

**Form 51-102F1**

**Management's Discussion & Analysis of Financial Condition and Results of Operations for the Financial  
Nine Months Ended August 31, 2018**

**Date: October 30, 2018**

**Management's Discussion and Analysis**

The following management discussion and analysis (MD&A) of the financial information of Pascal Biosciences Inc. (the "Company") and results of operations should be read in conjunction with the Company's condensed consolidated interim financial statements for the nine months ended August 31, 2018 and 2017 and the audited consolidated financial statements and accompanying notes for the year ended November 30, 2017. 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 October 30, 2018. The information contained within this MD&A is current to October 30, 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**

This MD&A contains forward-looking statements within the meaning of applicable securities laws. All statements contained herein that are not clearly historical in nature are forward-looking, and the words "believe," "expect," "plan," "may," "will," "could," "leading," "intend," "estimate," or words of a similar nature are generally intended to identify forward-looking statements. Forward-looking statements in this MD&A include, but are not limited to, statements with respect to the Company's:

expected future loss and accumulated deficit levels;

projected financial position and estimated cash burn rate;

expectations about the timing of achieving milestones and the cost of development programs;

requirements for, and the ability to obtain future funding on favourable terms or at all;

projections for the development of our core technologies, particularly with respect to the timely and successful completion of trials and availability of results from such studies and efficacy;

expectations about its product's safety and efficacy;

expectations regarding the progress and the successful and timely completion of the various stages of regulatory processes;

ability to secure strategic partnerships with larger pharmaceutical and biotechnology companies;

expectations regarding the acceptance of our products and technologies by the market;

ability to retain and access appropriate staff, management and expert advisors;

expectations with respect to existing and future corporate alliances and licensing transactions with third parties, and the receipt and timing of any payments to be made by the Company or to the Company in respect of such arrangements; and

strategy with respect to the protection of the Company's intellectual property.

All forward-looking statements reflect the Company's beliefs and assumptions based on information available at the time the assumption was made. These forward-looking statements are not based on historical facts but rather on management's expectations regarding future activities, results of operations, performance, future capital and other expenditures (including the amount, nature and sources of funding thereof), competitive advantages, business prospects and opportunities.

By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, known and unknown, that contribute to the possibility that the predictions, forecasts, projections or other forward-looking statements will not occur. There can be no assurance that such statements will prove to be accurate, and future events and actual results could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's expectations are disclosed under the heading "Risk Factors" in the Company's Annual Information Form for the year ended November 30, 2017 and under the heading "Risk Factors" in this MD&A and other continuous disclosure documents filed from time to time via SEDAR with the applicable Canadian securities regulators.

Some of these risks and assumptions include, among others:

- substantial fluctuation of losses from quarter to quarter and year to year due to numerous external risk factors, and anticipation that the Company will continue to incur significant losses in the future;
- uncertainty as to the Company's ability to raise additional funding to support operations;
- the Company's ability to generate product revenue to maintain our operations without additional funding;
- the risks associated with the development of the Company's product candidates which are at early stages of development;
- reliance on third parties to plan, conduct and monitor our pre-clinical studies and clinical trials;
- the Company's product candidates may fail to demonstrate safety and efficacy to the satisfaction of regulatory authorities or may not otherwise produce positive results;
- risks related to filing Investigational New Drug applications (INDs), to commence clinical trials and to continue clinical trials if approved;
- the risks of delays and inability to complete clinical trials due to difficulties involved in enrolling patients;
- competition from other biotechnology and pharmaceutical companies;
- the Company's reliance on the capabilities and experience of its key executives and scientists and the resulting loss of any of these individuals;
- the Company's ability to adequately protect our intellectual property and trade secrets;
- the Company's ability to source and maintain licenses from third-party owners; and
- the risk of patent-related litigation.
- all as more fully described under the heading "Risk Factors" in this MD&A.

Although the forward-looking statements contained in this MD&A are based upon what management believes to be reasonable assumptions, we cannot assure readers that actual results will be consistent with these forward-looking statements. Any forward-looking statements represent estimates only as of the date of this MD&A and should not be relied upon as representing estimates as of any subsequent date. The Company undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events, except as may be required by securities legislation.

## **Overview**

Pascal Biosciences Inc. (the “Company”) was incorporated on January 28, 2011 pursuant to the *Business Corporations Act* (British Columbia). 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. On March 27, 2017, the Company incorporated a wholly owned subsidiary in Seattle, Washington, named Pascal Biosciences US, Inc. (“Pascal (US)”). The Company is a Tier 2 Biotechnology Issuer engaged in the research and development of products for the treatment of cancers and for modulation 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](http://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 October 30, 2018, the Company announced that it has entered into an exclusive license agreement with the University of Washington (“UW”) in Seattle to develop a cannabinoid-based product for the treatment of glioblastoma multiform and brain metastases. The program, developed in the lab of renowned cannabis researcher Dr. Nephi Stella, founder and co-director of the UW Center for Cannabis Research, includes a lead therapeutic, ST-403. Pascal plans to begin human clinical studies of ST-403 in 2019. ST compounds utilize a unique mechanism of action to kill cancer cells that may prove synergistic when used in combination with chemotherapeutics. In a preclinical model of glioblastoma, mice are treated with radiation and temozolomide, which is the standard of care for human patients; ST compounds synergize with these treatments to reduce tumour size and extend life. These compounds also demonstrated a favourable safety profile. These results support Pascal’s plans to begin clinical trials with ST-403 in 2019.

On September 11, 2017, Pascal announced that the Company had 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 potential treatment of 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. The leukemia also occurs in adults above age fifty. Current immunotherapies for this leukaemia 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 antibody-drug conjugates, 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 (molecules from the cannabis plant) that enhance the immunogenicity of tumour cells, rendering them more susceptible to recognition by the immune system. This discovery is important because the leading class of new cancer fighting agents, termed “checkpoint inhibitors”, activate the immune system to destroy cancer cells thus offering the potential to employ checkpoint inhibitors in tandem with selected cannabinoid molecules for cancer treatment. The Company is expanding its cannabinoid program and will continue to translate the results into clinical studies.

Please refer to “*Core Assets*” below for updates on the Company’s research and development.

### Share Capital

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

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 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 12, 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' fee of \$387,280 and issued 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. The fair value of the warrants granted was estimated using the Black-Scholes option-pricing model with the following weighted average assumptions: risk-free interest rate of 1.81%, expected dividend rate of 0%; expected volatility of 102%; and forfeiture rate of 0%. The fair value of the warrants was calculated at \$227,349.

On March 12, 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.

On April 23, 2018, 999,999 warrants were exercised at a price of \$0.40 for gross proceeds of \$400,000.

On May 18, 2018, 161,718 warrants were exercised at a price of \$0.40 for gross proceeds of \$64,687.

On June 18, 2018, 375,000 stock options were exercised at a price of \$0.23 per share for gross proceeds of \$86,250.

On August 3, 2018, the Company granted an aggregate of 2,100,000 stock options to directors, employees and consultants of the Company, exercisable at a price of \$0.35 per optioned share for a period of five years, vesting quarterly over one year. 1,475,000 of the stock options will vest quarterly over 12 months and 625,000 of the stock options will vest quarterly over 24 months. Vesting will commence three months after the date of grant.

#### 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, Alberta 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, 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.

On July 16, 2018, the Company appointed Julie Eastland to its Board of Directors. Ms. Eastland is a seasoned strategic and financial executive with more than 25 years of experience in public and private biotechnology companies. Most recently she was Chief Business Officer and Chief Financial Officer of Cascadian Therapeutics, where she negotiated and managed its \$810M acquisition by Seattle Genetics in March 2018.

On March 16, 2018, Dr. Reinhard Gabathuler resigned from the Board of Directors.

#### Financial Position

The condensed consolidated statements of financial position as of August 31, 2018 indicates a cash position of \$4,250,841 (November 30, 2017: \$114,698). Other current assets are comprised of prepaid expenses of \$86,055 (November 30, 2017: \$72,303) and accounts receivable of \$10,480 (November 30, 2017: \$17,235). Non-current assets at August 31, 2018 are comprised of computer and lab equipment of \$53,133 (November 30, 2017: \$56,004) and intangible assets of \$720,302 (November 30, 2017: \$784,653).

Current liabilities at August 31, 2018 total \$71,371 (November 30, 2017: \$85,249) and are comprised of accounting and audit fees of \$3,502 (November 30, 2017: \$18,000), research and development fees of \$16,842 (November 30, 2017: \$23,497), legal fees of \$23,778 (November 30, 2017: \$36,808), consulting fees of \$12,000 (November 30, 2017: \$nil), payroll income taxes and CPP of \$17,626 (November 30, 2017: \$nil), travel of \$4,648 (November 30, 2017: \$nil), transfer agent, filing and listing fees of \$921 (November 30, 2017: \$721), insurance of \$1,875, marketing of \$7,912 (November 30, 2017: \$nil) and general administrative expenses of \$7,805 (November 30, 2017: \$nil).

Shareholders' equity is comprised of share capital of \$11,659,509 (November 30, 2017: \$6,378,406), which increased during the period due to the closing of two private placements, exercise of stock options and warrants, (please refer to '*Share capital*' above), reserves of \$964,659 (November 30, 2017: \$712,141) and an accumulated deficit of \$7,574,718 (November 30, 2017: \$6,130,903).

As at August 31, 2018, the Company had working capital of \$4,276,015 (November 30, 2017: \$118,987).

The weighted average number of common shares outstanding, basic and diluted, as at August 31, 2018 was 46,539,524 (November 30, 2017: 37,232,547).

## Intangible Assets

<b>Cost</b>	<b>\$</b>
Balance, November 30, 2016	1,172,516
Additions	-
Balance, November 30, 2017 and August 31, 2018	1,172,516
<b>Accumulated Amortization</b>	<b>\$</b>
Balance, November 30, 2016	302,063
Charge for the year	85,800
Balance, November 30, 2017	387,863
Charge for the period	64,351
Balance, August 31, 2018	452,214
<b>Carrying Value</b>	<b>\$</b>
Balance, November 30, 2017	784,653
Balance, August 31, 2018	720,302

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-associated proteins. On May 24, 2013, the Company acquired bioMmune Advanced Technologies Inc. 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 assets have finite lives and are amortized over their 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 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 increasing the ability of 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 increasing 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 initially identified. Subsequently, four new curcuphenol analogues have been synthesized and shown to induce increased cell-surface expression of MHC 1. These analogues are being produced in sufficient quantities for testing of their anti-tumour activity in animals.

One of the analogues of curcuphenol (PC-02-113) has been tested *in vivo* in lab rodents 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 approximately half of the levels induced by interferon gamma, a natural powerful 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 cancer cells more visible to immune surveillance. Such a molecule has the potential to increase cancer cell recognition thus dramatically increasing the efficacy of checkpoint inhibitors, which release the cancer killing effects of cytolytic (“killer”) 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 paid UBC an additional \$132,000 to continue the research

**2. Monoclonal antibody regulation of selected calcium channel activity:** Application to regulation of immune system activity involved in 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, 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*. Our early studies showed that one of the Cav1-4 antibodies slows growth of murine 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 paid UBC an additional \$132,000 to continue the research.

### **3. VpreB antibody for the treatment of acute lymphoblastic leukemia and other leukemias 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 potential treatment of 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. The leukemia is also seen in adults above age fifty. On an annual basis, more than 5,500 people in the United States, and approximately 40 cases per 1,000,000 people 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 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 the cell surface molecule CD19 is ubiquitously expressed on BCP-ALL and B-cell lymphomas, it has been a logical target for immunotherapies against all B-cell cancers. 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 cancer cells 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  $\mu$  ( $\mu$ ) 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 B cell receptor. 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 (antibody) 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 by secretion of antibodies.

Careful examination of large gene expression databases and the scientific literature revealed the unexpected expression of VpreB mRNA by tumour cells of subsets of acute myelogenous leukemia (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 humanized monoclonal antibodies specific for human VpreB. Characterization of the antibodies led to the selection of a lead antibody with sub-nanomolar 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 by 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. The use of CAR-T and T cell-recruiting bispecific antibodies will also be explored.

### Core Technologies Update

On October 30, 2018, the Company announced that it has entered into an exclusive license agreement with the University of Washington (“UW”) in Seattle to develop a cannabinoid-based product for the treatment of glioblastoma multiform and brain metastases. The program, developed in the lab of renowned cannabis researcher Dr. Nephi Stella, founder and co-director of the UW Center for Cannabis Research, includes a lead therapeutic, ST-403. Pascal plans to begin human clinical studies of ST-403 in 2019. ST compounds utilize a unique mechanism of action to kill cancer cells that may prove synergistic when used in combination with chemotherapeutics. In a preclinical model of glioblastoma, mice are treated with radiation and temozolomide, which is the standard of care for human patients; ST compounds synergize with these treatments to reduce tumour size and extend life. These compounds also demonstrated a favourable safety profile. These results support Pascal’s plans to begin clinical trials with ST-403 in 2019.

On July 1, 2018, the Company and UBC signed a new Collaborative Research Agreement on research and development projects covering the three core technologies above (novel natural compounds, monoclonal antibody regulation of calcium channels, and monoclonal antibody for B-cell precursor acute lymphoblastic leukaemia (BCP-ALL)). The contract period commenced on the effective date and will end 12 months after the start date. As part of the new agreement, the Company agreed to pay UBC \$140,000 for research, of which \$70,000 was paid in August 2018.

### 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 specifically 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 nine months ended August 31, 2018, the Company reported a net loss of \$1,443,815 (\$0.03 basic and diluted loss per share) compared to a net loss of \$1,193,176 (\$0.03 basic and diluted loss per share for the same period in Fiscal 2017).

### 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.

	2018			2017			2016	
	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	-	-	-	-	-	-	-	-
Net and comprehensive loss	568,773	473,537	408,054	463,839	443,079	409,931	340,166	410,546
Basic and diluted Loss per share	.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: Q3 2018: \$19,967; Q2 2018: \$70,660, Q1 2018: \$23,047, Q4 2017: \$61,182, Q3 2017: \$31,805, Q2 2017: \$35,957, Q1 2017: \$71,716, Q4 2016: \$96,997, and Q3 2016: \$75,649.



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

	Notes	Nine months ended August 31,		Three months ended August 31,	
		2018	2017	2018	2017
		\$	\$	\$	\$
Accounting and audit fees	a)	18,473	320	893	-
Administrative and general office	b)	42,971	17,236	12,294	912
Amortization		73,590	67,987	24,634	24,506
Bank charges and interest		4,149	2,098	1,390	997
Consulting fees	c)	180,265	235,640	69,765	47,250
Salaries and Benefits	d)	565,839	201,982	220,179	148,114
Foreign exchange loss/(gain)	e)	25,398	77,533	14,981	55,235
Insurance		8,272	15,938	2,189	10,603
Investor relations and marketing	f)	32,381	212	21,568	-
Legal fees	g)	68,747	71,978	(16,677)	24,332
Research and development	h)	296,635	323,311	188,702	91,065
Share-based payments	i)	90,627	142,478	19,967	31,805
Transfer agent, listing and filing fees		12,447	13,262	2,449	2,426
Travel and conferences	j)	44,200	26,484	14,254	7,532

- a) Accounting and audit fees – increase year over year is due to additional fees incurred as a result of the new subsidiary, Pascal Biosciences US, Inc.
- b) Administrative and general office – increase year over year is due to expenses related to the US subsidiary, which was formed in March, 2017.
- c) Consulting fees - the President and 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 President/CEO being paid salaries from July, 2017 onward, the Company hired three employees in April, 2017 to conduct research in its Seattle laboratory.
- e) Foreign exchange – during fiscal 2017, the Company paid more to US suppliers, particularly for patent maintenance, resulting in increased foreign exchange costs.
- f) Investor relations and marketing – increase year over year is due to attendance at conferences as well as reallocating marketing fees from Research and development (19,233).
- g) Legal fees – during the current quarter, legal fees decreased as a result of reallocating \$188,975 to other expense categories.

- h) Research and development – during the current period a reallocation from legal increased expenses by \$144,127. Year to date research costs incurred from UBC were \$65,290, down from \$175,094 during the same period in the previous year.
- i) Share-based payments - the decrease year over year is due to options becoming fully vested during the current year.
- j) Travel and entertainment – increased travel during the current fiscal year, including attendance at conferences.

### Liquidity & Capital Resources

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

	August 31, 2018	November 30, 2017
Working capital	\$ 4,276,015	\$ 118,987
Deficit	\$ 7,574,718	\$ 6,130,903

During the nine months ended August 31, 2018, net cash used in operating activities was \$1,300,473 (2017: \$1,089,832), comprised of a loss of \$1,443,815 (2017: \$1,193,176) net of amortization expense of \$73,590 (2017: \$67,987) and share-based payments of \$90,627 (2017: \$142,478), an increase in prepaid expenses of \$13,752 (2017: \$63,223), a decrease in accounts receivable of \$6,755 (2017: \$6,675) and a decrease in accounts payable and accrued liabilities of \$13,878 (2017: \$50,573).

Cash used in investing activities was \$6,368 (2017: \$52,596).

Cash from financing activities raised \$5,442,994 (2017: \$564,900) through non-brokered private placements of 13,262,594 units for gross proceeds of \$5,274,030, exercise of 575,000 stock options for gross proceeds of \$132,250 and exercise of 1,161,717 warrants for gross proceeds of \$464,687. Please refer to 'Share capital' above.

### 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 nine months ended August 31, 2018 and 2017:

Services provided by:	2018	2017
	\$	\$
Dr. Patrick Gray a)	113,000	90,000
Judi Dalling b)	48,750	48,750
Jens Biertumpel c)	61,920	8,000
Dr. Reinhard Gabathuler (Cydweli Consultants Inc.) d)	-	72,000
Benefits	30,510	-
Share-based payments	53,670	125,772
	319,964	324,522

- a) Dr. Patrick Gray, President and CEO of the Company, provided services in his role as President and CEO (note 10).
- b) Judi Dalling, the CFO of the Company, provided administrative and accounting services to the Company (note 10).
- c) Jens Biertumpel, a director of the Company, provided corporate financial consulting services to the Company.

- d) Dr. Reinhard Gabathuler, a director of the Company, provided scientific consulting services to the Company.

Other related party transactions include:

1,725,000 stock options were granted to directors and officers of the Company (2017: 640,000).

\$23,924 (2017: \$nil) 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 nine months ended August 31, 2018.

### Commitments

Commitments over the next five years are as follows:

	\$
2018	221,000
2019	883,000
2010	883,000
2021	883,000
2022	662,000
	3,532,000

The Company has entered into consulting and employment agreements as follows:

- a) Employment agreement with Dr. Patrick Gray, President and CEO of the Company in his role as President and CEO of the Company for a fee of \$120,000 per year. Effective July 1, 2018 his salary increased to US\$200,000 annually;
- b) Consulting agreement with Judi Dalling, CFO of the Company, to provide administrative and accounting services to the Company for a fee of \$65,000 per year;
- c) Consulting agreement with 442668 BC Ltd. to provide scientific consulting services to the Company for a fee of \$60,000 per year;
- d) Employment agreements with three scientists working in Seattle for Pascal Biosciences (US), Inc. totaling in aggregate \$375,000 per year which were increased to \$477,000 effective July 1, 2018; and
- e) Consulting agreement with an administrative employee working in Seattle for Pascal Biosciences (US), Inc. for \$31,250 per year.

### 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 August 31, 2018, 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, 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. The Company limits its exposure to credit loss by placing its cash and cash 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 meet 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 August 31, 2018, the Company had cash and cash equivalents of \$4,250,851 (November 30, 2017: \$114,698) available to apply against short-term business requirements and current liabilities of \$71,371 (November 30, 2017: \$85,249). All of the liabilities presented as accounts payable and accrued liabilities are due within 90 days of August 31, 2018.

(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 August 31, 2018 and November 30, 2017, the Company's net exposure to foreign currency risk is as follows:

US dollars	2018	2017
	\$	\$
Cash	170,317	145,590
Accounts payable	(28,842)	(38,003)
Net exposure to foreign currency risk	141,475	125,955
Canadian dollar equivalent	184,314	158,489

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 nine months ended August 31, 2018. 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 in the Company's shares should be considered highly speculative due to the nature of 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 cancer, autoimmune diseases and other 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 Dr. Patrick Gray 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](http://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 August 31, 2018 are described in detail in Note 7 to the condensed consolidated interim financial statements for the nine months ended August 31, 2018 and 2017.

As at the date of this document, October 30, 2018, the Company had the following number of securities outstanding:

<b>Number of shares</b>	<b>\$</b>	<b>Number of options</b>	<b>Exercise price</b>	<b>Expiry date</b>
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<b>Issued and outstanding</b>	52,547,396	11,689,509			
			750,000	\$0.31	August 4, 2020
			820,000	\$0.35	April 1, 2021
			392,000	\$0.72	October 3, 2021
			640,000	\$0.33	June 26, 2022
			250,000	\$0.29	January 28, 2023
			2,100,000	\$0.35	August 3, 2023
			<b>Number of share purchase warrants</b>		
			387,594	\$0.40	March 12, 2020
			12,875,000	\$0.60	March 12, 2019
			<b>Number of agents' warrants</b>		
			986,600	\$0.60	March 12, 2019