Managements' Discussion and Analysis (Expressed in Canadian Dollars)

# MIRACULINS INC.

Three months ended February 29, 2012

#### Management's Discussion and Analysis



The following management's discussion and analysis ("MD&A") is current to May 23, 2012 and should be read in conjunction with the unaudited condensed interim financial statements for the three month period ended February 29, 2012 which have been prepared for the first time under International Financial Reporting Standards (IFRS). The Company previously prepared its financial statements in accordance with Canadian generally accepted accounting principles (Canadian "GAAP"). For more information regarding the conversion to IFRS, see note 16 of the condensed interim financial statements, which contains further information and a reconciliation of Miraculins' previously reported financial information prepared under Canadian GAAP to IFRS. Except as otherwise noted, the financial information contained in this MD&A and in the condensed interim financial statements has been prepared in accordance with IFRS. This discussion and analysis provides an update to the Management's Discussion and Analysis for the year ended November 30, 2011, and should be read in conjunction with this document. The Company's independent auditors, KPMG LLP Chartered Accountants, have not reviewed the unaudited condensed interim financial statements. All amounts are expressed in Canadian Dollars unless otherwise noted. Additional information regarding the Company is available on SEDAR at www.sedar.com and on the Company's website at www.miraculins.com.

## **OVERVIEW**

Miraculins Inc. ("Miraculins" or the "Company") is a medical device company committed to extending life, reducing suffering and lowering healthcare costs. Through acquisition, development and commercialization of diagnostic tests and risk assessment tools for unmet clinical needs, the Company seeks to improve the overall diagnosis quality and treatment of patients by enhancing the information available to patients and physicians. The Company is listed on the TSX Venture Exchange under the symbol "MOM".

The Company's business model is to acquire and/or develop diagnostic and risk assessment opportunities in areas where there are unmet clinical needs. Once Miraculins has advanced a technology through the necessary development stages, it partners with large diagnostic companies, reference laboratories and distribution partners to commercialize and market its technology. These types of relationships typically involve collaborative research agreements, upfront payments, milestone payments and ongoing royalties on sales. Successful execution of this model requires the convergence of product development, marketing, regulatory and corporate finance strategies.

The Company's future operations are dependent upon its ability to generate product sales, negotiate collaboration or license agreements with upfront payments, obtain research grant funding, and secure additional funds. While the Company is striving to achieve these plans, there is no assurance that these and other strategies will be achieved or such sources of funds will be available or obtained on favourable terms or obtained at all.

The Company's two primary technology programs are in the areas of maternal health and cardiovascular disease. Miraculins maternal health program is centred on a suite of promising markers for preeclampsia and is partnered with Alere, Inc. (NYSE: ALR) (formerly Inverness Medical Innovations), one of the world's largest diagnostic companies. The Company's cardiovascular disease program is focused on the PreVu Non-Invasive Skin Cholesterol Test ("PreVu"), a new non-invasive tool for risk assessment of coronary artery disease ("CAD"). Miraculins continues to make steady and significant progress and is in the final stages of the planned launch of the PreVu technology in the second guarter of calendar 2012.

Miraculins continues to be open to the evaluation of new licensing and acquisition opportunities that fit strategically with the Company's business model, however management remains primarily focused on preparing for the successful commercial launch of the Company's PreVu technology, which will transition Miraculins into a sales and marketing organization. Potential new programs of greatest interest to the Company are those that have completed discovery stage research and biomarker identification, but require additional expertise and resources to be developed into commercial products.

The Company has continued to access capital during difficult market conditions, having successfully completed private placement and debt financings, and obtained non-dilutive grant funding to advance its programs to fund general operating, ongoing product development, inventory and sales and marketing related costs. Miraculins continues to work to selectively advance the critical aspects of its development programs while obtaining the appropriate financing, collaboration and/or license agreements necessary to apply greater resources to its programs.

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



The Company's future operations are dependent upon its ability to generate product sales, negotiate collaboration or license agreements with upfront payments, obtain research grant funding, and secure additional funds. While the Company is striving to achieve these plans, there is no assurance that these and other strategies will be achieved or such sources of funds will be available or obtained on favourable terms or obtained at all. If the Company cannot generate product sales, negotiate collaboration or license agreements with upfront payments, obtain research grant funding, or if it cannot secure additional financing on terms that would be acceptable to it, the Company will have to consider additional strategic alternatives which may include, among other strategies, exploring the monetization of certain intangible assets as well as seeking to outlicense and/or divest assets. Based on management's current estimates and expected operating activities, sufficient financial resources exist to fund operations into the fourth quarter of fiscal 2013.

On March 8, 2012, Miraculins announced an Agreement that will see The Stevens Company Limited, the largest, privately-owned Canadian distributor of hospital, physician and nursing home supplies, distribute the PreVu Point of Care ("POC") Test to medical professionals in clinical settings across Canada. Additionally, on April 18, 2012, Miraculins announced an Agreement that will see Pear Healthcare Solutions, a leading provider of in-pharmacy health screening and education services, distribute the PreVu POC Test to Canadian retail pharmacies and work with pharmacy partners to establish coronary artery disease (CAD) screening programs using skin cholesterol and other known risk factors for implementation in pharmacy settings across the country. The PreVu POC test contains two components: the PreVu Handheld Spectrophotometer which is used to both guide the operator through the test and take the skin cholesterol reading; and the Reagent Test Kit, comprised of reagent solution and test consumables to run 40 individual procedures. To facilitate the direct marketing and selling of the product to their medical customer base, the agreement calls for The Stevens Company to purchase a start-up inventory sufficient for national servicing, which will represent Miraculins' first commercial sale of the PreVu technology. Both companies will jointly participate in promotional initiatives directed towards the medical segment.

#### **Development Program Highlights**

- The Company's PreVu Non-Invasive Skin Cholesterol Test is designed to address the worldwide market of cardiovascular risk assessment. This novel test measures cholesterol in the skin tissues to assess risk of coronary artery disease ("CAD"). Miraculins continues to make steady and significant progress and is in the final stages of the planned launch of the PreVu technology in the second quarter of calendar 2012.
- The Company's preeclampsia technology is comprised of a suite of placental development protein biomarkers for the detection and diagnosis of preeclampsia, a disease of growing incidence and a leading cause of maternal and prenatal deaths worldwide. The program is based on world leading research from Mount Sinai Hospital and is being developed through a collaborative research and development partnership with Alere, Inc. (NYSE:ALR) (formerly Inverness Medical Innovations), one of the world's largest diagnostic companies.

The following table summarizes the Company's research and development programs:

Product	Program/Indication	Status
PreVu Non-Invasive Skin Cholesterol Test	Coronary Artery Disease Risk Assessment	Nearing product Launch (1)
Placental Development Biomarkers	Preeclampsia Biomarkers	Partnered with Alere, Inc. (2) Research Stage
Endoglin Assay	Preeclampsia Biomarker	Partnered with Alere, Inc. (2) Assay Development & Optimization
Prostate Secretory Protein (PSP94) Assay	Prostate Cancer Biomarker	RUO Kit Launched (3)
also known as microseminoprotein-beta (MSMB)		On hold
MIR-CR1, MIR-GP1, Suite of Markers	Cancer Biomarkers	On hold Research Stage

<sup>(1)</sup> See discussion of the Company's PreVu Program on page 3.

<sup>(2)</sup> See discussion of the Company's Preeclampsia Program on page 6.

<sup>(3)</sup> Miraculins' PSP94 Immunoassay for Urine Specimens is for Research Use Only (RUO) and not for Diagnostic Procedures

#### Management's Discussion and Analysis



### **Corporate History**

Miraculins began active operations in 2002 as a research and development company focused on the screening and identification of target proteins and peptides related to diseases. The Company's original vision was to contribute to the saving of lives through the early detection and diagnosis of cancer by developing products to increase the information available to physicians and consequently enhance the quality of treatment for cancer patients. Through basic discovery research, subsequent development and the acquisition of complementary technologies, Miraculins established programs in the areas of prostate, colorectal, gastric, pancreatic and breast cancer.

In the spring of 2008, Miraculins announced a shift in its business model, moving the Company's focus away from basic discovery research and further down the diagnostic assay development and commercialization pathway. The Company's business plan is now focused on in-licensing/acquiring and developing diagnostic and risk assessment technologies that address unmet clinical needs and have completed the early stage research phase.

In the fall of 2008, Miraculins announced its first technology acquisition under its new business model. The Company acquired a panel of biomarkers from Mount Sinai Hospital that have demonstrated the potential to detect or diagnose preeclampsia, a devastating condition of growing incidence affecting pregnant women that is the leading cause of maternal and prenatal deaths worldwide. The Company partnered the program with Alere, Inc. (formerly Inverness Medical Innovations) in January 2010 for development and potential commercialization.

In late summer 2010, Miraculins completed the acquisition of all assets relating to the PreVu Non-Invasive Skin Cholesterol Test. PreVu is a revolutionary new coronary artery disease ("CAD") risk assessment technology that measures cholesterol levels in a patient's skin non-invasively, painlessly and without the need for fasting. Since closing the acquisition of the PreVu technology, Miraculins' has been focused on preparing all aspects of the product for market launch.

## **RESEARCH PROGRAMS**

The Company is focused on developing non-invasive diagnostic tests and risk assessment technologies that address unmet clinical needs in various disease areas. As a result of market conditions and the limited availability of investment funding Miraculins has focused its attention primarily on advancing its preeclampsia program and capitalizing on the acquisition of its PreVu program. The Company has also successfully developed an immunoassay for PSP94 in urine and is exploring commercialization opportunities for its intellectual property on PSP94's use in combination with other markers for detecting prostate cancer.

#### Cardiovascular Disease Program (PreVu Non-Invasive Skin Cholesterol Test)

Coronary artery disease ("CAD") is a leading cause of death worldwide. CAD occurs when fat and cholesterol gradually accumulate in the coronary arteries, forming a plaque that narrows the artery and reduces blood flow to the heart. Undetected or untreated, this build-up of plaque can block the artery and cause a heart attack. A heart attack, also known as a myocardial infarction (MI), causes a part of the heart muscle to die, which weakens or prevents the heart's ability to pump blood. Worldwide, about 7.2 million people die from heart attacks every year.

A major risk factor for CAD is high blood cholesterol. It is estimated that more than 250 million cholesterol tests are performed per year in the United States. While blood cholesterol remains one of several important risk factors for heart disease, it is widely accepted that multiple risk factors for CAD must be considered to provide a more accurate picture of the absolute risk of disease.

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Absolute cardiovascular disease risk is determined by a combination of all cardiovascular risk factors present. Other traditional and emerging risk factors include: gender; increasing age and heredity; tobacco smoking; high blood pressure; physical inactivity, diet and obesity; diabetes mellitus; C-reactive protein ("CRP"); homocysteine; carotid intima-media thickness ("CIMT"); and coronary calcium, among others. Many of these factors are costly to measure or assess, are resource intensive, are inappropriate for a primary care setting, are not easily accessible by the broader population or require invasive procedures. In addition, many individuals are still getting through this assessment net, as evidenced by growing incidences of heart attacks worldwide. Therefore, a clear unmet medical need exists for new CAD risk factors to identify hidden risk individuals and help avoid that critical first coronary event.

In September 2010, Miraculins announced the acquisition of the PreVu Non-Invasive Skin Cholesterol test, a new and non-invasive tool for risk assessment of CAD. As a new risk factor for heart disease, skin cholesterol measurement provides valuable information to augment traditional CAD risk assessment. Skin contains over 10% of the body's cholesterol and ages in parallel with vascular connective tissue. As blood vessel walls accumulate cholesterol, peer reviewed clinical data has shown that so too does skin tissues. A high skin cholesterol level is a reliable predictor of the risk of higher cholesterol accumulation in the arteries and, accordingly, the risk of heart disease. High levels of skin cholesterol have been shown to be correlated to CAD as measured by stress test, angiography, coronary calcium, and carotid intima-media thickness, inflammatory markers of vascular disease, previous heart attack incidents and Framingham risk score.

This test is conducted by placing a drop of detector reagent on the palm of the hand, which binds selectively to the cholesterol in the skin. After a one minute incubation period, the area is blotted dry to remove any unbound detector solution and an indicator reagent is then added. When combined, a blue colour change occurs in direct proportion to the amount of skin cholesterol present. After two minutes, a hand held spectrophotometer (colour reader) is placed over the drop to precisely measure its hue, generating a quantitative number which indicates a patient's skin cholesterol value.

In addition to the POC format of the test, the PreVu technology is also being developed by Miraculins and partner Gamma-Dynacare Medical Laboratories in a lab-processed format called the PreVu Non-Invasive Skin Cholesterol Lab Processed ("LP") Test or the PreVu LP Test. This format of the test has been designed as a simple collection device that allows a patient or administrator to capture skin cells and cholesterol from the palm of the hand with a medical grade adhesive.

The PreVu POC test has recently received Health Canada clearance and has been CE-Marked for sale in Europe. In Canada and Europe, the PreVu LP Test has been previously cleared for use as part of risk assessment for CAD. In the United States, the PreVu POC Test has previously been cleared by the FDA for use as part of risk assessment for CAD in persons with a history of heart attack and/or in persons suspected of having significant multi-vessel coronary artery disease (>50% stenosis, or blockage, in more than one vessel, as diagnosed by angiography). Skin cholesterol test results, when considered in conjunction with clinical evaluation, blood cholesterol and other risk factors identified for coronary artery disease, will aid a physician or healthcare practitioner in focusing diagnostic and patient management options.

PreVu has previously been successfully test marketed on a limited basis in North America, and Miraculins is currently in the final stages of preparing for the planned launch of the PreVu technology and making the product commercially available in the second quarter of calendar 2012. During the past year, Miraculins has focused on making the PreVu technology available for commercial sale with six critical activities of focus leading to this significant milestone. The following progress can be reported:

# 1. Re-established key manufacturing partnerships for the PreVu reagent test kits and the PreVu handheld spectrophotometer:

- Announced a manufacturing agreement with International Aerospace/Medical Device Contractor HEI, Inc. for the handheld spectrophotometer.
- Executed a manufacturing agreement for the reagent testing kits with Thermo Fisher Scientific Inc., the world leader in serving science.

# 2. Coordinated the establishment of an ISO 13485 certified quality system at Miraculins in order to become the medical manufacturer of record:

- Developed a complete Quality Management System for the manufacturing and sale of medical devices, including the comprehensive documentation and implementation of a quality manual, standard operating procedures, forms and work instructions, followed by the requisite training of Miraculins' management and team.
- Appointed the BSI Group to provide assessment and certification services.
- Engaged the Emergo Group to provide technical support during the implementation and certification process.
- Successfully passed an ISO 13485 certification audit and was issued an ISO certificate.





# 3. Prepared for regulatory notifications required for medical device product marketing in Canada, the United States and Europe:

- Completed a full review of all available historical regulatory documentation and developed detailed regulatory strategies for both the point of care ("POC") and lab processed ("LP") versions of the test.
- Obtained Heath Canada regulatory clearance in January 2012.
- Appointed Emergo Europe as the European Authorized Representative and received CE-mark for European marketing in January 2012.
- Received clarification from the FDA on PreVu's current Indication for Use, under which the POC technology can be sold into the US market.

# 4. Refreshed the PreVu brand across all marketing and promotional platforms to communicate technology value proposition:

- Introduced revised PreVu logo and product positioning language to most effectively communicate the full value proposition of the technology.
- Preliminary reconstruction of a new PreVu website.

## 5. Evaluated multiple sales channels to more precisely target end consumers:

- Conducted high level pre-sales discussions with key decision makers in a number of important markets including medical clinic chains, retail pharmacies, the life insurance industry, alternative healthcare and established medical device distributors.
- Exhibited the PreVu technology to over 250 potential future customers at the Health Fusion conference of the Canadian Association of Naturopathic Doctors ("CAND") in Calgary, a three-day congress, with strong indications that PreVu will be incorporated into Naturopathic Doctors practices across the country once the product is launched.
- Exhibited the PreVu technology at the Ontario Association of Naturopathic Doctors Annual Convention and Tradeshow in Toronto in November 2011.

#### 6. Conducted partnership discussions to seed sales and distribution channels:

- Announced an agreement that will see The Stevens Company Limited distribute the PreVu POC Test to medical professionals in clinical settings across Canada.
- Announced an agreement with Pear Healthcare Solutions to distribute the PreVu POC test to the Canadian retail pharmacy market.
- Formed a critical partnership with Gamma-Dynacare Medical Laboratories, one of Canada's largest and most respected medical laboratories, for the final development and commercialization of the lab processed ("LP") format of the technology designed to become PreVu's over-the-counter retail test format.
- Conducted meetings and discussions with interested parties for the licensing/distribution rights to PreVu in foreign markets including China, India, South Korea, Mexico, the European Union and Saudi Arabia.

To support the launch plan, Miraculins has appointed key consultants in the areas of scientific, manufacturing, technical development and clinical and regulatory affairs. In addition to bringing their skills to Miraculins, certain consultant resources having experience with the PreVu product prior to Miraculins' acquisition also provides a continuity of technical knowledge as the product advances to commercialization.

Of particular note, Miraculins has established a PreVu Medical Advisory Board (MAB) of distinguished medical professionals to advise on PreVu matters, including product launch strategy. The founding member of the MAB, and its chair, is Dr. G.B. John Mancini, MD, FRCPC, FACC, Vancouver Coastal Health Research Institute - University of British Columbia. Subsequently, both Dr. Milan Gupta, MD, FRCPC, FACC, Associate Clinical Professor of Medicine at McMaster University in Hamilton, Ontario and Assistant Professor of Medicine at the University of Toronto, and Dr. Henry A. Solomon, MD, FACP, FACC, Senior Medical Advisor to the American College of Cardiology, have joined the PreVu MAB.

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#### Preeclampsia Program

Preeclampsia is a devastating condition affecting pregnant women that manifests abruptly and results in 15% of all premature births. In the most severe cases, it can result in seizure, stroke, coma, or death. The incidence rate is 7 – 10% of all pregnant women and has an estimated \$7 billion impact on the healthcare system annually. Currently, the sole diagnosis for preeclampsia is by its symptoms; high blood pressure and significant amounts of protein in the urine, which are non-specific to the disease. Currently, preeclampsia affects three million mothers worldwide every year and is associated with premature births and infant illness including cerebral palsy, blindness, epilepsy, deafness and lung conditions. There is no effective detection method for the risk of preeclampsia and the cause is unknown. It is estimated that preeclampsia costs the global health care system US \$3 billion per year. The potential target market for a preeclampsia test is every expectant mother, estimated to be 6 million women annually in the US alone, and greater than 12 million worldwide.

Miraculins' preeclampsia technology is based on a suite of 35 novel protein biomarkers, in-licensed from Mount Sinai Hospital, involved in the development of the placenta and the biology implicated in the development of preeclampsia. The technology was discovered through pioneering research conducted by Dr. Isabella Caniggia and her collaborators at the Samuel Lunenfeld Research Institute of Mount Sinai Hospital, and the Hospital for Sick Children.

One of the promising biomarkers in the portfolio acquired by Miraculins is a cell surface glycoprotein known as Endoglin, which has been widely studied in the independent literature, including a major study published in the New England Journal of Medicine entitled "Soluble Endoglin and Other Circulating Anti Angiogenic Factors in Preeclampsia". Under the direction of independent experts from institutions across the United States, the paper reports that Endoglin levels change during gestation and that it can play a role in identifying the patients at highest risk of preeclampsia. Subsequent studies have continued to report on the strong utility of Endoglin and its role in detecting preeclampsia.

On January 8, 2010, Miraculins announced a partnership with Alere, Inc. (NYSE: ALR) (formerly Inverness Medical Innovations, Inc.), a global leader in the convergence of medical diagnostic testing and health management, to advance and potentially commercialize Miraculins' preeclampsia technology. The partnership agreement included a fee paid to Miraculins by Alere to acquire the exclusive option to license the worldwide rights to biomarkers of interest from the program. The goal of the partnership is to commercialize Miraculins' biomarkers for worldwide distribution.

The development program is established in a Collaborative Research and Option Agreement, whereby Alere develops tests for Miraculins' biomarkers and evaluates their performance in large cohorts of patient blood samples. The biomarkers are also being assessed for their utility in detecting intrauterine growth restriction and other diseases of pregnancy. Alere can exercise its option to license at any time during the term of the Collaborative Research and Option Agreement. Upon exercise of the option, Miraculins will receive additional fees, developmental and commercial milestone payments, and royalties on sales.

In January 2011, Miraculins announced that significant progress had been made towards the development of tests for a number of Miraculins' preeclampsia biomarkers under the Collaborative Research and Option Agreement between the parties. A further update was provided in June 2011, and again in January 2012, when the Company announced that Alere had maintained its exclusive option on Miraculins' preeclampsia technology through payment of a non-refundable fee in accordance with the terms of the Collaborative Research and Option Agreement. In accordance with the terms of that agreement, Alere must maintain the exclusive option at regular intervals.

Miraculins has retained certain commercial rights to pursue complementary commercial strategies for the markers and receives a secure supply of reagents and certain rights to intellectual property related to the biomarker Endoglin from Alere.

## **Prostate Cancer Program**

Through the discovery and identification of proteins specific to prostate cancer, Miraculins has developed intellectual property surrounding the combination of markers including Prostate Secretory Protein (PSP94, also known as microseminoprotein-beta or "MSMB") with the goal of reducing the number of men proceeding to biopsy based on current methods. These unnecessary biopsies are costly, invasive and can lead to complications. The current standard screen for prostate cancer, the Prostate Specific Antigen ("PSA") test, although sensitive, is not highly specific, sending upwards of 750,000 men for unnecessary prostate biopsies annually in the United States alone.

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PSP94 is a basic 94 amino acid protein found in high concentration in the epithelial cells of the prostate. The marker has been examined in independent literature for its potential to be a cancer biomarker and was found to be decreased in the 24 hour collection of urine from men with late stage tumours compared to men with enlarged prostate or benign prostatic hyperplasia. Further research is needed to confirm the utility of PSP94 as a biomarker in men with prostate cancer. Miraculins has completed a number of studies which have added to the growing body of evidence that levels of PSP94 are differentially expressed in this disease.

Discovery and validation of the Miraculins prostate cancer markers has been conducted on nearly 600 separate and distinct patient samples including the PCSC04 study, a 200 patient, 15 site study. The data from that study showed that Miraculins' urine-based test performed with a specificity that would have eliminated approximately 23% of the biopsies for patients who did not have prostate cancer and a sensitivity that correctly identified 93% of patients who were true positives for prostate cancer.

Additionally, Miraculins has discovered that the detection of PSP94 in urine can improve the performance of free over total ("F/T") PSA ratio in detecting aggressive prostate cancer, which could help significantly improve upon the standard free PSA test.

In 2010, Miraculins launched the PSP94 Immunoassay for urine specimens (research use only and not for diagnostic procedures) to enable further independent study of the marker in pre-clinical and non-clinical research settings.

## **Other Cancer Programs**

Miraculins has a number of potential biomarkers for colorectal, gastric and pancreatic cancers. In order to effectively manage its financial and other resources, the Company is currently focused on its cardiovascular and preeclampsia programs while evaluating the next steps for this program and therefore research and development for these programs is currently on hold.

- Biomarkers, including Miraculins' lead biomarker for colorectal cancer (known as MIR-CR1) have been shown to be 100% more sensitive than the fecal occult blood test ("FOBT"), the current preliminary screening standard for colorectal cancer, according to numbers available in the scientific literature in studies conducted in collaboration with the European Tumour Sample Institute gGmbH, and Fox Chase Cancer Center.
- MIR-CR1 has been identified by amino acid sequence, and the next step for this program involves the development of a clinical grade immunoassay for the marker.
- Seven blood based protein biomarkers of interest for their potential to separate gastric cancer patients from non gastric cancer patients. This included a single marker that performs with a 72% sensitivity at 95% specificity (AUC=0.925) known as MIR-GP1.
- Miraculins also has intellectual property related to pancreatic cancer markers that requires further research.

#### **New Program Opportunities**

Miraculins is continually evaluating in license/acquisition opportunities in areas where there are unmet clinical diagnostic and risk assessment needs. Diagnostic technologies of greatest interest to the Company have completed discovery stage research and biomarker identification but require additional expertise and resources to be developed into validated commercially viable assays.

#### OUTLOOK

The strategic direction of the Company is centred on the acquisition, development and commercialization of diagnostic and risk assessment tests for unmet clinical needs. In order to advance these research and development programs, Miraculins expects to continue incurring operating losses. Based on current projections and strategic plans, management expects expenses will increase in fiscal 2012, as compared to fiscal 2011. Any increase in expenditures would result from the continued development of current technology programs and the potential addition of complementary technologies.

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The Company's financial statements have been prepared using International Financial Reporting Standards ("IFRS") that are applicable to a going concern, which contemplates that Miraculins will continue in operation for the foreseeable future and will be able to realize its assets and discharge its liabilities and commitments in the normal course of business. There is substantial doubt about the Company's ability to continue as a going concern. The Company has experienced operating losses and cash outflows from operations since incorporation and has not reached successful commercialization of its products.

The Company's future operations are dependent upon its ability to generate product sales, negotiate collaboration or license agreements with upfront payments, obtain research grant funding, and secure additional funds. While the Company is striving to achieve these plans, there is no assurance that these and other strategies will be achieved or such sources of funds will be available or obtained on favourable terms or obtained at all. If the Company cannot generate product sales, negotiate collaboration or license agreements with upfront payments, obtain research grant funding, or if it cannot secure additional financing on terms that would be acceptable to it, the Company will have to consider additional strategic alternatives which may include, among other strategies, exploring the monetization of certain intangible assets as well as seeking to outlicense assets or potential asset divestitures.

The ability of the Company to continue as a going concern and to realize the carrying value of its assets and discharge its liabilities and commitments when due is dependent on the successful completion of the actions taken or planned, some of which are described above, which management believes will mitigate the adverse conditions and events which raise doubt about the validity of the going concern assumption used in preparing these financial statements. There is no certainty that these and other strategies will be sufficient to permit the Company to continue as a going concern.

The Company's financial statements do not reflect adjustments in the carrying values of assets and liabilities, expenses, and the balance sheet classification used, that would be necessary if the going concern assumption were not appropriate. Such adjustments could be material.

Based on current estimates and expected operating activities, management believes the Company has sufficient financial resources to fund operations into the fourth quarter of fiscal 2013.

The Company may decide to accelerate, terminate or reduce its focus in certain research areas, or commence research in new areas as a result of the Company's research progress and the availability of financial resources. These decisions are made with the goals of managing the Company's cash resources and optimizing the Company's opportunities. The availability of funding may change management's strategy over the coming year.

#### **RISKS AND UNCERTAINTY**

The Company operates in a highly competitive environment that involves significant risks and uncertainties, some of which are outside of the Company's control. The Company is subject to risks inherent in the biotechnology industry, including:

## Risks Related to the Company's Financial Condition

- The Company has not derived any revenue to date from the commercial sale of its diagnostic products. In light of
  the length of time and expense associated with bringing new products through commercialization, obtaining
  regulatory approval and bringing products to market, operating losses are expected to continue.
- The Company has mainly relied on equity and debt financing and grant funding to support operations and will
  continue to need significant amounts of additional capital that may not be available to the Company on favourable
  terms, and may be dilutive.
- The Company may fail to obtain additional financing and be unable to fund operations and commercialize its product candidates.
- The Company must meet its debt repayment obligations and failure to do so could cause the lender to demand on
  its security on the Company's long-term debt.

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The Company intends to raise additional financing, as required, through research, partnering and licensing arrangements, the exercise of warrants and options, and through equity and/or debt financing. However, there can be no assurance that these financing efforts will be successful or that the Company will continue to be able to meet ongoing cash requirements. It is possible that financing will not be available or, if available, may not be on favourable terms. The availability of financing will be affected by the results of scientific and clinical research, ability to attain regulatory approvals, the market acceptance of the Company's products, the state of the capital markets generally (with particular reference to pharmaceutical, biotechnology and medical companies), the status of strategic alliance agreements, and other relevant commercial considerations.

#### Risks Related to the Company's Business and Operations

- The Company is in various stages of development of diagnostic and risk assessment products and, as a result, is
  unable to predict whether it will be able to profitably commercialize its products.
- Failure to protect intellectual property, or infringement on the intellectual property rights of others, may impede the Company's ability to operate freely.
- The Company's business is subject to significant government regulation and failure to achieve and maintain regulatory approval of diagnostic products would negatively affect its business.
- The Company is dependent on strategic partners, including clinical investigators and contract research
  organizations, as part of its diagnostic product development strategy, and it would be negatively affected if it is not
  able to initiate or maintain these relationships.
- The Company may be dependent on others for the manufacture, development and sale of its products. If the
  Company is unable to establish or manage collaborations in the future, there could be a delay in the manufacture,
  development and sale of products.
- Even if product candidates receive all of the required regulatory approvals, there is no guarantee of market
  acceptance or commercialization of the resulting product candidates, which will be determined by the Company's
  sales, marketing and distribution capabilities and the positioning and competitiveness of its diagnostic product
  compared with any alternatives
- The Company's ability to successfully market certain diagnostic products may depend in part on the extent to which reimbursement for the cost of such products will be available from government health administration authorities, private health insurers and other organizations. Significant uncertainty exists as to whether newly approved healthcare products will qualify for reimbursement, or the timing by which such reimbursement can be secured. Furthermore, challenges to the price of medical products and services are becoming more frequent. There can be no assurance that adequate third-party coverage will be available to establish price levels, which would allow the Company to realize an acceptable return on its investment in product development. Although non-reimbursed, user-pay models may be available to the Company, uncertainty exists to the degree which lack of available reimbursement by government health administration authorities, private health insurers and other organizations could limit market adoption of the Company's products. Reimbursement issues and decisions vary country by country as to procedure and time for review and/or reimbursement approval.
- The Company's industry is characterized by rapid change and a failure by the Company to react to these changes could have a material adverse effect on its business.
- The Company may conduct development internationally and may be subject to laws and regulations of several
  countries which may affect the Company's ability to access regulatory agencies and may affect the enforceability
  and value of the Company's licenses and intellectual property.
- If the Company fails to hire or retain needed personnel, the implementation of its business plan could slow and future growth could suffer.
- The Company must meet its debt repayment obligations and failure to do so could cause the lender to demand on
  its security on the Company's long-term debt.

#### Management's Discussion and Analysis



Miraculins views patents and other means of intellectual property protection as essential to the Company's core business by protecting the Company's proprietary technology from infringement by competitors. To that end, patents will be reviewed and continued to be sought in relation to those components or concepts of each of its pre-clinical and clinical diagnostic products by management of the Company to ensure the highest level of protection possible is obtained. The Company requires all employees, consultants, and parties to collaborative research agreements to execute confidentiality agreements upon the commencement of employment, consulting relationships or a collaboration with the Company. These agreements require that all confidential information developed or made known during the course of the engagement with Miraculins is to be kept confidential. The Company also maintains agreements with scientific staff and all parties contracted in a scientific capacity, providing that all inventions resulting from work performed for Miraculins, using Miraculins' property, or relating to Miraculins' business and conceived or completed during the period covered by the agreement are the exclusive property of the Company.

#### Risks Relating to the Company's Common Shares

- The Company has not paid any cash dividends on its common shares and, for the foreseeable future, the Company does not intend to pay any cash dividends on its common shares and therefore its shareholders may not be able to receive a return on their shares unless they sell them.
- The market price and trading volume of the Company's common shares may be volatile. In addition, variations in earnings estimates by securities analysts and the market prices of the securities of our competitors may also lead to fluctuations in the trading price of the common shares.
- The significant costs that the Company will incur as a result of being a public company in Canada could adversely
  affect its business.

To date, no dividends have been declared or paid on the common shares, and it is not expected that dividends will be declared or paid in the immediate or foreseeable future. The policy of the Board of Directors of the Company is to reinvest all available funds in operations. The Board of Directors may reassess this policy from time to time. Any decision to pay dividends on the common shares of Miraculins will be made by the Board of Directors based on the assessment of, among other factors, earnings, capital requirements and the operating and financial condition of the Company.

#### SELECTED QUARTERLY FINANCIAL INFORMATION

The selected financial information provided in the table below is derived from the unaudited quarterly financial statements for each of the last eight quarters (in \$'s):

	Q1 - 2012	Q4 - 2011	Q3 - 2011	Q2 - 2011	Q1 - 2011	Q4 - 2010	Q3 - 2010	Q2 - 2010
Loss for the period	(548,258)	(558,736)	(349,897)	(376,012)	(332,537)	(406,924)	(565,714)	(268,495)
Finance income	1,471	1,576	6,169	3,102	2,044	2,187	846	725
Loss per share	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

The Company adopted IFRS in fiscal 2012 with a transition date of December 1, 2010, The quarterly data for 2010 is presented in accordance with previous Canadian GAAP and has not been restated under IFRS. Accordingly, it may not be comparable with the information for fiscal 2011 and 2012. See "Adoption of International Financial Reporting Standards ("IFRS")" on page 19 for a description of the significant differences between Canadian GAAP and IFRS for the Company.

It is important to note that historical patterns of expenditures cannot be taken as an indication of future expenditures. The amount and timing of expenditures, and therefore liquidity and capital resources, may vary substantially from period to period depending on the business and research activities being undertaken at any one time and the availability of funding from investors and prospective commercial partners.

#### Management's Discussion and Analysis



The Company's cumulative quarterly loss over the past two years relates primarily to the expansion of the Company's research and development programs, primarily the acquisition and the move towards commercialization of the PreVu Non-Invasive Skin Cholesterol Test. The increased losses for Q4 and Q3 2010, as compared to preceding quarters, is primarily due to the professional fees and other costs related to the acquisition of PreVu assets. The increased losses in the quarters in fiscal 2011 and 2012 as compared to Q2 2010 relate to costs associated with the move towards commercialization of PreVu. The Q4 2011 loss has also increased due to an increase in the revaluation of the royalty obligation and interest on the long-term debt obtained in Q4 2011. The Q1 2012 loss has increased as a result of interest in the long-term debt and increased stock-based compensation expense, as a result of significant stock options issued during the quarter.

#### **RESULTS OF OPERATIONS**

#### **General and Administration**

General and administration expenses include those costs not directly related to research and development activities. This includes expenses associated with management services, and professional fees such as legal, audit and investor and public relations activities.

The changes in general and administration expenditures, including stock-based compensation, for the three month periods ended February 29, 2012 and February 28, 2011 are reflected in the following table:

Three month periods ended	Februa	ary 29, 2012	Februa	ary 28, 2011	Increase (Decrease)		
Compensation related costs Wages, consulting fees, and benefits Stock compensation related costs	\$	128,005 129,542	\$	82,504 10.586	\$	45,501 118,956	
Other administration costs		116,611		108,503		8,108	
Total general and administration	\$	374,158	\$	201,593	\$	172,565	

The increase in costs for the three month period ended February 29, 2012 as compared to 2011 can be attributed to the following factors:

- The increase in wages, consulting fees, and benefits is primarily related to the appointment of new executive team members, as well as the Company hiring additional employees.
- The increase in stock compensation related costs is related to the granting of stock options to certain of the Company's management, directors and employees during the first quarter of fiscal 2012. In fiscal 2011, the compensation related to stock option grants was significantly less.
- The increase in other administration costs is primarily related to higher professional fees and transfer agent and filing fees.

The Company expects higher levels of general and administration expenditures for the coming fiscal year.

#### Research and development

Research and development expenditures include costs associated with the Company's research and development programs, the significant portion of which are development activities related to the commercialization of the PreVu technology. The Company is in the development stage and devotes a significant portion of its financial resources to research and development activities.

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



The changes in research and development expenditures, including stock-based compensation, for the three month periods ended February 29, 2012 and February 28, 2011 are reflected in the following table:

Three month periods ended	Febru	February 29, 2012		ıary 28, 2011	Increase (decrease)		
PreVu Non-Invasive Cholesterol test less: Government assistance		133,923 (19,942)		46,481		87,442 19,942	
	\$	113,981	\$	46,481	\$	67,500	
Other Research and Development Activities Compensation related costs Laboratory rent and occupancy costs Contract research and scientific consulting Consumables Other research costs Write-offs of intangible assets less: Government assistance	\$	- 18,066 500 114 352 -	\$	30,158 9,997 12,300 3,113 7,757 23,186 (7,987)	\$	(30,158) 8,069 (11,800) (2,999) (7,405) (23,186) 19,942	
	\$	19,032	\$	78,524	\$	(59,492)	
Total research and development	\$	133,013	\$	125,005	\$	8,008	

As expected, research and development expenditures for the three month period ended February 29, 2012 were higher as compared to the three months ended February 28, 2011. This net increase can be attributed to the following factors:

- In 2010, the Company acquired assets related to the PreVu Non-Invasive Cholesterol test. Costs incurred during the three months ended February 29, 2012 were directly related to development activities of this technology as the Company moves towards commercialization of the product. Costs have increased from the three months ended February 28, 2011 as additional costs have been incurred as the Company gets closer to the launch of the product, which is expected in the second guarter of calendar 2012.
- Government assistance relating to the PreVu program is as a result of the Company receiving a grant from the Province of Manitoba through the Manitoba Technology Commercialization Program to support the PreVu Non-Invasive Cholesterol Test. The program provided funding to cover up to 50% of eligible costs including legal fees, patenting, marketing studies, literature development, product certification, prototyping, process validation and technical consulting costs to maximum of \$100,000. During the three months ended February 29, 2012, \$19,942 was recorded under this program. The grant funding was approved in June of 2011 so as a result there was no government assistance relating to the PreVu program during the three months ended February 28, 2011.
- Expenses associated with the Company's other research and development activities has decreased during the three months ended February 29, 2012, when compared to the three months ended February 28, 2011 as the Company's focus is on the advancement of the PreVu technology. The increase in laboratory rent and occupancy costs during the three months ended February 29, 2012 is as a result of the Company closing its wet laboratory in the fourth quarter of 2011. The Company terminated its laboratory lease in January of 2012 and incurred a one-time payment of \$17,500 as a result of this lease termination.
- Government assistance in fiscal 2011 relates to the cooperation and project funding agreement with CIRDF. The Company received funding to offset \$1 for every \$2 spent on research on the project. During the three months ended February 28, 2011 \$7,987 was recorded under agreement. This project was completed during the 2011 fiscal year and as a result no further assistance was recorded during the three months ended February 29, 2012 relating to this funding agreement.

The Company expects higher levels of research and development expenditures for the coming fiscal year as the Company moves towards commercialization of PreVu.

#### Management's Discussion and Analysis



## **Collaborative Research and Option Fees**

The change in collaborative research and option fee income for the three month periods ended February 29, 2012 and February 28, 2011 is reflected in the following table:

Three month periods ended	February 29, 2012		Febru	ary 28, 2011	Increase (Decrease)		
Collaborative research and option fee income	\$	31,575	\$	23,213	\$	8,362	

The increase in collaborative research and option fee income for the three months ended February 29, 2012 is the result of higher collaborative research and option revenues earned from the agreement with Alere Inc. when compared to the three months ended February 28, 2011.

#### **Finance Income**

The changes in finance income for the three month periods ended February 29, 2012 and February 28, 2011 are reflected in the following table:

Three month periods ended	February 29, 2012		Februa	ary 28, 2011	Increase (Decrease)		
Finance income	\$	1,471	\$	2,044	\$	(572)	

Finance income was lower during the three months ended February 29, 2012 as a result of lower average cash balances as compared to the same period in the prior year. The Company anticipates higher levels of investment income for the coming year as a result of increased cash due to the financing completed in March of 2012.

## **Finance Expense**

The change in finance expense for the three month periods ended February 29, 2012 and February 28, 2011 is reflected in the following table:

Three month periods ended	February 29, 2012			ary 28, 2011	Increase (Decrease)		
Finance expense	\$	72,278	\$	31,584	\$	40,694	

Finance expense for the three months ended February 29, 2012 is the primarily the result of the accretion on the royalty obligation associated with the acquisition of PreVu of \$31,000 and interest on the long-term debt that was obtained in October of 2011 of \$40,396. During the three months ended February 28, 2011, the finance expense primarily related to the accretion on the royalty obligation associated with the acquisition of PreVu of \$23,248 and interest on the amount payable to GVI of \$7,759. The increase is due to higher accretion of the royalty obligation, as well the interest on the long-term debt that was obtained in Q4 of 2011, partially offset by no interest on the amount payable to GVI which was settled during the three months ended February 29, 2012. Interest was waived in the period subsequent to September 30, 2011. The Company anticipates higher levels of finance expense as a result of the outstanding debt for the coming year.

#### Management's Discussion and Analysis



#### Loss and comprehensive loss for the year

The loss and comprehensive loss for the three month periods ended February 29, 2012 and February 28, 2011 is reflected in the following table:

Three month periods ended	February 29, 2012		February 28, 2011		Increase (Decrease	
Loss and comprehensive loss for the period	\$	548,258	\$	332,537	\$	215,721
Loss per share	\$	0.01	\$	0.01	\$	-

As discussed above, the increase in loss for the three months ended February 29, 2012 as compared to the three months ended February 28, 2011 resulted mainly from higher PreVu development activities, stock-based compensation and interest expense.

#### LIQUIDITY AND CAPITAL RESOURCES

Since inception, the Company has financed its operations from public and private sales of equity, issuance of debt, the exercise of warrants and stock options, interest income on funds available for investment, government grants and tax credits. As at February 29, 2012, the Company had unrestricted cash totaling \$373,375 as compared with \$683,169 at November 30, 2011.

## Cash used in operating activities

Cash used in operating activities totaled \$312,339 for the three months ended February 29, 2012 from ongoing research and development programs as well as general and administration activities, compared to cash used by operating activities of \$408,279 for the same period in fiscal 2011. The decrease in cash used in operating activities is due to higher payments on accounts payable during 2011 and higher collaborative research and option fees received during 2012, partially offset by a higher net loss after adjusting for non cash items.

## Cash (used in) from financing activities

For the three months ended February 29, 2012, cash used in financing activities totaled \$792. and related to repayment of obligation under finance lease. For the three months ended February 28, 2011, cash provided from financing activities totaled \$890,054. Of this amount, \$2,263 was for repayment of obligation under finance lease and \$892,317 was from the issuance of shares and the exercise of warrants.

## Cash from (used in) investing activities

Cash from investing activities totaled \$3,337 for the three months ended February 29, 2012. Of this amount, \$14,321 was for patent costs and \$1,267 was for the acquisition of property and equipment. Additionally, the Company received proceeds of \$18,925 on the sales of scientific equipment, which was being held for resale. During the three months ended February 28, 2011, cash used in investing activities totaled \$12,889. Of this amount, \$11,198 was for patent costs and \$1,691 was for the acquisition of property and equipment.

#### Shares, options and warrants

On January 20, 2012, the Company issued 952,533 Common Shares to Genesys Venture Inc. ("GVI") in accordance with the terms of an agreement between the two parties to settle the amount payable by the Company to GVI.

On March 29, 2012, the Company closed a private placement offering (the "2012 Offering") with aggregate gross proceeds to the Company of \$2,452,292 from the sale of 22,293,559 units ("Units") at a price of \$0.11 per Unit. Each Unit is comprised of one common share of the Company (a "Share") and one half of one Share purchase warrant (a "Warrant"). Each Warrant will expire 24 months from the date the Warrant is issued (the "Expiry Date") and will entitle the holder to purchase one Share at a price of \$0.16 up to the Expiry Date. There were 11,146,780 warrants issued within the 2012 Offering.

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



Certain persons assisted the Company by introducing potential subscribers for the 2012 Offering and were paid a finder's fee of up to 8% of the total subscription proceeds received from subscribers introduced to the Company by each particular person. Additionally, these persons were issued compensation warrants ("Compensation Warrants") up to 8% of the total number of Units subscribed for by subscribers introduced to the Company by each particular person. Each Compensation Warrant entitles the holder thereof to purchase one Share at a price of \$0.14 for a period of 12 months from the date of issue. There were 503,047 Compensation Warrants issued. The net proceeds of the Offering shall be used for general corporate purposes.

On May 7, 2012, 300,000 options to purchase common shares were exercised at an exercise price of \$0.10 resulting in the issuance of 300,000 common shares for gross proceeds of \$30,000 to the Company.

During the three months ended February 29, 2012, the Company granted 2,680,000 options to purchase Common Shares to certain directors, an officer, employees and advisors of the Company all with an exercise price of \$0.10. Additionally, 130,000 options expired during the quarter.

Subsequent to February 29, 2012, the Company granted 250,000 options to purchase Common Shares to a certain advisors of the Company with an exercise price of \$0.10 and 300,000 options were exercised as described above.

6,248,332 warrants expired on December 15, 2011. On March 29, 2012, 11,649,827 warrants were issued as described above.

	May 23, 2012	February 29, 2012	November 30, 2011
Common shares issued and outstanding	92,968,820	70,375,261	69,422,728
Options outstanding	6,705,000	6,755,000	4,205,000
Warrants outstanding	11,649,827	-	6,248,332

The Company believes it has sufficient financial resources to fund operations into the fourth quarter of fiscal 2013. The Company's management may consider all financing alternatives and may seek to raise additional funds for operations from current stockholders and other potential investors. This disclosure is not an offer to sell, nor a solicitation of an offer to buy the Company's securities. Where the Company opts to pursue such financing, there is no assurance that funding will be available or obtained on favourable terms.

## **CONTRACTUAL OBLIGATIONS**

The Company periodically enters into long-term contractual agreements for the leases of office facilities and equipment, management services, and certain purchased services. The following table presents commitments arising from agreements currently in force over the next five years.

	Payments due by Period									
Management services agreement Contractual commitments Finance lease Accounts payable and accrued liabilities Long-term debt		Within 2 - 3 1 year years					Total			
	\$	70,833 37,150 9,360 160,234 120,000	\$	- 40,000 6,980 - 1,180,000	\$	- 40,000 - - -	\$	70,833 117,150 16,340 160,234 1,300,000		
	\$	397,577	\$	1,226,980	\$	40,000	\$	1,664,557		

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



Effective January 1, 2012, the Company has a business and administration services agreement with GVI, including the provision of Chief Financial Officer services. The Company is committed to pay \$7,083 per month or \$85,000 per annum for a period of one year.

The Company is obligated to pay an annual licence maintenance fee beginning on October 15, 2011, which is the third anniversary date of a license agreement with the Mount Sinai Hospital in Toronto, Canada. For further information refer to Note 5 contained in the condensed interim financial statements for the three months ended February 29, 2012.

On April 9, 2012 a payment of \$15,919 in regards to the finance lease was made and there is no further obligation under this lease.

The Company previously leases its laboratory space under an operating lease. In addition to the annual lease payments, the Company also pays maintenance, property taxes, insurance and other operating costs. The premises and equipment are leased from GVI, a company controlled by a now former director. On January 16, 2012, the Company and GVI mutually agreed to terminate the remainder of the laboratory lease for a one-time payment of \$17,500 and there is no further obligation under this lease.

The Company is obligated to pay royalties to PreMD based on any future commercial sale of PreVu Skin Cholesterol Test equal to 10 percent of gross revenue associated with PreVu. The Company retains the right to buy-out the royalty at anytime for a one-time payment of \$1,000,000. To date, no revenue had been recorded related to PreVu.

The Company is obligated to pay royalties to CIIRDF based on any future product revenues, if any, from the exploitation of the technology contemplated in the project funding agreement, described in note 9 to the audited financial statements for the year ended November 30, 2011, equal to 2.5 percent up to a maximum of the amounts funded under the agreement. To date, no royalties are due and/or payable.

The Company will also pay a royalty to MSH, subject to minimum annual royalties, of a stipulated percentage of the net sales of licensed products related to the worldwide rights to commercialize a portfolio of biomarkers for use in developing diagnostic assays for the early detection of preeclampsia, if any, along with other milestone payments. If the Company sub-licenses any rights under the agreement to a third party, the Company shall pay MSH a stipulated percentage of the sub-license fee and sub-license royalty fee as described in note 6 to the audited financial statements.

A summary of the Company's contractual obligations may be found in Note 11 of the condensed interim financial statements for the three months ended February 29, 2012.

## **RELATED PARTY TRANSACTION**

On January 20, 2012, the Company issued 952,533 Common Shares to Genesys Venture Inc. (GVI), a party which was related to the Company until November 1, 2011, when a director who controlled GVI resigned from the Board of Directors, in accordance with the terms of an agreement between the two parties to settle the amount payable of \$64,296 by the Company to GVI.

#### **OFF-BALANCE SHEET ARRANGEMENTS**

Other than as described above, the Company does not have any off-balance sheet arrangements.

**Management's Discussion and Analysis** 



#### **CONTROLS**

## Effectiveness of disclosure controls and procedures

Management has established and maintained disclosure controls and procedures for the Company in order to provide reasonable assurance that material information relating to the Company is made known to management in a timely manner and that information required to be disclosed by the Company is reported within the time periods prescribed by applicable securities legislation.

A control system can only provide reasonable, not absolute, assurance that the objectives of the control system are met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs.

As a result of the Company's limited administrative staffing levels, internal controls which rely on segregation of duties in many cases are not appropriate or possible. Due to resources constraints and the present stage of the Company's development, the Company does not have sufficient size and scale to warrant the hiring of additional staff to correct this potential weakness at this time. To help mitigate the impact of this potential weakness and to ensure quality financial reporting, the Company is highly reliant on the performance of compensating procedures and senior management's review and approval to ensure that the controls are as effective as possible.

During the three months ended February 29, 2012, the Company made no material changes to its systems of internal controls over financial reporting.

#### CRITICAL ACCOUNTING POLICIES AND ESTIMATES

## **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

The preparation of financial statements in conformity with International Financial Reporting Standards (IFRS) requires the Company to select from possible alternative accounting principles and to make estimates and assumptions that determine the reported amounts of assets and liabilities at the balance sheet date, and reported costs and expenditures during the reporting period. Management believes that the estimates and assumptions upon which the Company relies are reasonable based upon information available at the time these estimates and assumptions are made. Estimates and assumptions may be revised as new information is acquired, and are subject to change.

In addition to the going concern assumption previously described, management believes that its most critical accounting policies and estimates relate to the following areas, with reference to notes contained in the accompanying financial statements:

#### Research and development costs

The Company's accounting policy over research and development costs may be found in Note 3(f)(i). Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit and loss as incurred. Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Company intends to and has sufficient resources to complete the development and to use of sell the asset. No development costs have been capitalized to date.

#### Management's Discussion and Analysis



#### **Acquired intellectual property**

The Company's accounting policy over acquired intellectual property may be found in Note 3(f)(ii). Costs incurred for acquired intellectual property will amortized over the estimated period that it is available for use in the manner intended by management, which is estimated to be three to five years.

#### Patents and trademarks

The Company's accounting policy over patents and trademarks may be found in Notes 3(f)(iii). Costs incurred for patents and trademarks are capitalized and amortized from the date of issuance on a straight-line basis over their respective legal lives or economic life, if shorter. Trademarks have an indefinite life, Costs incurred in successfully obtaining a patent or trademark are measured at cost less accumulated amortization and accumulated impairment losses. The cost of servicing the Company's patents and trademarks is expensed as incurred.

## **Technology licenses**

The Company's accounting policy over technology licences may be found in Notes 3(f)(iv). Technology licenses are recorded at cost and amortized over their estimated useful life.

## Stock-based compensation

The Company's accounting policy over stock-based compensation may be found in Notes 3(i)(ii) and 10(c). The grant date fair value of share-based payment awards granted to employees is recognized as an personnel expense, with a corresponding increase in equity, over the period that the employees unconditionally become entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market vesting conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that do meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

Share-based payment arrangements in which the Company receives goods or services as consideration for its own equity instruments are accounted for as equity-settled share-based payment transactions. In situations where equity instruments are issued and some or all of the goods or services received by the entity as consideration cannot be specifically identified, they are measured at fair value of the share-based payment.

## Impairment of non-financial assets

The Company's accounting policy over impairment of non-financial assets may be found in Notes 3(h)(ii). The carrying amounts of the long-lived non-financial assets, including intangible assets and property and equipment, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Intangible assets that have indefinite lives and intangible assets not yet put into use are evaluated for impairment at least annually.

An impairment exists when the carrying value of an asset exceeds its recoverable amount, which is the higher of its fair value less costs to sell or its value in use. The fair value less costs to sell calculation is based on available data from observable market prices, less incremental costs. The value in use calculation is based on a discounted cash flow model. These calculations require the use of estimates and forecasts of future cash flows. Qualitative factors, including market size and market growth trends, strength of customer demand and degree of variability in cash flows, as well as other factors, are considered when making assumptions with regard to future cash flows and the appropriate discount rate. A change in any of the significant assumptions or estimates used to evaluate the underlying assets could result in a material change to the results of operations.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed, to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of amortization, if no impairment had been recognized. Write-downs as a result of impairment are recognized in research expense in the statement of comprehensive loss.

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



A summary of all of the Company's significant accounting policies and estimates may be found in Note 3 to the accompanying financial statements for the three months ended February 29, 2012.

#### **CHANGES IN ACCOUNTING POLICIES**

#### Adoption of International Financial Reporting Standards (IFRS):

In February 2008 the Canadian Accounting Standards Board ("AcSB") confirmed that the use of IFRS would be required for Canadian publicly accountable enterprises for interim and annual financial statements effective for fiscal years beginning on or after January 1, 2011. The Company implemented these standards on December 1, 2011.

The unaudited condensed interim financial statements for the three months ended February 29, 2012 are the Company's first financial statements that comply with IFRS. These financial statements have been prepared as described in Note 2 of the condensed interim financial statements.

In preparing the condensed interim financial statements in accordance with IFRS 1, the Company has applied the mandatory exceptions and certain of the optional exemptions from full retrospective application of IFRS.

Note 16 of the unaudited condensed interim financial statements for the three months ended February 29, 2012 contains a detailed description of the Company's conversion to IFRS, including required reconciliations of the Company's financial statements previously prepared under Canadian GAAP to those under IFRS as at December 1, 2010 and for the three months ended February 29, 2012 and February 28, 2011 and for the year ended November 30, 2011.

#### FORWARD-LOOKING STATEMENTS

This Management's Discussion and Analysis ("MD&A") contains forward-looking information as defined in applicable securities laws (referred to herein as "forward-looking statements") that reflect the Company's current expectations and projections about its future results. All statements other than statements of historical fact are forward-looking statements. Forward-looking statements are based on the current assumptions, estimates, analysis and opinions of management of the Company made in light of its experience and its perception of trends, current conditions and expected developments, as well as other factors which the Company believes to be relevant and reasonable in the circumstances.

The Company uses words such as "believes," "may," "plan," "will," "estimate," "continue," "anticipates," "intends," "expects," and similar expressions to identify forward-looking statements, which, by their very nature, are not guarantees of the Company's future operational or financial performance, and are subject to risks and uncertainties, both known and unknown, as well as other factors that could cause the Company's actual results, performance, prospects or opportunities to differ materially from those expressed in, or implied by, these forward-looking statements.

Specifically, this MD&A contains forward-looking statements regarding, but not limited to, the Company's:

- intention to acquire, develop and commercialize diagnostic tests for unmet clinical needs;
- intention to partner with large diagnostic companies and reference laboratories to commercialize and market technology;
- expectation regarding collaborative research agreements, upfront payments, milestone payments, ongoing royalties on sales and other sources of revenue:
- expectation regarding new diagnostic program opportunities;
- intentions regarding the protection of intellectual property:
- business strategy; and
- intention with respect to dividends.

Inherent in forward-looking statements are known and unknown risks, uncertainties and other factors beyond the Company's ability to predict or control that may cause the actual results, events or developments to be materially different from any future results, events or developments expressed or implied by such forward-looking statements. Such risk factors include, among others, the Company's stage of development, lack of product revenues, additional capital requirements, the ability to protect its intellectual property, dependence upon collaborative partners, changes in government regulation or regulatory approval processes, and rapid technological change in the industry. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements.





Actual results and developments are likely to differ, and may differ materially, from those expressed or implied by the forward-looking statements contained in this MD&A. Such statements are based on a number of assumptions which may prove to be incorrect, including, but not limited to, assumptions about:

- the availability of financing for the Company's research and development projects, or the availability of financing on reasonable terms;
- general business and economic conditions;
- the timing of the receipt of regulatory and governmental approvals for the Company's research and development projects;
- interest rates and foreign exchange rates;
- the Company's costs of research projects;
- positive results of current and future clinical trials;
- the uncertainties associated with the acceptance and demand for new products;
- research projects will not be unreasonably delayed and expenses will not increase substantially;
- government regulation will not impose requirements that significantly increase expenses or that delay or impede the Company's ability to bring new products to market;
- the Company's ability to attract and retain skilled staff;
- the impact of changes in Canadian-US dollar and other foreign exchange rates on the Company's costs and results;
- market competition;
- tax benefits and tax rates; and
- the Company's ongoing relations with its employees and with its business partners.

Although management of the Company believes that these forward-looking statements are based on reasonable assumptions, a number of factors could cause the actual results, performance or achievements of the Company to be materially different from the future results, performance or achievements expressed or implied by such forward-looking statements. The forward-looking statements contained in this MD&A and any documents incorporated by reference herein are expressly qualified by this cautionary statement. The Company cautions you that the foregoing list of important factors and assumptions is not exhaustive. Events or circumstances could cause actual results to differ materially from those estimated or projected and expressed in, or implied by, these forward-looking statements. You should also carefully consider the matters discussed under "Risk Factors" in this MD&A which provides for additional risks and uncertainties relating to the Company and its business. The Company undertakes no obligation to update publicly or otherwise revise any forward-looking statements or the foregoing list of factors, whether as a result of new information or future events or otherwise, other than as may be required by applicable legislation.