

May 11, 2017

MANAGEMENT'S DISCUSSION & ANALYSIS

(All figures are expressed in thousands of Canadian dollars)

This Management's Discussion & Analysis (MD&A) for the three months ended March 31, 2017 has been prepared to help investors understand the financial performance of the Company in the broader context of the Company's strategic direction, the risks and opportunities as understood by management, and the key success factors that are relevant to the Company's performance. Management has prepared this document in conjunction with its broader responsibilities for the accuracy and reliability of the financial statements, as well as the development and maintenance of appropriate information systems and internal controls to ensure that the financial information is complete and reliable. The Finance and Audit Committee of the Board of Directors has reviewed this document and all other publicly reported financial information for integrity, usefulness, reliability and consistency.

This MD&A is dated May 11, 2017 and should be read in conjunction with the condensed interim consolidated financial statements for the three months ended March 31, 2017, and the audited annual consolidated financial statements of the Company for the years ended December 31, 2016 and 2015 (the Annual Financial Statements), as well as management's discussion and analysis for the year ended December 31, 2016.

FORWARD LOOKING STATEMENTS

Certain statements contained in this MD&A constitute forward-looking information within the meaning of securities law. Forward-looking information may relate to our future outlook and anticipated events or results and may include statements regarding our future financial position, business strategy, budgets, litigation, projected costs, capital expenditures, financial results, taxes and plans and objectives. In some cases, forward-looking information can be identified by terms such as %may+, %will+, %should+, %expect+, %plan+, %anticipate+, %believe+, %attend+, %estimate+, %predict+, %potential+, %continue+ or other similar expressions concerning matters that are not historical facts. These statements are based on certain factors and assumptions regarding, among other things, expected growth, results of operations, performance and business prospects and opportunities. While we consider these assumptions to be reasonable based on information currently available to us, they may prove to be incorrect. Forward looking-information is also subject to certain factors, including risks and uncertainties that could cause actual results to differ materially from what we currently expect. These factors include, among other things, the availability of funds and resources to pursue development projects, the successful and timely completion of clinical studies, and the ability of the Company to take advantage of business opportunities, the granting of necessary approvals by regulatory authorities as well as general economic, market and business conditions. For more exhaustive information on these risks and uncertainties you should refer to our most recently filed Annual Information Form which is available at www.sedar.com. Forward-looking information contained in this MD&A is based on our current estimates, expectations and projections, which we believe are reasonable as of the current date. You should not place undue importance on forward-looking information and should not rely upon this information as of any other date. While we may elect to, we are under no obligation and do not undertake to update this information at any particular time.

This document and the related consolidated financial statements can also be viewed on the Company's website at www.spectraldx.com and at www.sedar.com. The Company's Annual Information Form and Management Information Circular are also available on these websites.

INTRODUCTION

Spectral Medical Inc. (Spectral or the Company) is strategically focused on the development and commercialization of a treatment for septic shock utilizing its Endotoxin Activity Assay (EAA[®]) and the Toraymyxin[®] (PMX) therapeutic. If approved, this will be the first targeted therapy guided by a specific diagnostic in the area of sepsis. The Company also manufactures and sells certain proprietary reagents.

EAA[™]

Spectral has pioneered the development of biochemical markers for the clinical syndrome known as septic shock. In 2003, the Company achieved U.S. Federal Drug Administration (FDA), Health Canada and European CE clearance of the Endotoxin Activity Assay (EAA[®]) for the first recognized rapid test for the risk of developing sepsis in the Intensive Care Unit (ICU). In North America alone over 1,000,000* patients are diagnosed with the clinical syndrome of sepsis annually. Between 30% and 50% of patients with severe sepsis and septic shock die in the ICU. Earlier identification and treatment of patients at risk for sepsis reduces mortality and saves significant cost by reducing the length of stay in the ICU and by helping to guide therapeutic interventions. Spectral's EAA[®] endotoxin measurement is the only FDA cleared diagnostic for this indication currently on the market.

PMX

PMX is a therapeutic hemoperfusion device that removes endotoxin from the bloodstream. PMX has been used in more than 150,000 patients to date globally and has demonstrated in clinical trials that it safely and effectively removes endotoxin and reduces mortality in patients with severe sepsis and septic shock.

PROPRIETARY REAGENTS

Spectral develops, produces and markets recombinant proteins, antibodies and calibrators. These materials are sold for use in research and development as well as in products manufactured by other diagnostic companies through non-exclusive license and supply agreements. Royalty revenues are earned from these license arrangements based on a percentage of end user sales of Troponin I.

CLINICAL DEVELOPMENT

The Company's primary clinical development program continues to be focused on obtaining U.S. Food and Drug Administration (FDA) approval for PMX.

On March 6, 2009, Spectral signed a license agreement with Toray Industries, Inc. of Japan granting Spectral the exclusive development and commercial rights in the U.S. for PMX, a therapeutic device for the treatment of septic shock that removes endotoxin from the bloodstream. Under the terms of the agreement, Spectral is seeking FDA approval for PMX and, if successful intends to commercialize the product, together with its Endotoxin Activity Assay (EAA[®]), the only FDA cleared diagnostic for the measurement of endotoxin.

On February 26, 2010, the Company received final approval of its Investigation Device Exemption (IDE) from the FDA, which permitted the Company to conduct a pivotal trial for PMX (the EUPHRATES trial) in the United States.

In October 2010, the Company announced the initiation of its EUPHRATES trial (Evaluating the Use of Polymyxin B Hemoperfusion in a Randomized controlled trial of Adults Treated for Endotoxemia and Septic shock) in the United States comparing standard of care versus PMX plus standard of care.

* Ref: Martin. G., *Expert Rev Anti Infect Ther.* 2012 June; 10(6): 701-706

In January 2013, the first interim analysis was conducted on the 76 randomized patients who were followed for 28 days. The Data Safety and Monitoring Board (DSMB), consisting of experts in the fields of critical care medicine, infectious disease, nephrology, biostatistics and regulatory affairs, reviewed the totality of the data set for evidence of safety concerns, such as adverse events and/or adverse device effects, related to the use of the PMX cartridge. The results from the first interim safety analysis by the DSMB stated that there are no safety issues to date concerning the application of the PMX cartridge to patients in the EUPHRATES trial.

On January 27, 2014, the DSMB met to review the results of the second interim analysis after 184 patients had been randomized and followed for 28 days in accordance with the Statistical Analysis Plan agreed to with the FDA. On that date, the DSMB reported that stopping rules for safety, efficacy and futility were not met and that the trial should continue. The DSMB did not, however, provide the planned sample size recalculation at that time. The DSMB requested that additional analysis be performed by the Contract Research Organization on the original 184 patients prior to the recalculation.

The Company received the recommendations of the DSMB pursuant to its analysis on April 10, 2014, which recommendations included an additional exclusion criterion. The DSMB recommended that patients with a Multiple Organ Dysfunction Score (MODS) score of ≥ 9 no longer be eligible for randomization in the trial. The MODS score is a recognized scoring system used to evaluate the degree of organ dysfunction which exists in patients with sepsis.

In late September 2014, pursuant to the protocol change in April 2014 to effect the exclusion criterion that further refined patient selection to sicker patients, the FDA recommended that only data for those patients randomized after the change be considered in the determination of whether a statistically significant outcome related to the primary endpoint of 28-day mortality had been achieved.

In April 2015, the FDA accepted the Company's formal plan, and related content, for a rolling Pre-Market Approval (PMA) submission consisting of four separate modules. The first three modules include physical, chemical and safety testing data, as well as requisite manufacturing information. All three modules have now been filed with and accepted by the FDA. The Company expects to file the fourth and final module, providing clinical data, in the second quarter of 2017.

On September 14, 2015, the Company announced that the sample size for its EUPHRATES trial had been reset to 446 evaluable patients, of which 176 patients randomized after the protocol change on April 10, 2014 will be considered for determination of the primary endpoint of 28-day mortality as recommended by the FDA. The trial remained powered at 80 percent and the alpha remained at <0.05 for its primary endpoint. The methodology for the sample size recalculation was recommended by the trial's Steering Committee and accepted by the DSMB without further comment. The Company submitted a revised statistical plan to the FDA related to the sample size change and it was formally accepted.

Top line results for the Company's pivotal Phase III EUPHRATES trial were announced on October 3, 2016. Although the trial did not statistically achieve its primary endpoint, the trial results did show that use of the PMX cartridge is safe and demonstrated a five (5) percent reduction in mortality at 28 days in the sickest group of patients ($\text{MODS} > 9$) who were treated with two PMX cartridges. This was a pre-specified population which, in addition to a mortality benefit, showed beneficial treatment effects across multiple secondary endpoints and that the mortality benefit increased as a function of the amount of endotoxin removed.

The EUPHRATES study also showed that endotoxemia remains a major cause of the unacceptably high mortality of patients in septic shock. It is the only trial to have been designed to show the relationship between endotoxemia (based on a reliable method of measurement) and its removal with a cartridge specifically designed to remove endotoxin.

The database for the EUPHRATES trial contains detailed data on the clinical characteristics of 450 randomized subjects with high levels of endotoxin. These subjects were followed closely over 28 days for changes in endotoxin levels, as well as for other details of the clinical course of their septic shock episode. The Company completed its review of this extensive database in the first quarter and has determined that

the data is sufficient to proceed with filing the fourth and final module of its PMA submission to the FDA in the second quarter of 2017. The Company plans to make an announcement when the submission has been filed and to disclose further clinical data at that time. The Company also expects to submit a manuscript for publication in a major medical journal and to present trial results at a major medical conference before the end of June 2017.

PMX is marketed in Japan and Europe and has been used to treat more than 150,000 sepsis patients safely and effectively. Spectral[®] EAAi can identify patients that are most likely to benefit from PMX and monitor the effects of the treatment. This combination of the EAAi diagnostic and the PMX therapeutic has been utilized by clinicians in Europe since November 2007 and has demonstrated a clear reduction in mortality.

COMMERCIALIZATION INITIATIVES

The Company has taken a number of other operational and strategic measures to prepare itself for commercialization.

These measures include the development of a proprietary stand-alone pump (the Spectral Apheresis Machine or SAM) dedicated to the Company's therapy that enables treatment delivery in the ICU and reduces reliance on third party instrumentation. The addition of this state of the art equipment will enable the Company to provide a fully integrated and user friendly septic shock treatment system to the ICU. SAM is also designed to provide an open platform for other hemoperfusion cartridges and to deliver continuous renal replacement therapy (CRRT) when indicated. Final documentation has been submitted to Health Canada and the FDA, with potential regulatory approvals anticipated as early as the second quarter of 2017.

Other commercialization initiatives include new packaging for the EAAi diagnostic to simplify usage and reduce lab technician time in hospitals and the automation and scale up of the manufacturing process at Spectral[®] plant in Toronto, Canada to increase production capacity for the EAAi diagnostic.

OPERATIONS

The Company continues to focus its activities on the final stages of implementation of the EUPHRATES trial.

The Company also continued to sell its EAAi diagnostic and its proprietary reagents under the terms of existing commercial arrangements.

OPERATING RESULTS

REVENUE

Revenue for the months ended March 31, 2017 was \$941 compared to \$1,062 for the same period in the prior year. Revenues are subject to timing of customer orders and shipments, but are expected to be consistent with levels achieved in 2016.

EXPENSES

Operating costs for the three months ended March 31, 2017 were \$1,903, compared to \$4,069 for the same period in the preceding year, a decrease of \$2,166. The decrease is directly related to the reduction of activities related to the EUPHRATES trial. Enrolment in the trial was completed in June 2016 and final patient follow up will finish by the end of June 2017. The Company continues to maintain a low cost operating structure for its base business operations.

EUPHRATES trial costs (as disclosed in Note 11 of the condensed interim consolidated financial statements) were \$340 for the first quarter of 2017 compared to \$2,295 for the three months ended March 31, 2016. A significant portion of EUPHRATES trial costs is comprised of consulting and professional fees

paid to the trial's contract research organization, product distribution centre, co-ordinating centre and other clinical and regulatory consultants. Cumulative trial costs total \$40,063 as of March 31, 2017.

Product development costs for the three months ended 2017 of \$50 are related to the development of the Company's proprietary hemoperfusion/RRT (renal replacement therapies) instrument.

Loss

For the three months ended March 31, 2017, the Company reported a loss of \$962 compared to a loss of \$2,994 for the three months ended March 31, 2016.

COMMON SHARES OUTSTANDING

The total number of common shares outstanding for the Company was 207,165,587 as at March 31, 2017.

BALANCE SHEET, FINANCIAL CONDITION AND LIQUIDITY

Cash of \$3,714 at March 31, 2017, decreased by \$1,366, from \$5,080 at December 31, 2016. This decrease was attributable to the following:

Cash operating losses	\$(962)
Working capital	(323)
Purchases of property and equipment	<u>(81)</u>
	<u><u>\$(1,366)</u></u>

BOUGHT DEAL PROSPECTUS OFFERING

On February 18, 2016, the Company closed a bought deal prospectus offering (the Offering) resulting in the issuance of 14,300,000 Shares for gross proceeds of \$10,010.

On February 24, 2016, an additional 806,804 Shares were issued by the Company resulting in gross proceeds of \$565 in connection with the underwriters' exercise of their over-allotment option.

In total, the Company issued 15,106,804 Shares for aggregate gross proceeds of \$10,575. The Company received net cash proceeds of \$9,399 which will be used to fund its EUPHRATES trial and for working capital and general corporate purposes.

The Company also issued 906,408 broker warrants to the underwriters representing 6% of the total number of shares sold pursuant to the bought deal financing. Each broker warrant entitles the holder thereof to acquire one Share at a price of \$0.70 per Share for a period of 24 months from the closing date. 400,000 broker warrants were exercised in September 2016 for total proceeds of \$280.

NORMAL COURSE ISSUER BID

- i. On July 4, 2016, the Company announced that the Toronto Stock Exchange (the TSX) approved its notice of intention to make a normal course issuer bid (NCIB) for its outstanding Shares. Pursuant to the notice, the Company was able to purchase up to 4,134,664 of its Shares, representing approximately 2% of its issued and outstanding Shares, during the twelve month period commencing July 6, 2016 and ending July 5, 2017.

The Company did not repurchase any Shares under this NCIB.

RELATED PARTIES

All related parties and the respective transactions have been disclosed in Note 14 to the condensed interim consolidated financial statements for the three months ended March 31, 2017 and 2016.

1. Toray Industries, Inc. (Toray)

Toray holds 45,630,105 Shares of the Company as at March 31, 2017, representing approximately 22.0% (2016 . 22.41%) of Spectral's issued and outstanding Shares, calculated on a non-diluted basis.

Toray is entitled to nominate one director (the Toray Representative) to the Board of Directors as long as it owns in the aggregate not less than 10% of the Shares issued and outstanding calculated on a non-diluted basis.

2. Birch Hill Equity Partners Management Inc. (Birch Hill)

Birch Hill, through a number of its funds and an investee company, holds 33,517,718 Shares of the Company as at March 31, 2017 representing approximately a 16.2% (2016 . 16.2%) ownership interest, calculated on a non-diluted basis.

Birch Hill is entitled to nominate one director to the Company's Board of Directors so long as it owns in aggregate not less than 5% of the issued and outstanding Shares of the Company calculated on a non-diluted basis.

3. Key management consists of the Company's four executive officers and its Board of Directors.

There are no other related party transactions.

OUTLOOK

The Company expects to continue to generate sales in 2017 pursuant to its existing commercial arrangements for EAAi and its proprietary biological reagents. The Company's primary focus continues to be on potentially obtaining FDA approval of the PMX treatment and it plans to submit its final PMA module to the FDA in the second quarter of 2017. The Company believes that it has adequate cash on hand to fund its regulatory program and operations through the end of the first quarter of 2018.

BUSINESS RISKS

The Company's operations are exposed to a variety of risk factors inherent in new product development. The Company's short operating history in its new endeavours makes prediction of future operating results difficult. Actual future results may differ significantly from those projected in any forward-looking statements. Key business risks for the Company are detailed in its most recent Annual Information Form which is available at www.sedar.com.

RISK MANAGEMENT

1. FINANCIAL RISK MANAGEMENT

In the normal course of business, the Company is exposed to a number of financial risks that can affect its operating performance. These risks are: credit risk, liquidity risk and market risk. The Company's overall risk management program and prudent business practices seek to minimize any potential adverse affects on the Company's financial performance.

a. Credit Risk

Credit risk is the risk of a financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligation. Financial instruments that potentially expose the Company to significant credit risk consist of cash and trade and other receivables.

- i. Cash: The Company places its cash with Canadian Schedule I banks.
- ii. Trade and other receivables: The Company sells its products to distribution partners in major markets. The credit risk associated with the accounts receivable pursuant to these agreements is evaluated during initial negotiations and on an ongoing basis. There have been no events of default under these agreements. As at March 31, 2017 and 2016, no material accounts receivable balances were considered impaired or past due.

b. Liquidity Risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting obligations associated with its financial liabilities as they become due. The Company is exposed to liquidity risk, as it continues to have net cash outflows to support its operations. The Company's objective for liquidity risk management is to maintain sufficient liquid financial resources to meet commitments and obligations in the most cost effective manner possible.

The Company achieves this by maintaining sufficient cash and managing working capital. The Company monitors its financial resources on a weekly basis and updates its expected use of cash resources on the latest available data. All of the Company's financial liabilities are classified as current liabilities. Trade and other payables were \$758 as at March 31, 2017 with all of them having expected settlement dates within one year. There are uncertainties related to the timing and use of the Company's cash resources.

c. Market Risk

- i. Currency risk: The majority of the Company's revenue is denominated in U.S. dollars and Euros. At March 31, 2017, cash included US\$432. Trade and other receivables included a total of US\$428 and " 47. Trade and other payables included a total of US\$204 and " 1. There is no active hedging program currently in place due to the relatively short time frame for settlement of these balances. A 10% change in the U.S. dollar/Canadian dollar or Euro/Canadian exchange rates on the March 31, 2017 amounts would have an impact on losses by \$94.
- ii. Interest rate risk: The Company has no material exposure to fluctuations in interest rates.

2. CAPITAL RISK MANAGEMENT

The Company's primary objective, when managing capital, is to maintain appropriate levels of cash for working capital and operating purposes, as well as funding commercialization of its core products. Capital consists of share capital, contributed surplus, share-based compensation, warrants, and deficit. In order to maintain or adjust the capital structure, the Company may issue new common shares from time to time.

CRITICAL ACCOUNTING ESTIMATES

The Consolidated Financial Statements of Spectral are prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standard Board as set out in the CPA Canada Handbook. The Company has identified the accounting policies and estimates that are critical

to the understanding of the Company's operation and financial results in the Consolidated Financial Statements. Certain policies are selected by management and approved by the Finance and Audit Committee of the Board of Directors. These policies are set out in Note 3 to the Consolidated Financial Statements for the years ended December 31, 2016 and 2015. Certain policies are more significant than others and are, therefore, considered critical accounting estimates. Accounting policies are considered to be critical if they rely on a substantial amount of judgment in their application or if they result from a choice between accounting alternatives and that choice has a material impact on the reported results or financial position. The policies identified as critical to Spectral are discussed below.

Management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the Consolidated Financial Statements and the reported amounts of revenue and expenses during the reporting period. These policies are set out in Note 3 iv. to the Consolidated Financial Statements for the years ended December 31, 2016 and 2015. The most significant estimates are related to the valuation assumptions related to share-based compensation, accrual estimates made for clinical trial expenses and recoverability of deferred income tax assets. Actual results could differ from those estimates.

CONTINGENCIES AND COMMITMENTS

- i. The Company has committed to expenditures for its EUPHRATES trial, which are disclosed in Note 8 of the condensed interim consolidated financial statements for the three months ended March 31, 2017 and 2016. In addition, the Company is committed to certain future lease payments primarily in connection with the leased premises.
- ii. Directors and officers are indemnified by the Company for various items including, but not limited to, costs to settle lawsuits or actions due to their association with the Company, subject to certain restrictions. The Company has purchased directors and officers liability insurance to mitigate the costs of any potential future lawsuits or actions. The term of the indemnification covers the period during which the indemnified party served as a director or officer of the Company.
- iii. In the normal course of business, the Company has entered into agreements that include indemnities in favour of third parties, such as purchase and sale agreements, confidentiality agreements, engagement letters with advisors and consultants, leasing contracts and license agreements. These indemnification arrangements may sometimes require such third parties to compensate counterparties for losses as a result of breaches in representations, covenants and warranties provided by the Company or as a result of litigation or other third party claims or statutory sanctions that may be suffered by the counterparties as a consequence of the relevant transaction. In some instances, the terms of these indemnities are not explicitly defined. No accruals have been required to be made as at March 31, 2017 with respect to these agreements.

DISCLOSURE CONTROLS AND INTERNAL CONTROLS

Management's responsibility for financial reporting

Disclosure controls and procedures and internal controls over financial reporting

As at March 31, 2017, management has disclosure controls and procedures (~~DCP~~) that provide reasonable assurance that information required to be disclosed by the Company in its filings under Canadian securities legislation is recorded, processed, summarized and reported in a timely manner. The system of DCP includes, among other things, the Company's Corporate Disclosure and Whistleblower policies and Code of Conduct, the review and approval procedures of the Disclosure Committee and continuous review and monitoring procedures by senior management.

As at March 31, 2017, management has designed internal controls over financial reporting (~~ICFR~~) within the Company in order to provide reasonable assurance regarding the reliability of financial reporting and

the preparation of consolidated financial statements for external purposes in accordance with IFRS. These controls were designed based on the framework established by Internal Control - Integrated Framework: 2013 issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Due to its inherent limitations, ICFR may not prevent or detect misstatements. In addition, the design of any system of control is based upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all future events, no matter how remote, or that the degree of compliance with the policies or procedures may not deteriorate. Accordingly, even effective ICFR can only provide reasonable, not absolute, assurance of achieving the control objectives for financial reporting.

Changes in internal controls over financial reporting

There have been no changes to the Company's internal controls over financial reporting during the year ended March 31, 2017 that have materially affected, or are reasonably likely to materially affect, its internal controls over financial reporting.

An evaluation of the design and effectiveness of the Company's DC&P and ICFR has been conducted by management, under the supervision of the Chief Executive Officer (CEO) and Chief Financial Officer (CFO). Based on this evaluation, the CEO and CFO have concluded that, as of March 31, 2017, the Company's disclosure controls and procedures and internal control over financial reporting, as defined by National Instrument 52-109 . Certification of Disclosure in Issuers' Annual and Interim Filings, are operating effectively.