# 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 Six Months Ended
May 31, 2016

Date: July 29, 2016

#### **Management's Discussion and Analysis**

The following management discussion and analysis (MD&A) of the financial information of bioMmune Technologies Inc. (the "Company") and results of operations should be read in conjunction with the Company's condensed consolidated interim financial statements for the six months ended May 31, 2016 and May 31, 2015 and the audited consolidated financial statements and accompanying notes for the year ended November 30, 2015. 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 and approved and authorized for issue by the Audit Committee on July 29, 2016. The information contained within this MD&A is current to July 29, 2016.

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

## **Forward-Looking Statements**

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

## **Overview**

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

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

# **Overall Performance**

# Research and Development

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

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

Effective December 2, 2015, the Company appointed Dr. Patrick W. Gray as Chief Scientific Officer to oversee the scientific operations of the Company.

On April 22, 2016, the Company appointed Dr. Patrick W. Gray to serve as Chief Executive Officer and President. Dr. Gray has worked in the biotechnology industry for the past 35 years and gained extensive experience in drug discovery at Genentech, ICOS, and Macrogenics. He also has previous executive experience as Chief Scientific Officer, as CEO and as a director on several Boards. His previous drug discovery efforts led to the development of multiple drugs (such as Interferon-gamma) and drug targets (CCR5 and PI3 Kinase p110delta) and to development of a Hepatitis B vaccine. Former bioMmune CEO and President, Dr. Reinhard Gabathuler, has resigned the CEO and President positions to become Senior Vice-President of Business Development. In his new role, Dr. Gabathuler will lead the company's partnering and business development activities and Dr. Gray will lead the company's R&D programs and financing activities. BioMmune anticipates increasing partnering efforts resulting from its progress in its oncology and immunology programs.

#### **Investor Relations**

Effective September 15, 2015, the Company engaged Envoy Strategic Partners ("Envoy") to provide strategic investor relations and financial communications services. Under the terms of the contract, the Company paid Envoy a monthly retainer of \$3,500. The Company terminated the contract with Envoy effective December 15, 2015.

## **Executive Chairman**

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

#### **Stock Options and warrants**

On March 31, 2015, 200,000 stock options granted to Hamza Thindal Capital Corp., exercisable at a price of \$0.25 per share, expired unexercised.

On August 4, 2015, the Company granted incentive stock options to officers and directors of the Company to purchase an aggregate of 750,000 common shares of the Company, exercisable at a price of \$0.31 per share, for a period of five years, and subject to vesting.

On October 16, 2015, the Company granted 200,000 incentive stock options to consultants of the Company, priced at \$0.35 with a term of one year and subject to vesting.

On December 7, 2015, 50,000 warrants were exercised at a price of \$0.30 per share for total consideration of \$15,000.

On January 12, 2016, 175,000 stock options were exercised at a price of \$0.10 per share for total consideration of \$17,500.

On January 15, 2016, 100,000 stock options granted at a price of \$0.35 per share were cancelled.

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

On June 30, 2016, 150,000 stock options exercisable at a price of \$0.23 per share expired unexercised.

#### **Private Placements**

On June 8, 2015, the Company closed a non-brokered private placement previously announced on May 3, 2015. The Company issued 5,000,000 units (each a "Unit") at a price of \$0.20 per Unit, for gross proceeds of \$1,000,000. Each Unit consists of one common share and one full common share purchase warrant (each a "Warrant"). Each Warrant entitles the holder to purchase one additional common share of the Company at a price of \$0.30 per share for a period of 18 months up to and including December 8, 2016, subject to an exercise acceleration clause. Under the exercise acceleration clause, which the Company may exercise once the Units are free of resale restrictions and 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 30 days from the date the Company provides notice in writing to the Warrant holders via a news release. Cash finders' fees of \$70,400 were paid on a portion of the financing. The net proceeds from the sale of Units were added to working capital in furtherance of the Company's business.

On November 18, 2015, the Company closed a non-brokered private placement previously announced on October 10, 2015. The Company issued 2,000,000 units (each a "Unit") at a price of \$0.30 per Unit for gross proceeds of \$600,000. Each Unit consists of one common share and one 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 24 months from the date of closing, subject to an exercise acceleration clause. Under the exercise acceleration clause, which the Company may exercise once the Units are free of resale restrictions and if the Company's shares are trading at or above a volume weighted average price of \$0.60 for 10 consecutive days of trading, the Warrants will expire upon 30 days from the date the Company provides notice in writing to the Warrant holders via a news release. Cash finders' fees of \$2,715 were paid in connection with the financing. The net proceeds from the sale of Units were added to working capital in furtherance of the Company's business.

# **Financial Position**

The condensed consolidated statement of financial position as at May 31, 2016 indicates a cash position of \$389,326 (November 30, 2015: \$998,158). Other current assets are comprised of prepaid expenses of \$108,646 (November 30, 2015: \$99,264) and GST receivable of \$9,606 (November 30, 2015: \$22,831). Non-current assets at May 31, 2016 comprise computer equipment of \$3,372 (November 30, 2015: \$1,802) and intangible assets of \$913,353 (November 30, 2015: \$956,253).

Current liabilities at May 31, 2016 total \$76,938 (November 30, 2015: \$131,146) comprising audit fees of \$nil (November 30, 2015: \$17,000), research and development fees of \$48,939 (November 30, 2015: \$12,500), legal fees of \$nil (November 30, 2015: \$16,537), consulting fees of \$8,500 (November 30, 2015: \$nil), accrued termination fees of \$nil (November 30, 2015: \$75,600), withholding tax of \$3,000 (November 30, 2015: \$nil) and general administrative expenses of \$16,499 (November 30, 2015: \$9,509).

Shareholders' equity is comprised of share capital of \$4,587,141 (November 30, 2015: \$4,554,941), reserves of \$504,553 (November 30, 2015: \$371,878) and an accumulated deficit of \$3,744,329 (November 30, 2015: \$2,979,657).

Option reserves increased \$132,675 due to options vesting during the period.

As at May 31, 2016, the Company had working capital of \$428,640 (November 30, 2015: \$989,107).

The weighted average number of common shares outstanding, basic and diluted, as at May 31, 2016 was \$31,855,618 (November 30, 2015: \$31,673,417).

# **Intangible Assets**

Cost	\$
Balance, November 30, 2014 and 2015	1,172,516
Accumulated Amortization	\$
Balance, November 30, 2014	130,463
Charge for the year	85,800
Balance, November 30, 2015	216,263
Charge for the period	42,900
Balance, May 31, 2016	237,713
Carrying Value	\$
Balance, November 30, 2015	956,253
Balance, May 31, 2016	913,353

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 related to the three technologies involved in the cancer protein research projects.

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

Intangible assets consist of intellectual property surrounding the following three technologies:

1. Novel Histone Deacetylase Inhibitors (HDACis) that are able to increase antigen expression on the surface of tumour cells, making them more visible to the immune system. These HDACis will be useful as cancer therapeutics by stimulating 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 immunotherapeutic approaches for elimination of cancer. The Company showed that by restoring the function of the Transporter of Antigen Processing 1 (TAP1) molecule in the APP, the presentation of tumour antigens at the cancer cell surface was restored and immune responses were enhanced in metastatic disease. Research revealed that the mechanism leading to the TAP1 defect and poor antigen presentation is not regulated by mutations in the TAP-1 gene, but that it is epigenetically regulated and can be restored by treatment with HDACis. By developing a high-throughput screening assay and using a novel pharmacological assay using extracts from deep-sea sponges, bioMmune has identified several unique HDACis that induce antigen presentation in metastatic prostate and lung carcinomas.

In February, 2014, the Company entered into an agreement with UBC whereby UBC conducted research to identify compounds that increase the expression of the TAP1 protein, a part of the APP, thus increasing expression of MHC 1 molecules on the surface of metastatic tumour cells, thereby increasing tumour antigen expression and rendering them visible to the immune system. During fiscal 2014, the Company paid UBC an aggregate of \$130,000 to cover the cost of the research under the agreement, which terminated on January 31, 2015. On August 12, 2015, the Company entered into a collaborative research agreement with UBC to further this research and advanced UBC \$50,000 to cover the scope of this research. On December 21, 2015, the Company amended the collaborative research agreement to continue the research and agreed to advance a further \$50,000 to UBC, which was paid in March, 2016.

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

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

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

In January, 2014, the Company entered into an agreement with UBC whereby UBC conducted research to derive monoclonal antibodies (mAbs) that modulate the activation of specific calcium channels which are associated with the proliferation and induction of cells of the immune system. These antibodies are selected for their ability to modulate the function of specialized white blood cells (specifically lymphocytes) that are involved in a variety of human diseases and in transplantation of tissues and organs. The calcium channels on lymphocytes are a multi-member family comprised of more than 10 different proteins. The activity of these channels is regulated to control intracellular concentrations of calcium (Ca) which determines the proliferation and activity of cells involved in immune responses. Antibodies generated against different forms of the calcium channels may act as new calcium channel regulators and in some cases have been shown to inhibit the proliferation and functional differentiation of lymphocytes. Such antibodies

may allow modulation of the immune system to combat cancers and infections and to control autoimmune diseases, allergy and transplantation responses. A large number of mAbs were derived against specific external domains of voltage-dependent calcium channel isoforms Cav 1-1, Cav1-2, Cav1-3 and Cav1-4. These mAbs were evaluated for binding to Jurkat cells and several were found to inhibit Jurkat cell growth *in vitro*. Testing for inhibition of Jurkat cell growth will also be performed *in vivo*. The same mAbs will be used *in vivo* to determine their effect on modulation of immune responses, including anti-cancer activity.

During fiscal 2014, the Company paid UBC \$130,000 to cover the scope of this research. In June 2015, an additional service agreement was finalized with UBC. The Company paid a total of \$100,000 to UBC to continue research to identify anti-Cav1-4 mAbs for use in the treatment of leukaemias and for the modulation of the immune reaction in auto-immune disorders. In June, 2015, \$50,000 was advanced to UBC and in January 2016, a final payment of \$50,000 was made.

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

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

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

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

During fiscal 2014, the Company paid UBC \$130,000 to cover the scope of this research. In June 2015, an additional service agreement was finalized with UBC. The Company will pay a total of \$100,000 to UBC to continue research to develop new, more efficient vaccines against viral infections. In June, 2015, \$50,000 was advanced to UBC and in January 2016, a final payment of \$50,000 was made.

During the six months ended May 31, 2016, the Company incurred research and development costs of \$264,478 (2015: \$147,598) comprising UBC lab work of \$138,825 (2015: \$71,161) pursuant to research agreements as described above and legal fees of \$125,653 (2015: \$76,437) associated with filing patent continuities as well as maintaining protection of patent applications currently held by the Company.

## **Patents**

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

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

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

## **Results of Operations**

During the six months ended May 31, 2016, the Company reported a net loss of \$764,672 (\$0.02 basic and diluted loss per share) compared to a net loss of \$413,018 (\$0.01 basic and diluted loss per share for the same period in Fiscal 2015).

## **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.

	2016		2015				2014	
	Q2 Q1		Q4	Q3 Q2	Q1	Q4	Q3	
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	-	-	-	-	-	-	-	-
Net Loss	413,018	351,654	472,239	195,632	176,737	301,139	342,839	280,782
Basic and diluted								
Loss per share	0.01	0.01	0.02	0.01	0.00	0.01	0.02	0.01

Share-based compensation expense impacts expenses and net and comprehensive loss as follows: Q2 2016: \$80,369, Q1 2016: \$52,306, Q4 2015: \$87,712, Q3 2015: \$985 Q2 2015: \$1,372, Q1 2015: \$35,156 Q4 2014: \$9,182, Q3 2014: \$30,606, Q2, 2014: \$36,632. Quarter over quarter of Fiscal 2015, share-based compensation fluctuated due to the following: During quarter one, the directors passed a resolution to vest all stock options previously granted to directors and officers effective immediately. Quarter one reflects these vests. Quarter two of 2016 and quarter four of 2015 reflect granting of new stock options to directors of the Company during the quarters. (Please refer to "Analysis of Annual and Quarterly Results" below).

Losses during quarter four of the year ended November 30, 2015 increased from previous quarters during the year due to accrued audit fees of \$17,000 and increased consulting fees and research and development expenditures. (Please refer to "Analysis of Annual and Quarterly Results" below).

The Company's significant accounting policies are set out in Note 3 of the audited annual financial statements as at and for the year ended November 30, 2015.

		SIX MONUS	enaea	inree montr	is ended
	Notes	May 31,		May 3	1,
		2016	2015	2016	2015
		\$	\$	\$	\$
Accounting and audit fees		298	300	298	300
Administrative and general office	a)	23,333	4,664	8,985	2,144
Amortization		43,724	42,220	21,862	21,204
Bank charges and interest		801	634	400	343
Consulting fees	b)	193,885	170,500	92,750	70,091
Foreign exchange loss	c)	38,968	40,904	12,878	43,108
Insurance		4,084	5,219	2,042	2,653
Investor relations and marketing	d)	13,715	8,760	5,277	1,005
Legal fees		2,378	3,979	1,178	3,979
Research and development	e)	264,478	147,598	164,100	18,545
Share-based payments	f)	132,675	36,528	80,369	1,372
Travel and entertainment	g)	36,724	4,604	17,655	2,646
Transfer agent, listing and filing fees		11,495	12,870	5,998	9,742

Six months ended

Three months ended

- a) Administrative and general office In December 2015, the Company contracted a web service provider for \$2,500 per month to provide website administration. The contract was cancelled in June, 2016.
- b) Consulting fees Effective December 1, 2015, the Company retained Dr. Patrick Gray as Chief Scientific Officer at a rate of \$10,000 per month. This was offset by \$8,000 per month due to the termination of the Executive Chairman in December, 2015.
- c) Foreign exchange loss foreign exchange on legal fees pertaining to patents (research and development) were paid in US dollars, increasing foreign exchange costs due to the weak Canadian dollar.
- d) Investor relations and marketing during the current period, the Company participated in a conference in Calgary, Alberta.
- e) Research and development during the six months ended May 31, 2016, research at UBC totalled \$138,825 compared to \$71,161 during same period in the previous year. Patent costs totalled \$125,653, compared to \$76,437 during the same period in the previous year. Patent expenses increased due to furtherance of applications and the receipt of the Australian patent in June, 2016.
- f) Share-based payments the increase year over year is due to vesting of option grants beginning in August of 2015.
- g) Travel and conferences the six months ended May 31, 2016 includes expenses related to the Chief Scientific Officer travelling from Seattle to Vancouver weekly as well as travel by some directors to attend conferences and meetings.

## **Liquidity & Capital Resources**

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

	May 31, 2016		November 30, 2015	
Working capital	\$ 430,640	\$	313,332	
Deficit	\$ 3,744,329	\$	2,979,657	

During the six months ended May 31, 2016, net cash used in operating activities was \$638,638 (2015: \$313,332), comprising a loss of \$764,672 (2015: \$477,876) net of amortization expense of \$43,724 (2015: \$42,220) and share-based payments of \$132,675 (2015: \$36,528), an increase in prepaid expenses of \$9,382 (2015: a decrease of \$76,380), a decrease in GST receivable of \$13,225 (2015: \$11,761) and a decrease in accounts payable and accrued liabilities of \$54,208 (2015: \$2,345).

Cash from investing activities was \$2,394 (2015: \$2,058), reflecting the purchase of computers.

Cash from financing activities was \$32,200 (2015: \$nil).

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

## **Off-Balance Sheet Arrangements**

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

#### **Related Party Transactions**

The following is a summary of related party transactions that occurred during the six months ended May 31, 2016 and 2015:

Key management compensation:

Services provided by:		2016	2015
		\$	\$
Robin Hutchison (RBH Consulting Inc.)	a)	5,885	40,000
Judi Dalling	b)	32,500	32,500
Dr. Karoly Nikolich	c)	-	7,556
Dr. Patrick Gray (MolaQule Inc.)	c)	60,000	-
Jens Biertumpel	d)	2,500	-
Dr. Reinhard Gabathuler (Cydweli Consultants Inc.)	e)	48,000	40,000
Share-based payments		60,162	33,377
		209,047	97,730

- a) Robin Hutchison, former Executive Chairman of the Company provided consulting services to the Company.
- b) Judi Dalling, the CFO of the Company, provided consulting services to the Company.
- c) Dr. Karoly Nikolich was paid US \$6,000 for his services as a director of the Company.
- d) Dr. Patrick Gray, CEO, President and Chief Scientific Officer of the Company, provided consulting services to the Company.
- e) Jens Biertumpel, a director of the Company, provided consulting services to the Company.
- f) Dr. Reinhard Gabathuler, a director and officer of the Company, provided consulting services to the Company.

Other related party transactions include:

\$11,055 (2015: \$19,122) is included in accounts payable and accrued liabilities for disbursements and consulting fees 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 six months ended May 31, 2016 and May 31, 2015.

#### Commitments

Commitments over the next five years are as follows:

	\$
2016	198,917
2017	341,000
2018	341,000
2019	341,000
2020	341,000
2021	142,083

The Company has entered into consulting agreements as follows:

- a) Consulting agreement with Cydweli Consultants Inc., a privately held corporation controlled by Dr. Reinhard Gabathuler, VP Business Development to provide consulting services to the Company for a fee of \$96,000 per year. (See also "Related party transactions");
- b) Consulting agreement with Judi Dalling, CFO of the Company, to provide consulting services to the Company for a fee of \$65,000 per year (See also "Related party transactions");
- c) Consulting agreement with 442668 BC Ltd. to provide consulting services to the Company for a fee of \$60,000 per year; and
- d) Consulting agreement with MolaQule Inc., a privately held corporation controlled by Dr. Patrick W. Gray, CEO, President and Chief Scientific Officer of the Company, to provide consulting services to the Company for a fee of \$120,000 per year (See also "Related party transactions").

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

## Accounting standards not yet implemented

Certain new standards, interpretations and amendments to existing standards are not yet effective as of May 31, 2016 and have not been applied in preparing these consolidated financial statements. The Company is assessing the impact of these standards on its consolidated financial statements:

IFRS 9 Financial Instruments (2014)

This is a finalized version of IFRS 9, which contains accounting requirements for financial instruments, replacing IAS 39 *Financial Instruments: Recognition and Measurement*. The standard contains requirements in the following areas:

- Classification and measurement. Financial assets are classified by reference to the business model within which they
  are held and their contractual cash flow characteristics. The 2014 version of IFRS 9 introduces a "fair value through
  other comprehensive income" category for certain debt instruments. Financial liabilities are classified in a similar
  manner to under IAS 39; however, there are differences in the requirements applying to the measurement of an
  entity's own credit risk.
- Impairment. The 2014 version of IFRS 9 introduces an "expected credit loss" model for the measurement of the
  impairment of financial assets, so it is no longer necessary for a credit event to have occurred before a credit loss is
  recognized.
- Hedge accounting. Introduces a new hedge accounting model that is designed to be more closely aligned with how
  entities undertake risk management activities when hedging financial and non-financial risk exposures.
- Derecognition. The requirements for the derecognition of financial assets and liabilities are carried forward from IAS 39.

Applicable to the Company's annual period beginning on December 1, 2018.

#### **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 May 31, 2016, the Company's financial instruments are comprised of cash and cash equivalents and accounts payable and accrued liabilities. With the exception of cash and cash equivalents and short-term investments, all financial instruments held by the Company are measured at amortized cost.

## (b) Credit risk

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

# (c) Liquidity risk

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

At May 31, 2016, the Company had cash and cash equivalents of \$389,326 (November 30, 2015: \$998,158) available to apply against short-term business requirements and current liabilities of \$76,938 (November 30, 2015: \$131,146). All of the liabilities presented as accounts payable and accrued liabilities are due within 90 days of May 31, 2016.

## (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 May 31, 2016 and May 31, 2015, the Company's net exposure to foreign currency risk is as follows:

US dollars	2016	2015
	\$	\$
Cash	10,576	-
Accounts payable	(43,974)	(24,639)
Net exposure to foreign currency risk	(33,398)	(24,639)
Canadian dollar equivalent	(43,621)	(30,702)

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 six months ended May 31, 2016. Refer to note 3 in the audited consolidated financial statements for the year ended November 30, 2015 for the Company's significant accounting policies. Certain pronouncements were issued by the IASB that are mandatory for annual years beginning after January 1, 2015. The changes have not been early adopted are being evaluated to determine if there will be an impact on the Company.

#### **Risks and Uncertainties**

#### Overview

An investment the Company'shares should be considered highly speculative due to the nature of the the Company's business and the present stage of its development. In evaluating the company and its business, shareholders should carefully consider, in addition to the other information contained in this management discussion and analysis, the following risk factors. These risk factors are not a definitive list of all risk factors associated with the Company. It is believed that these are the factors that could cause actual results to be different from expected and historical results. Investors should not rely upon forward-looking statements as a prediction of future results.

## Competition

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

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

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

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

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

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

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

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

## **Intellectual Property**

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

## **Legal Proceedings**

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

#### **Dependence upon Management**

Although the Company Issuer is expected to have experienced senior management and personnel, it will be substantially dependent upon the services of a few key personnel, particularly 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 May 31, 2016 are described in detail in Note 7 to the condensed consolidated interim financial statements for the six months ended May 31, 2016 and May 31, 2015.

As at the date of this document, July 29, 2016, the Company had the following number of securities outstanding:

	Number of shares	\$	Number of options	Exercise price	Expiry date
Issued and outstanding	31,898,417	4,587,141			
			1,325,000	\$0.23	June 19, 2018
			150,000	\$0.20	September 24, 2018
			750,000	\$0.31	August 4. 2020
			100,000	\$0.35	October 18, 2016
			820,000	\$0.36	April 1, 2021
			Number of		
			share purchase		
			warrants		
			4,950,000	\$0.30	December 18, 2016
			2,000,000	\$0.40	November 18, 2017