

# Management's Discussion and Analysis of Operations For the three months ended December 31, 2016

This Management's Discussion and Analysis ("MD&A) is prepared as February 17, 2017 and has been prepared in accordance with International Financial Reporting Standards ("IFRS). All amounts are in Canadian dollars.

Management is responsible for the preparation and integrity of the financial statements, including the maintenance of appropriate information systems, procedures and internal controls and to ensure that information used internally or disclosed externally, including the financial statements and MD&A, is complete and reliable. The Company's director's follows recommended corporate governance guidelines for public companies to ensure transparency and accountability to shareholders. The board's audit committee meets with management quarterly to review the financial statements including the MD&A and to discuss other financial, operating and internal control matters.

# Caution Regarding Forward Looking Statements

This document contains forward looking statements, such as statements regarding future sales opportunities in various global regions and financing initiatives that are based on current expectations of management. These statements involve uncertainties and risks, including Monarch Energy Limited's (Monarch or the Company) ability to obtain and/or access additional financing with acceptable terms, and delays in anticipated product sales. Such forward-looking statements should be given careful consideration and undue reliance should not be placed on these statements.

The preparation of Management's Discussion and Analysis (MD&A) may require management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements and the reported amount of revenue and expenses during the reporting period. Management bases estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions. Management believes the accounting policies, outlined in the Significant Accounting Policies section of its consolidated financial statements, affect its more significant judgments and estimates used in the preparation of its consolidated financial statements.

#### Introduction

The following MD&A for the three months ended December 31, 2016 has been prepared to help investors understand the financial performance of ChroMedX Corp. ("the Company" or "ChromedX Corp"), in the broader context of the Company's strategic direction, the risk and opportunities as understood by management, and the key metrics that are relevant to the Company's performance. The Audit Committee of the Board of Directors has reviewed this



document and all other publicly reported financial information for integrity, usefulness, reliability and consistency.

All amounts are expressed in Canadian dollars (CAD) unless otherwise noted.

Additional information about ChroMedX Corp., this document, and the related quarterly financial statements can be viewed on the Company's website at www.chromedX.com and are available on SEDAR at www.sedar.com.

On June 30, 2014, the Company completed a transaction which resulted in the acquisition of ChroMedX, a company incorporated under the laws of Ontario on December 3, 2013. As the former ChroMedX shareholders ended up owing the majority of the Company upon completion of the transaction, the transaction was deemed to be a reverse takeover.

Chromedx Ltd. ("ChroMedX" or the "Company") is a 100% owned subsidiary of ChroMedX Corp.

The Company's Common Shares are listed and traded on the CSE ("CSE") under the symbol CHX.

## Results of operation

ChroMedX, following the acquisition of the Patents (as defined and described below from Invidx Corp. ("Invidx") (formerly ChroMedX Inc.), is developing novel medical devices for Point of Care Testing (POCT), blood sample collection, and serum/plasma treatment and analysis. Based on previous devices and numerous patents, both issued and applied for, developed by Dr. James Samsoondar, a clinical biochemist, the devices represent disruptive technologies for the POCT and In Vitro Diagnostic (IVD) market.

The Company has two platform technologies. The initial platform will focus on devices and methodologies for blood sample collection and analysis. The initial product in this platform, known as the HemoPalm system, consists of a hand held analyzer and a suite of disposable cartridges for obtaining and testing blood samples. The analysis of the oxygen carrying state of hemoglobin in the blood is known as CO-oximetry. It is a critical measurement of a patient's condition. As well as determining if there is oxygen deficiency at the tissue level CO-oximetry determines the degree of any carbon monoxide poisoning (carboxy-hemoglobin) that may be affecting the patient. In addition, measurement of methemoglobin will indicate if a patient has been exposed to certain environmental toxins containing nitrates and is also used to monitor certain neonatal treatments. Thus rapid analysis of hemoglobin status and blood oxygenation as well as acid/base balance and electrolyte levels is an essential tool for patient evaluation. This information is of particular importance for first responder patient evaluation and in emergency and operating rooms in healthcare facilities. A hand-held analyzer which uses a disposable cartridge for obtaining blood samples for measuring CO-oximetry, blood gases (including pH) and electrolytes represents the initial project based upon the first technology platform.



Additional devices based on the same platform will provide innovative measurement techniques for neonatal bilirubin analysis and other blood chemistry markers.

The second technology platform is based on ultrafiltration and will be applied to several applications. The first will provide plasma separation from whole blood during blood collection which avoids the step of centrifugation in the laboratory. The second application will process plasma to remove proteins in preparation for analysis. The Company's plasma/serum ultrafiltration technology will provide the next innovation in measurement of free hormones and therapeutic drugs using existing laboratory immunoanalysers, but with reduced sample preparation time and cost. Proof of concept for this technology has been demonstrated.

The Company will develop its technologies in collaboration with major hospitals and universities and will seek strategic relationships with existing medical diagnostic companies, as well as companies that desire to enter into the field of medical diagnostics.

ChroMedX Corp. is led by an experienced management team, all of whom have advanced technical training and past start-up experience. A full suite of patents has been developed and these have either been granted by the USPTO or have been filed. Appropriate PCT filings for the patents are being executed, which enable worldwide protection of the ChroMedX's intellectual property.

During the three months ended December 31, 2016, the Company continued the development of the HemoPalm system prototype. Main focus over this period was development and testing of the HemoPalm biosensor component, cartridge design and sourcing parts to assemble the prototype unit. Company also continued to expand its IP portfolio on the HemoPalm Blood Analyzer System. The biosensor development is being carried out in collaboration with McMaster's Biointerface Institute under Innovation and Productivity I grant from Ontario Centres of Excellence. Initial results on the pH biosensor have been very positive, showed expected electrical signals in response to pH changes. The design of the cartridge is continuing with our partner Hochuen International and significant improvements have been made to the design. Once the design has been finalized the molding phase of the cartridges will be initiated. The main parts for the prototype device were defined and Company received delivery of these parts from our partner Dr. Licht GmbH of Numbrecht, Germany. The company worked closely with Dr. Licht to develop these specialized parts for the construction of the handheld prototype.

The company was very active in maintaining and increasing its IP portfolio. We received the US and Canadian patents entitled "Joint Spectroscopic and Biosensor System for Point-of-Care Testing", and filed for protection in the remaining major international markets of Europe, India, China, Japan, and South Korea.

The main claims in the issued patents cover the HemoPalm system, the HemoPalm cartridge, and a method for using the HemoPalm system. HemoPalm is positioned to be the only hand held POCT analyzer that combines Blood Gases & Electrolytes, with full CO-oximetry. Currently this combination is only available in benchtop analyzers that are usually found in the central laboratory. The significance of this patent is that patent protection of the HemoPalm system is



now extended until 2035.

ChroMedX was also awarded U.S. patent No. 9,162,186, entitled "Sample Filtration Assembly." This patent is related to manual ultrafiltration cartridges, and while related to two recently announced Canadian patents on the company's automated ultrafiltration (AUF) system, presents a new business opportunity for ChroMedX.

One potential application of the technology claimed in U.S. 9,162,186 is to extract plasma from blood during the time blood is drawn from a patient. Usually blood is drawn into a vacuum filled tube and the plasma is extracted in a central laboratory by centrifuging the tube of blood. By providing plasma separation immediately at the time of sampling, this technology provides a means for POCT that cannot be performed accurately on whole blood. A second claimed application is to provide disposable manual plasma ultrafiltration cartridges for measuring unbound drugs and hormones (that is biologically active drugs and hormones), to laboratories that cannot afford an AUF workstation.

#### **Selected Three-Month Information**

The following table sets forth selected financial information for Chromedx Corp. for the three months ended December 31, 2016 and the three months ended December 31, 2014. This information has been derived from Company's financial statements for the years and should be read in conjunction with financial statement and the notes thereto.

	For the three months ended December 31, 2016	For the three months ended December 31, 2015		
Income	nil	nil		
Expenses	\$964,840	\$320,803		
(Loss) for the year	\$(964,840)	\$(320,803)		
Loss per share	\$(0.02)	\$(0.01)		
Total assets	\$2,618,465	\$3,490,458		
Total Liabilities	\$251,340	\$148,225		
Working capital	\$76,858	\$510,103		

Per share amounts are calculated using the weighted have not been calculated, as they would be anti-dilutive. average number of shares outstanding. Fully diluted loss per share amounts



# **Revenue and Expenses**

# For the three months ending December 31, 2016

The net loss for the three months ending December 31, 2016 was (\$964,840)(\$0.02/share).

For the three months ending December 31, 2016 consulting fees were \$316,435 (three months ending December 31, 2015 - \$157,141) and increased compared to the comparative quarter due to increases to the management team, along with higher outside consultants and fees relating to the research and development of the technology. Office, general and administration expense for the three months ending December 31, 2016 were \$36,420 (three months ending December 31, 2015 - \$37,763) was consistent with the comparative quarter. Patent amortization expense, for the three months ending December 31, 2016 was \$163,356 (three months ending December 31, 2015 - \$66,384).

## **Summary of Quarterly Results**

The following table is a summary of selected unaudited financial information for the eight most recent fiscal quarters.

Quarter ended	Income	Net income (loss)	Net income (loss) per share
December 31, 2016	Nil	\$ (964,840)	\$ (0.02)
September 30, 2016	Nil	\$ (540,906)	\$ (0.01)
June 30, 2016	Nil	\$ (439,077)	\$ (0.01)
March 31, 2016	Nil	\$ (457,475)	\$ (0.01)
December 31, 2014	Nil	\$ (654,138)	\$ (0.02)
September 30, 2014	Nil	\$ (756,588)	\$ (0.14)
June 30, 2014	Nil	\$ (880,100)	\$ (5.32)
March 31, 2014	Nil	\$ (16,450)	\$ (164.50)
December 31, 2013 *IFRS reporting	Nil	\$ (410)	\$ (4.10) Fully diluted loss per share amounts are not shown as they would be anti-dilutive.

There can be significant variances in Company's reported loss from quarter to quarter arising from factors that are difficult to anticipate in advance or to predict from past results.



# Liquidity

The majority of financing of current operations is achieved by issuing share capital. As December 31, 2016, Company had cash of \$226,223, HST receivable of \$33,275, prepaid of \$2,400 and amounts receivable of \$66,300. The Company has accounts payable of \$139,645 and due to related parties of \$1,695. Company had a positive working capital of \$76,858 at December 31, 2016.

In the quarter ending December 31, 2016, the Company completed a non-brokered private placement of 4,400,000 units at a price of \$0.125 per unit for aggregate proceeds of \$550,000. Each unit consist of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to acquire one common share at a price of \$0.20 per a common share for a period of 18 months from the date of issuance. In connection with this financing, the Company paid cash commissions of \$28,000 and issued 84,000 broker warrants where each broker warrant entitles the holder to acquire one additional common share at a price of \$0.20 for a period of 18 months from the date of issuance.

During the quarter the Company also completed a non-brokered private placement of 1,227,000 units at a price of \$0.15 per unit for aggregate proceeds of \$184,050. Each unit consist of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to acquire one common share at a price of \$0.20 per a common share for a period of 18 months from the date of issuance. In connection with this financing, the Company paid cash commissions of \$6,000 and issued 44,000 broker warrants where each broker warrant entitles the holder to acquire one additional common share at a price of \$0.20 for a period of 18 months from the date of issuance.

#### **Investing Activities**

There was no material investing activity during the three months ending September 30, 2016.

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

The Company has not entered into any off balance sheet arrangements, other than previously disclosed, that has, or is reasonably likely to have, an impact on the current or future results of operations or the financial condition of our company.

#### **Transactions with Related Parties**

Related parties and related party transactions impacting the accompanying financial statements are summarized below and include transactions with the following individuals or entities:

As at December 31, 2016, amounts due to related parties consist of \$1,695 (September 30, 2016 - \$97,475) to companies controlled by officers and directors of the Company.

Key management personnel:

Key management personnel include those persons having authority and responsibility for planning, directing and controlling the activities of the Company as a whole. The Company has



determined that key management personnel consist of executive and non executive members of the Company's Board of Directors and corporate officers.

Remuneration attributed to key management personnel can be summarized as follows:

	December 31, 2016		December 31, 2015	
Share-based compensation (note 7(b))	\$	185,832	\$	13,317
Short-term benefits*	\$	129,000	\$	25,000

<sup>\*</sup>includes base salaries pursuant to contractual employment, or consultancy arrangements. These have been recorded in consulting fees and management fees.

## **Events After Quarter End**

Subsequent to quarter end, the Company completed a non-brokered private placement of 4,073,667 units at a price of \$0.15 per unit for aggregate proceeds of \$611,050. Each unit consist of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to acquire one common share at a price of \$0.20 per a common share for a period of 18 months from the date of issuance.

## **International Financial Reporting Standards ("IFRS")**

In February 2008, the Canadian Accounting Standards Board confirmed that Canadian generally accepted accounting principles (GAAP), as used by publicly accountable enterprises, would be fully converged into IFRS, as issued by the International Accounting Standards Board (IASB), effective for fiscal years beginning on or after January 1, 2011. The Company implemented for the quarters ended December 31, 2016 and December 31, 2014.

#### **Critical Accounting Policies and Estimates**

### Going concern

These audited financial statements have been prepared in accordance with IFRS 1 on a going concern basis which assumes that Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future. Company has incurred losses from inception and the inability to raise additional financing may impact the future assessment of Company as a going concern. Company's ability to continue as a going concern is dependent upon its ability to attain future profitable operations and to obtain the necessary financing to meet its obligations and repay its liabilities arising from normal business operations when they come due. While Company has been successful in obtaining its required financing in the past, there is no assurance that such financing will be available in the future. These financial statements do not include any adjustments to the amounts and classification of asset's and liabilities that might be necessary should Company not be able to continue as a going concern.

Significant accounting judgments and estimates



The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant areas requiring the use of management estimates relate to the determination of carrying value of resource properties, warrants, stock-based compensation, and deferred tax assets and liabilities. Financial results as determined by actual events could differ from those estimates.

#### **Risks and Uncertainties**

History of Losses – The Company has been in a cumulative net loss position throughout its operating history. The Company's limited operating history makes it difficult to evaluate the future financial prospects of its business. There is no assurance that the Company will grow or be profitable or that the Company will have earnings or significant improvement in its cash flow from operations in the future. The future earnings on and cash flow from operations are dependent on the Company's ability to further develop and sell its products and the Company's operational expenses. Management expects that the Company will continue to have high levels of operating expenses, since the Company needs to make significant up-front expenditures for product development, and corporate development activities. Management anticipates that the operating losses for the Company may continue until such time as the Company consistently generates sufficient revenues to support operations.

Need for Additional Financing - The implementation of the Company's business plan requires significant capital outlays and operating expenditures over the next several years. There can be no assurance that additional financing will be available to the Company when needed, on commercially reasonable terms, or at all. Any inability to obtain additional financing when needed would have a material adverse effect on the Company. Further, any additional equity financing may involve substantial dilution to the Company's then existing shareholders. Debt financing, if available, may involve onerous obligations, monetary or otherwise. If adequate funds are not available, the Company may obtain funds through arrangements with strategic partners or others who may require the Company to relinquish rights to certain technologies, any of which could adversely affect its business, financial condition and results of operations.

### Product Risks

Uncertain Demand for Products - Demand for medical technologies is dependent on a number of social, political and economic factors that are beyond the control of the Company. The healthcare industry is likely to continue to change as the public, government, medical practitioners, and the medical industries focus on ways to expand medical coverage while controlling the growth in healthcare costs. While the Company believes that demand for medical technologies will continue to grow, there is no assurance that such demand will exist or that the Companies products will be purchased to satisfy that demand.



Dependence on Development of New Products - New technological or product developments in the medical industry may render the Company's products obsolete or reduce their value. The Company's future prospects are highly dependent on its ability to develop new products - from new technologies and achieve market acceptance. There can be no assurance that the Company will be successful in these efforts.

## Disclosure Controls and Procedures & Internal Controls over Financial Reporting

In accordance with the Canadian Securities Administrators National Instrument 52-109 ("NI 52-109"), Certification of Disclosure in Issuers' Annual and Interim Filings, the Company has filed certificates signed by the Chief Executive Officer and the Chief Financial Officer that, among other things, report on the design and effectiveness of disclosure controls and procedures and the design and effectiveness of internal controls over financial reporting.

The Company continues to review and document its disclosure controls and procedures and internal controls over financial reporting and may, from time to time, make changes aimed at enhancing their effectiveness and to ensure that its systems evolve with the business. There were no changes in the Company's internal controls over financial reporting during the year ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, its disclosure controls and procedures and internal controls over financial reporting.

#### **Share Data**

Shares and Warrants - During the three-month period December 31, 2016 the Company completed a non-brokered private placement of 4,400,000 units at a price of \$0.125 per unit for aggregate proceeds of \$550,000. Each unit consist of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to acquire one common share at a price of \$0.20 per a common share for a period of 18 months from the date of issuance. In connection with this financing, the Company paid cash commissions of \$28,000 and issued 84,000 broker warrants where each broker warrant entitles the holder to acquire one additional common share at a price of \$0.20 for a period of 18 months from the date of issuance.

During the quarter the Company also completed a non-brokered private placement of 1,227,000 units at a price of \$0.15 per unit for aggregate proceeds of \$184,050. Each unit consist of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to acquire one common share at a price of \$0.20 per a common share for a period of 18 months from the date of issuance. In connection with this financing, the Company paid cash commissions of \$6,000 and issued 44,000 broker warrants where each broker warrant entitles the holder to acquire one additional common share at a price of \$0.20 for a period of 18 months from the date of issuance.

As of December 31, 2016, there are 62,346,097 shares issued and outstanding and 16,454,452 warrants.



*Options* – During the three months ending December 31, 2016, the Company issued 2,800,000 incentive options to directors and consultants. The options have a strike price of \$0.15 and expire October 24, 2021. As at December 31, 2016 there are 6,070,000 options outstanding at an average exercise price of \$0.16.

As of February 17, 2016 the Company has 66,419,764 common shares, 11,983,627 warrants and 6,070,000 options outstanding.

Signed

"Ash Kaushal" CEO February 27, 2017