298	18,000	18,000
Administrative and general office	a)	34,586	32,217	17,350	6,583
Amortization	b)	93,078	86,996	25,091	21,409
Bank charges and interest		2,845	1,555	747	403
Consulting fees	c)	277,890	395,135	42,250	94,400
Salaries and benefits	d)	345,290	-	143,308	-
Foreign exchange loss/(gain)	e)	65,600	91,486	(122,101)	25,126
Insurance	f)	11,159	8,125	(4,779)	1,999
Investor relations and marketing	g)	7,651	17,951	7,439	11,933
Legal fees	h)	139,772	70,055	39,931	65,952
Research and development	i)	414,608	458,732	91,297	65,875
Share-based payments	j)	200,660	305,321	58,182	96,997
Travel and conferences	k)	30,358	56,302	3,874	(1,408)
Transfer agent, listing and filing fees		19,249	19,569	5,987	4,132

- a) Administrative and general office Seattle office and lab rentals expensed in Q4 F2017 that should have been expensed in Q3 F2017.
- b) Amortization Fiscal 2017 includes added depreciation for lab equipment purchased during the year.
- c) Consulting fees the CEO of the Company commenced being paid as an employee in July, 2017, resulting in a decrease in consulting fees and an increase in salaries. A consulting agreement with a director of the Company was cancelled effective August 31, 2017.
- d) Salaries and benefits in addition to the CEO being paid salary from July, 2017 onward, the Company hired three employees in April, 2017 to conduct research in its Seattle laboratory.

- e) Foreign exchange as of April, 2017, the Company created a laboratory for research and development in Seattle, WA which is funded from Canada. Currency exchange rates result in the variance.
- f) Insurance the Company increased its D&O coverage in 2017 as well as insuring the Seattle facility. The variance for the three months ended November 30, 2017 was due to a reallocation of insurance paid from expense to prepaids.
- g) Investor relations and marketing During the year ended November 31, 2016, the Company participated in several conferences. During the same period in the current year, fewer conferences were attended.
- h) Legal fees legal fees increased during the year ended November 30, 2017 due to review of the Company's patent portfolio as well as corporate consulting during the period.
- Research and development during the year ended November 30, 2017, research at UBC totalled \$220,221 compared to \$296,706 during the same period in the previous year. Seattle laboratory costs totalled \$75,823 (November 30, 2016: \$nil). Legal fees associated with patent maintenance totalled \$118,564, compared to \$162,026 in F2016. During F2016, most of the Company's patents/patent applications were renewed resulting in higher fees.
- j) Share-based payments the decrease year over year is due to options becoming fully vested during the current year.
- k) Travel and conferences The Company attended fewer conferences in F2017.

## Liquidity & Capital Resources

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

	Novem	November 30, 2016		
Working capital	\$	118,987	\$	977,646
Deficit	\$ 6	,130,903	\$	4,473,888

During the year ended November 30, 2017, net cash used in operating activities was \$1,417,975 (2016: \$1,125,326), comprised of a loss of \$1,607,015 (2016: \$1,559,001) net of amortization expense of \$93,078 (2016: \$86,996) and sharebased payments of \$200,660 (2016: \$305,321), an increase in prepaid expenses of \$27,971 (2016: a decrease of \$54,932), a decrease in receivables of \$1,079 (2016: \$4,547) and a decrease in accounts payable and accrued liabilities of \$27,806 (2016: \$18,091).

Cash used in investing activities was \$60,282 (2016: \$2,394) for equipment purchases.

Cash from financing activities was \$564,900 (2016: \$1,157,617). During the year ended November 30, 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. In March 2018, the Company completed private placement of 13,262,594 units for gross proceeds of \$5,274,030. 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 year ended November 30, 2017 and 2016: Key management compensation:

Services provided by:		2017	2016
		\$	\$
Robin Hutchison (RBH Consulting Inc.)	(a)	-	5,885
Dr. Patrick Gray	(b)	120,000	120,000
Judi Dalling	(c)	65,000	65,000
Dr. Reinhard Gabathuler (Cydweli Consultants Inc.)	(d)	52,000	96,000
Jens Biertumpel	(e)	8,000	13,250
Share-based payments		168,282	286,873
Benefits	(b)	4,050	-
		417,332	587,008

- (a) RBH Consulting Inc. is a privately held corporation controlled by Robin Hutchison, a former director and former Executive Chairman of the Company, who provided consulting services to the Company. During the year ended November 30, 2015, Robin Hutchison was terminated without cause, effective December 22, 2015. As a result, the Company incurred \$72,000 plus GST, nine months of Robin Hutchison's consulting fee, as stated in the original consulting agreement during the year ended November 30, 2015. The Company paid \$5,885 plus GST during the year ended November 30, 2016 for consulting services rendered in December 2015.
- (b) Effective November 30, 2015, the Company entered into a consulting agreement with MolaQule LLC to provide consulting services for a fee of \$120,000 per year, commencing December 2, 2015. MolaQule LLC is controlled by Patrick Gray, the Chief Scientific Officer. Effective July 1, 2017, Dr. Gray became an employee of the Company and was paid a salary of \$57,118 during the year ended November 30, 2017.
- (c) Judi Dalling, the CFO of the Company, provided consulting services to the Company.
- (d) Dr. Reinhard Gabathuler, a director of the Company, provided consulting services to the Company through Cydweli Consultants Inc., a company controlled by him, for a fee of \$96,000 per year. During the year ended November 30, 2017, consulting agreement was amended to reduce the fee to \$48,000 per year and was terminated effective August 31, 2017.
- (e) Jens Biertumpel, a director of the Company, provided consulting services to the Company.

Included in accounts receivable is \$2,000 (2016: payable of \$2,000) consisting of advances made to 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 consolidated financial statements for the year ended November 30, 2017.

	\$
2018	125,000
2019	125,000
2020	125,000
2021	125,000
2022	125,000
	625,000

Effective June 1, 2013, the Company entered into consulting agreements as follows:

- a) 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); and
- b) Consulting agreement with 442668 BC Ltd. to provide consulting services to the Company for a fee of \$60,000 per year.

## Accounting standards not yet implemented

Certain new standards, interpretations and amendments to existing standards are not yet effective as of November 30, 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 November 30, 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 accounts receivables, 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 November 30, 2017, the Company had cash and cash equivalents of \$114,698 (November 30, 2016: 2016: \$1,028,055) available to apply against short-term business requirements and current liabilities of \$85,249 (November 30, 2016: \$113,055). All of the liabilities presented as accounts payable and accrued liabilities are due within 90 days of November 30, 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 November 30, 2017 and 2016, the Company's net exposure to foreign currency risk is as follows:

US dollars	2017	2016
	\$	\$
Cash	35,460	(1,936)
Accounts payable	(44,863)	(36,223)
Net exposure to foreign currency risk	(9,403)	(37,619)
Canadian dollar equivalent	(12,111)	(50,221)

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 year ended November 30, 2017. Refer to note 3 in the audited consolidated financial statements for the year ended November 30, 2017 for the Company's significant accounting policies. Certain pronouncements were issued by the IASB that are mandatory for annual years beginning after December 1, 2018. 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 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 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 November 30, 2017 are described in detail in Note 7 to the consolidated financial statements for the years ended November 30, 2017 and 2016.

As at the date of this document, April 2, 2018, the Company had the following number of securities outstanding:

	Number of shares	\$	Number of options	Exercise price	Expiry date
Issued and outstanding	50,860,679	6,378,406			
			375,000	\$0.23	June 19, 2018
			150,000	\$0.20	September 24, 2018
			750,000	\$0.31	August 4. 2020
			820,000	\$0.36	April 1, 2021
			392,000	\$0.72	October 3, 2021
			640,000	\$0.33	April 26, 2022
			250,000	\$0.29	January 28, 2023
			Number of		
			share purchase		
			warrants		
			1,333,332	\$0.40	May 18, 2018
			387,594	\$0.40	March 12, 2020
			12,875,000	\$0.60	March 12, 2019
			Number of agents' warrants		
			986,600	\$0.60	March 12, 2019