

# BIOMARK DIAGNOSTICS INC.

## Form 51-102F1

### *Management's Discussion & Analysis Quarterly Report For the Quarter Ended June 30, 2018*

#### **1.1 Date of Report: August 29, 2018**

*The following management's discussion and analysis ("MD&A") should be read together with the condensed consolidated financial statements and accompanying notes for the quarter ended June 30, 2018, which are prepared in accordance with International Financial Reporting Standards ("IFRS"). All amounts are stated in Canadian dollars unless otherwise indicated.*

*This MD&A includes certain statements that may be deemed "forward-looking statements". Forward-looking statements are often, but not always, identified by the use of words such as "anticipate", "plan", "estimate", "expect", "may", "project", "predict", "potential", "could", "might", "should" and other similar expressions. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include market prices, continued availability of capital and financing and general economic, market or business conditions. Investors are cautioned that any such statements are not guarantees of future performance and actual results or developments may differ materially from those projected in the forward-looking statements.*

#### **1.2 Overall Performance**

BioMark Diagnostics Inc. was incorporated under the Business Corporation Act of British Columbia on June 19, 2014. The head office of the Company is 165-10551 Shellbridge Way, Richmond, British Columbia, V6X 2W8.

BioMark Diagnostics is developing proprietary, non-invasive, and accurate cancer diagnostic solutions to help detect, monitor, and assess treatment for cancer early and cost effectively. The platform technology is also designed to be used for measuring response to treatment and potentially for serial monitoring for cancer survivors. For more information please visit the company website at: [www.biomarkdiagnostics.com](http://www.biomarkdiagnostics.com)

Announcements and Highlights during the quarter:

- Management continues to raise capital through private placement, family funds and other strategic sources to support completion of clinical trials studies and commercialization of its core technology platform. Management has been working on numerous non-dilutive financing with various government institutions across Canada and USA.

- In April 2018, BioMark met with principal investigators and its scientific advisory team to work on submitting publications to high impact scientific and oncology related journals. The overall team is planning on 3 or more publications before end of 2018 calendar year.
- BioMark and TMIC (The Metabolomics Innovation Centre) extended the repository of additional metabolite markers in early stage lung cancer through a customized assay. This will result in identification of additional prime metabolites that can further increase its existing assay functionality and robustness especially in improving staging and differentiating different lung cancer subtypes.
- On April 25th, 2018, BioMark announced that it has penned a deal with the Alberta Machine Intelligence Institute (Amii) led by Dr. Osmar Zaïane of the University of Alberta's Department of Computing Science and his team to assess and employ machine intelligence to augment BioMark's breakthrough biological molecular diagnostics for lung cancer that leverages the power of metabolomics. The result to date has been impressive and shows marked improvement in our lung assess test as we refined and tested critical features. BioMark intends to increase the size of the dataset and further fine tune its algorithms as we begin to incorporate machine and deep learning application onto our technology platform. BioMark intends to incorporate more machine and deep learning as an application-driven breakthrough embedded seamlessly onto our technology platform.
- In April 2018, an ethics approval for amendment for response to chemo and radio therapy treatment using SSAT1 assay was obtained.
- BioMark and Drs. Don Miller (University of Manitoba), Thomas Klonish (University of Manitoba), Ted Lakowski (University of Manitoba) and Dr. David Wishart (University of Alberta) submitted a Letter of Intent application funded under Collaborative Health Research Project (CHRP) for a focused study to investigate SAT1 (Spermidine Acetyl Transferase 1) as a biomarker target for improved detection and clinical management of brain tumours. The outcome of this study will help expand BioMark's platform to other cancers. Results and decision are expected in September 2018.
- BioMark filled new provisional patents related to its high-performance lung cancer panel. Some of the patents are now at national phase in various global jurisdictions. Additional patents are in the works related to process and will be filled after research is completed.
- In June 2018, final follow up on phase II (12 months post first check up) of the outliers in Bangladesh was been completed and biological samples were sent to BRI labs in Vancouver for analysis which are planned for late August 2018. Results from these studies will be used to support potential claims related to SSAT1 assay.

- A European patent is in the process of being granted and BioMark is working with its patent lawyers to support all important claims.
- In June 2018, BioMark obtained a revised Ethics Review Board approval on the extension of its lung cancer fingerprint study. This will facilitate re-validation and confirmation in Canada and US for early stage lung cancer studies. In addition, BioMark is completing a thorough metabolite profile for its lung cancer panel with TMIC that might form the basis of its lung cancer test.
- In June 2018, BioMark's oncology team met with Japanese counterparts in Chicago at ASCO to discuss protocol and potential timing for a collaborative study. The Japanese group was the same one identified in previous monthly report update

### **About Alberta Machine Intelligence Institute (Amii)**

The Alberta Machine Intelligence Institute (Amii) is a world-leading research group at the University of Alberta in Edmonton specializing in machine intelligence. One of three hubs in Canada's Pan-Canadian AI Strategy, Amii conducts advanced research and development in the many subfields of machine learning and artificial intelligence. Amii researchers collaborate with a variety of organizations to help push the bounds of scientific knowledge and develop innovative, adaptive solutions for businesses in Alberta and beyond. Learn more at [www.amii.ca](http://www.amii.ca)

### **Collaborative Health Research Project (CHRP)**

The Collaborative Health Research Projects (CHRP) initiative supports innovative, interdisciplinary, collaborative research projects, requiring participation from the natural sciences or engineering community together with the health sciences community. This initiative focuses on the translation of the research results to knowledge/technology users (KTUs) and related stakeholders outside the academic or training environment. As such, the proposed research projects must have a strong focus on knowledge translation (KT) and lead to health and economic benefits for Canadians, more effective health services and products, and/or a strengthened health care system.

### **Risk Factors and Uncertainty**

The Company is focused on more select market introduction and development of all its product lines while instituting cost control of product development. The failure to generate future sales in the Company's main products could have a significant and adverse affect on the Company.

The Company is engaging in assay development, establishing new quantitative standards, conducting additional clinical research related to technology positioning and regulatory submissions. Negative clinical trials along with regulatory non-approval or delays could adversely affect sales, product commercialization and could have a major impact on the Company. Additionally, industry evolution and existing or new market entrants can impact the competitive position of BioMark. New detection and screening technologies in genomics, epigenetics, exosomes, and liquid biopsy incorporating big data can negatively impact BioMark commercialization efforts.

BioMark's success will depend in large measure on certain key personnel. The loss of the services of such key personnel could have a material adverse affect on the Company. The contributions of these individuals to the immediate operations of BioMark are of central importance. In addition, there can be no assurance that BioMark will be able to continue to attract and retain all personnel necessary for the development and operation of its business.

Management is continuing efforts to attract additional equity and capital investors and implement cost control measures to maintain adequate levels of working capital. Nevertheless, there can be no assurance provided with respect to the successful outcome of these ongoing actions. If the Company is unable to obtain additional financing on reasonable terms, the Company may be required to curtail or reduce its operations to continue as a going concern.

In addition, the Company's limited working capital could affect the Company's ability to seize upon opportunities requiring investment, or to reinvest in its technology platform in a timely manner.

### 1.3 Selected Quarter Information

The following information is a summary of the current quarter and year-to-date results including a comparison of financial performance to the corresponding previous year. The information is presented on the same basis as the consolidated financial statements and should be read in conjunction with the statements and accompanying notes.

	June 30, 2018	March 31, 2018	June 30, 2017
	\$	\$	\$
Total Expenses	110,911	726,747	190,068
Net Loss	110,911	726,747	184,414
Loss Per share	0.00	0.01	0.003
Total Assets	149,893	51,746	473,596
Distribution or Cash Dividends	None	None	None

## 1.4 Discussion of Operations

The Company generated no revenues for the quarter ended June 30, 2018 and has recorded a net loss of \$110,911. The net loss decreased by \$79,157 compared to the previous year of \$190,068. This was due to reduced consulting and professional fees, filing and transfer agent fees, research costs and share-based compensation. Total assets increased to \$149,893 for the quarter ended June 30, 2018 compared to \$51,746 reported on March 31, 2018. This capital increase is attributed to Share Subscription received from the ongoing private placement.

Consulting service fees decreased by \$45,470 compared to the prior year that were due to capital raise related and business development services.

Research and other expense reduced by \$4,111 due to the leveraging of government funds. The Company is expecting to increase investment spending associated with research, sample and data analysis, and regulatory submission in the next quarter.

The Share-based compensation reduced by \$23,847 since there was reduction in services rendered by scientific advisors for their consulting services to support scientific and research work. The Company currently has no reported payroll and engages on the basis of consulting services as needed.

The office and miscellaneous remained at similar levels due to existing rental agreement. Travel expenses during the period was \$6,163 compared to \$8,749 for the previous year. The slight decrease of \$2,586 was a result of reduced meetings and site visits.

### **Upcoming Potential Operational Objectives**

In the coming quarters, BioMark will continue to evolve its business operations to help further leverage its expertise in cancer detection, monitoring and assessment. Some key business objectives initiatives include:

- Actively raise capital especially with institutional, family funds and strategic investors
- Submit an application to Health Canada for diagnostic application of its SSAT1 initially using LCMS. The LCMS is the industry gold reference standard, hence to gain recognition the company is focusing on this analytical methodology; See notes below on activities related to our clinical trials.

- Revalidate and advance the clinical commercialization of its customized fingerprint assay with The Metabolomics Innovation Centre (TMIC) and authorized lab service company for lung cancer. A larger cohort of samples with an emphasis of earlier stage lung cancer samples will be sourced through registered bio depository centres across America and analyzed at partner labs after the kits are optimized at TMIC. In addition, the company will enhance its supporting software as needed for the assay through services rendered at Alberta Machine Intelligence Institute. The company anticipates the completion of the sample validation by end of this fiscal year.
- Continue to research and develop better quantification technologies or methods that will enhance the signal detection and reduce overall costs associated with sample collection and preparation. The company's goal is to lower cost detection costs associated with our platform;
- Conduct and appropriately register the clinical trials which include measuring response to radiation and chemotherapy and surgical intervention for lung cancer and glioblastoma;
- Developing stronger industry collaborations both locally and internationally;
- Publish in leading journals to highlights its discoveries
- Seek strong industrial partners to engage in co -development projects
- Apply for appropriate government grants with partner institution

## 1.5 Summary of Quarterly Results

The following information is a summary of the Company's financial results for the eight most recently completed quarters.

	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017
	\$	\$	\$	\$
Total Revenue	-	-	-	-
Expenses	110,911	147,536	176,375	218,422
Net Loss	(110,911)	(147,536)	(176,375)	(218,422)
Loss per Share	(0.00)	(0.002)	(0.003)	(0.004)

	June 30, 2017	March 31, 2017	December 31, 2016	September 30, 2016
	\$	\$	\$	\$
Total Revenue	-	5,582	-	-
Expenses	184,414	243,409	111,757	150,306
Net Loss	(184,414)	(237,827)	(111,757)	(150,306)
Loss per Share	(0.003)	(0.004)	(0.002)	(0.003)

## 1.6 Liquidity

The Company has total assets of \$149,893 as at June 30, 2018 consisting of cash and amounts receivable and has a negative working capital of \$849,809.

At June 30, 2018, the Company had cash and cash equivalents of \$130,679 (June 30, 2017 – \$455,959) and working capital deficit increased by \$190,186 from June 30, 2017 (\$659,623) due to the decrease of assets during the year. Working capital is defined as current assets less current liabilities. Total liabilities increased by \$135,157 from June 30, 2017 (\$1,133,219) which are largely due to the reduction of account payable and accrued liabilities. Cash and cash equivalents decreased by \$325,280 and is attributed to the decrease in capital raise.

Cash utilized in operating activities during the quarter ended June 30, 2018 was \$133,678 (June 30, 2017 – \$173,094). This difference between June 30, 2018 and June 30, 2017 was a decrease in items not affecting cash which includes Consulting services paid in shares for scientific advisors and Share-based compensation for consultants.

At June 30, 2018, share capital was \$4,086,774 comprising 62,794,119 issued and outstanding common Shares (June 30, 2017 – \$3,867,115 comprising 60,834,452 issued and outstanding common Shares). Contributed Surplus at June 30, 2018 is \$699,397 (June 30, 2017 – \$667,458) the increase is the result of the share-based payments recognized for the year. As a result of the net loss for the quarter ending June 30, 2018 of \$110,911 (June 30, 2017 – \$184,414) the deficit at June 30, 2018 increased to \$5,845,440 from \$ 5,193,196 as at June 30, 2017.

At present, the Company's operations do not generate cash inflows and its financial success after June 30, 2018 is dependent on management's ability to continue to obtain sufficient funding to sustain operations through the development stage and successfully bringing the Company's technologies to the point that they may be out licensed or tests sold post commercialization to labs. Clinical research and development process can take many years and is subject to factors that are beyond the Company's control.

In order to finance the Company's future research and development and to cover administrative and overhead expenses in the coming years the Company may raise money through equity sales or debt instruments. Many factors influence the Company's ability to raise funds, including the Company's record of accomplishment, and the experience and caliber of its management. Actual funding requirements may vary from those planned due to various factors, including the progress of research activities and achievement of critical milestones. Management believes it will be able to raise equity capital as required in the long term but recognizes there will be risks involved that may be beyond their control. Should those risks fully materialize, it may not be able to raise adequate funds to continue its operations.

Since the Company will not be able to generate cash from its operations in the foreseeable future, the Company will have to rely on funding through future equity issuances and through short term borrowing in order to finance ongoing operations. The ability of the Company to raise capital will depend on market conditions and it may not be possible for the Company to issue shares on acceptable terms or at all.

### **1.7 Capital Resources**

The Company does not have any other commitments for material capital expenditures. The Company is not a party to any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on the Company's financial condition, changes in financial condition, revenues, expenses, results of operations, liquidity, capital expenditures or capital resources.

### **1.8 Off-Balance Sheet Arrangements**

There is no off-balance sheet arrangements to which the Company is committed.

### **1.9 Transactions Between Related Parties**

During the quarter ended June 30, 2018, the Company entered into the following transactions with related parties:

- a) For the quarter ended June 30, 2018, directors and officers of the company provided consulting services to the company of \$82,500. These charges are included in consulting fees. Consulting fees from the CEO was \$60,000 and the Interim CFO also performing duties as the Project Director was \$22,500 for the quarter ended June 30, 2018. As at June 30, 2018, the Company has \$579,946 and \$27,615 due to the Chief Executive ("CEO") and the former Chief Financial Officer respectively (2017 - \$528,377 and \$52,615 respectively). The balance owing to the interim CFO as at June 30, 2018 is \$112,645. The balances due to related parties are unsecured, non-interest bearing and without fixed repayment terms.



- b) For the quarter ended June 30, 2018, the Company recognized \$1,068 of share-based compensation for stock options held by director and officers, which were granted in 2017. This amount is included in share-based compensation expense.
- c) On May 14, 2014, the Company entered a General Service Agreement (the “Service Agreement”) with BioMark Technologies Inc., Both Biomark Diagnostics and BioMark Technologies are managed by the CEO of the Company. According to the Service Agreement, the Company engaged Biomark Technologies to provide important services that include continuation of research and development, establishing a framework quality management system, IP refinement and filing, establish protocols with key investigators, linking platforms that BioMark Diagnostics can leverage, engage in territorial business development from relationships that Biomark Technologies developed over the years, supplier validation and review, operating capital and other related functions (the “Services”). Biomark Technologies uses subcontractors to perform some of its services. The Company will pay management fees equivalent to cost plus a 25% administration fee to Biomark Technologies and payable upon completion of the Services. For the quarter ended June 30, 2018, the Company paid \$nil to Biomark Technologies as administration fees (2017 - \$722). BTI holds approximately 65% of the common shares of the Company as at June 30, 2018 (2017 – 75%). The CEO owns more than 10% interest in the Company. The term of this Agreement will remain in full force and effect indefinitely until terminated as provided in the Agreement. In the event that either party wishes to terminate this Agreement, that each party will be required to provide 30 days' notice to the other party.
- d) On May 14, 2014, the Company entered into an Independent Contractor Agreement (the “Agreement”) with the CEO of the Company. According to the Agreement, the CEO will provide consulting services to the Company for one year with a compensation of \$240,000 per year plus benefits. In addition, the CEO will be paid a cash bonus equivalent to 30% of the annual salary at the end of each year if the trading price of the Company shares increased by more than 30% from the trading price at the beginning of the year. For the purpose of this calculation, the starting trading price is \$0.25 per share. The CEO will also be granted stock options for 1,000,000 shares at a price of \$0.25 per share (granted). Finally, if the Company’s market capitalization exceeds \$200 million USD, the CEO will be paid an additional cash bonus of \$500,000. The terms of the CEO agreement are on year to year basis unless terminated accordance to the terms and conditions set forth in the agreement. According to the Agreement, the Company engaged CEO service to provide important services that include develop and direct the corporate strategy, resource allocation, review acquisitions or partnerships, drive or

generate revenue growth, hire, and retain staff as necessary, support in capital raise rounds, manage past relationships and build business and collaborations.

**1.10 Fourth Quarter**

N/A

**1.11 Proposed Transactions**

N/A

**1.12 Critical Accounting Estimates**

The preparation of the consolidated financial statements in accordance with IFRS requires the Company to make estimates and assumptions concerning the future. The Company's management reviews these estimates and underlying assumptions on an ongoing basis, based on experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Revisions to estimates are adjusted for prospectively in the period in which the estimates are revised. However, actual outcomes can differ from these estimates. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected. The more significant areas are as follows:

- the estimates and assumptions used in the share-based payments;
- the fair value measurements for financial instruments; and
- value of warrants in private placement.

The Company also made judgments, apart from those involving estimates, in applying accounting policies. Actual results may differ from these estimates. Significant areas where management's judgment has been applied include:

- Classifying categories of financial assets and financial liabilities in accordance with IAS 39, Financial instruments: recognition and measurement;
- Evaluating if the criteria for recognition of provisions and contingencies are met in accordance with IAS 37, Provisions, contingent liabilities and contingent assets; and
- The assessment of the Company's ability to continue as a going concern.

### **1.13 Changes in Accounting Policies including Initial Adoption**

During the year ended March 31, 2018, the Company did not adopt any new accounting standards and interpretations.

#### *New accounting standards issued but not yet effective*

Certain new standards, interpretations, amendments, and improvements to existing standards were issued by the IASB or IFRIC that are mandatory for future accounting periods. The following have not yet been adopted by the Company and are being evaluated to determine their impact.

- IFRS 9: New standard that replaced IAS 39 for classification and measurement, tentatively effective for annual periods beginning on or after January 1, 2018.
- IFRS 15: New standard to establish principles for reporting the nature, amount, timing, and uncertainty of revenue and cash flows arising from an entity's contracts with customers, effective for annual periods beginning on or after January 1, 2018.
- IFRS 16: Leases: New standard to establish principles for recognition, measurement, presentation, and disclosure of leases with an impact on lessee accounting, effective for annual periods beginning on or after January 1, 2019.

### **1.14 Financial Instruments and Other Instruments**

#### Fair values

The Company's financial instruments include cash, accounts payable and due to related parties. The carrying amounts of these financial instruments are a reasonable estimate of their fair values because of their current nature.

The Company classifies its fair value measurements in accordance with an established hierarchy that prioritizes the inputs in valuation techniques used to measure fair value as follows:

Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities;

Level 2 – Inputs other than quoted prices that are observable for the asset or liability either directly (i.e. as prices) or indirectly (i.e. derived from prices); and

Level 3 – Inputs that are not based on observable market date.

#### Credit risk

The Company is not exposed to credit risk.

### Interest rate risk

Interest rate risk is the risk the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Financial assets and liabilities with variable interest rates expose the Company to cash flow interest rate risk. The Company does not hold any financial liabilities with variable interest rates. The Company does maintain bank accounts which earn interest at variable rates, but it does not believe it is currently subject to any significant interest rate risk.

### Liquidity risk

The Company's ability to continue as a going concern is dependent on management's ability to raise required funding through future equity issuances and through short-term borrowing. The Company manages its liquidity risk by forecasting cash flows from operations and anticipating any investing and financing activities. Management and the Board of Directors are actively involved in the review, planning and approval of significant expenditures and commitments.

The Company intends to meet its current obligations in the following year with funds to be raised through private placements, shares for debt, loans and related party loans.

## **1.15 Other MD&A Requirements**

- (a) More information about the Company is on SEDAR at [www.sedar.com](http://www.sedar.com).
- (b) Information required in the following sections of National Instrument 51-102, if applicable:
  - (i) Section 5.3 – Additional Disclosure for Venture Issuers without Significant Revenue;

An analysis of material components of the Company's general and administrative expenses is disclosed in the Statement of Comprehensive Loss forming part of the Financial Statements for the period ended December 31, 2017 to which this MD&A relates.

- (ii) Section 5.4 – Disclosure of Outstanding Share Data; and
  - a. Authorized:

Unlimited common shares without par value

b. Common Shares Issued:

As at June 30, 2018, the Company had 62,794,119 common shares issued and outstanding.

c. Share Purchase Warrants

As at June 30, 2018, the Company had 4,135,455 shareholder warrants issued and outstanding. Each warrant will entitle the holder to acquire one share at a price of \$0.15 per share for a period of two years after its Closing Date. The Company uses the residual value method to allocate proceeds of the unit amongst the common share and the share purchase warrant.

d. Stock options:

The Company has reserved 4,351,455 common shares under its Existing Plan. The plan provides for the granting of options to directors, employees, and consultants. Stock options granted generally have varying expiry terms of up to five years and vesting periods determined at the discretion of the directors.

The number of options exercisable as at June 30, 2018 was 4,125,000. The weighted average life remaining for these options was 1.68 years and weighted average exercise price was \$0.23 per option.

(iii) Section 5.7 – Additional Disclosure for Reporting Issuers with Significant Equity Investees.

Not Applicable.

(c) Disclosure required by National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* and, as applicable, Form 52-109F1 *Certification of Annual Filings – Full Certificate*, Form 52-109F1R *Certification of Refiled Annual Filings*, or Form 52-109F1 *AIF Certification of Annual Filings in Connection with Voluntarily Filed AIF*.

Form 52-109FV2 *Certification of Interim Filings* is filed on SEDAR.