

# MedMira Inc.

Management's Discussion & Analysis
For the three and nine months ended April 30, 2017 and April 30, 2016
(Unaudited – Prepared by Management)

In accordance with National Instrument 51-102 released by the Canadian Securities Administrators, the Company discloses that its auditors have not reviewed the unaudited financial statements for the period ending April 30, 2017



# **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 MedMira Inc.'s (MedMira 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 interim 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 nine months ended April 30, 2017 has been prepared to help investors understand the financial performance of MedMira 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.

This document should be read in conjunction with the audited consolidated financial statements for the year ended July 31, 2016. Annual references are to the Company's fiscal years, which end on July 31. All amounts are expressed in Canadian dollars (CAD) unless otherwise noted.

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

#### **About MedMira**

MedMira is a biotechnology company engaged in the development and commercialization of rapid diagnostics and technology platforms. The Company is headquartered in Halifax, Nova Scotia, Canada and is listed on the TSX Venture Exchange (TSX-V) under the symbol MIR.

The patented MedMira Rapid Vertical Flow (RVF) Technology<sup>TM</sup> platform is the basis for the Company's line of rapid tests. Diagnostic applications based on this distinct technology are highly accurate, easy-to-use, and produce instant results – a strong advantage over most other rapid diagnostics on the market today. These features are enhanced further with the unique competitive advantage of enabling multiplex results on one test device with just one drop of specimen. The Company has created a new generation of rapid tests that are based on its customers' need to provide swift answers without increasing costs.

MedMira's technology and growing portfolio of diagnostic tools demonstrate excellence in performance and quality in the highly competitive diagnostics industry. More than \$30 million has been invested in perfecting MedMira's core technology, which has proven itself time and time again with its excellent clinical performance and its success in rigorous



evaluations and inspections, leading to regulatory approvals in the United States (U.S Food and Drug Administration (FDA)), Canada (Health Canada), the notified body in the European Union (CE Mark), and China (CFDA – formerly known as SFDA) and in a number of countries in Latin America, Africa, and Asia. The Company is also ISO 9001:2008 and ISO 13485:2003 certified.

MedMira sells its rapid tests through a worldwide network of medical distributors and strategic business development partners with customers in all sectors of the healthcare industry, including laboratories, hospitals, point-of-care facilities, governments, and public health agencies. The Company introduced its Miriad™ product line in 2014 to create new opportunities in the high value technology licensing and research sectors. This business allows the Company to monetize its award winning technology and core capabilities, including R&D, product development, and regulatory proficiency. Miriad provides access to MedMira RVF Technology for researchers, developers, and biotech companies on a license basis to facilitate the creation of new rapid tests or the transition of existing tests to this unique platform. Infiltrating new and different core sectors of the diagnostic industry, such as veterinary and environmental, with the Company's technology, enables MedMira to build a higher degree of global awareness, generate new revenue streams, and provide a superior diagnostic platform to the market.

### Intellectual property

The Company strives to protect its intellectual property in established and emerging markets around the world as warranted. MedMira's intellectual property portfolio for its Rapid Vertical Flow Technology and the methodology behind its rapid diagnostics includes the following:

Patent #	Title	Jurisdiction
9,164,087	Rapid Diagnostic Device, assay and multifunctional Buffer	United States
9,086,410	Downward or vertical flow diagnostic device and assay	United States
8,025,850	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
8,287,817	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
8,586,375	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
7,531,362	Rapid Diagnostic Device, Assay and Multifunctional Buffer	United States
D706945	Diagnostic Device	United States
D706466	Diagnostic Device	United States
EP1417489	Rapid Diagnostic Device and Assay	Europe
EP1328811	HCV Mosaic Antigen Composition	Europe
ZL02819646.5	Rapid Diagnostic Device and Assay	China
2,493,616	Rapid Diagnostic Device, Assay and Multifunctional Buffer	Canada

The Company has other patents pending patents in the U.S. as well as two design patents in force or pending in eight markets.

The Company's corporate and product brand names are protected by trademarks in the U.S. and Canada.



# Corporate update

In Q3 FY2017, MedMira concentrated on pursuing sales and marketing opportunities in the U.S. market, with a focus on Reveal and Miriad product lines. Key markets for these product lines were the rapid HIV testing market and the tissue and eye bank sector, which are primarily accessed through the Company's three U.S. distribution partners – VWR International, Cardinal Health, and Medline Industries.

MedMira's technology and R&D team continued to maintain and expand the Company's development and commercialization pipeline for RVF Technology and testing solutions during the quarter.

Subsequent to the close of Q3 FY2017, MedMira received CE Mark on its syphilis/HIV rapid tests, Multiplo TP/HIV. This approval allows the Company to market and distribute the multiplex rapid test throughout the European Union, where syphilis and HIV infection rates are on the rise, as well as in global markets which accept products with CE Marking. According to the European Center for Disease Prevention and Control (ECDC) in its latest Annual Epidemiological report syphilis rates have been increasing across Europe since 2010 with many countries in Western Europe seeing a sharp rise in syphilis infections, with some countries' rates growing by over 50%. In 2014, Europe recorded the highest number of newly diagnosed HIV infections since the start of reporting in the 1980s and rates of HIV diagnoses have more than doubled in countries in Eastern Europe.

#### Financial results

## Basis of preparation and significant accounting policies

The basis of financial statement preparation and the significant accounting policies of MedMira are described in Notes 2 and 3 of the Company's condensed interim consolidated financial statements for the nine months ended April 30, 2017 and its audited consolidated financial statements as at July 31, 2016.



# Selected quarterly information (in thousands of dollars except per share amounts)

Income statement	Q3 2017	Q2 2017	Q1 2017	Q4 2016	Q3 2016	Q2 2016	Q1 2016	Q4 2015
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	192	194	212	(957)	230	1,370	1,614	1,463
Cost of sales	76	60	92	(991)	66	1,134	1,028	1,028
Gross profit	116	134	120	34	164	236	586	435
Operating expenses	742	563	827	1,946	1,205	1,051	1,296	548
Other expenses (gains)	126	121	94	150	173	167	190	186
Net earnings (loss) before tax	(752)	(550)	(801)	(2,062)	(1,214)	(982)	(900)	(298)
Balance sheet								
	Q3 2017	Q2 2017	Q1 2017	Q4 2016	Q3 2016	Q2 2016	Q1 2016	Q4 2015
						\$	\$	\$
Current assets	582	674	695	678	1,930	3,648	4,465	1,520
Non-current assets	117	142	168	192	217	242	256	264
Total assets	699	816	863	870	2,147	3,890	4,721	1,784
Current liabilities	8,401	8,218	8,538	8,277	5,746	4,723	3,939	6,993
Non-current liabilities	737	286	-	255	2,201	3,753	4,412	2,495
Total liabilities	9,138	8,504	8,538	8,532	7,947	8,476	8,351	9,888
Total shareholders deficiency	(8,439)	(7,688)	(7,675)	(7,662)	(5,800)	(4,586)	(3,630)	(7,704)
Total liabilities and equity	699	816	863	870	2,147	3,890	4,721	1,784
Net earnings (loss) per share	(0.00114)	(0.00083)	(0.00122)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)

# Third quarter analysis

The following table compares the results of operations for the three months ended April 30, 2017 to the three months ended April 30, 2016.



	For the three months ended			
	30-Apr-17	30-Apr-16	Better(worse)	
	\$	\$	\$	
Product				
Product sales	192,590	230,419	(37,829)	
Product cost of sales	(76,209)	(66,591)	(9,618)	
Gross margin on product	116,381	163,828	(47,447)	
Operating expenses				
Research and development	(154,147)	(489,569)	335,422	
Sales and marketing	(118,570)	(165,454)	46,884	
Other direct costs	(129,108)	(189,501)	60,393	
General and administrative	(339,783)	(360,253)	20,470	
Total operating expenses	(741,608)	(1,204,777)	463,169	
Operating loss	(625,227)	(1,040,949)	415,722	
Non-operating income (expenses)				
Financing	(126,541)	(173,298)	46,757	
Net (loss) income	(751,768)	(1,214,247)	462,479	

#### Product revenue and gross margin

The Company recorded revenue from product sales in the three months ended April 30, 2017 of \$192,590 as compared to \$230,419 for the same period last year. The decrease in revenue was due to a change in ordering patterns with of one of the Company's U.S. distributor. This pattern changed from just-in-time ordering to semi-annual bulk order. Gross profit on product sales for the three months ended April 30, 2017 was \$116,381 compared to \$163,828 for the same period in 2016. The decrease in the Company's gross profit from 71% (April 30, 2016) to 60% (April 30, 2017) was due to the change in ordering patterns.

#### Operating expenses

Total operating expenses decreased by \$415,722 from \$1,040,949 for the three months ended April 30, 2016 to \$625,227 for the three months ended April 30, 2017.

- Research and development expenses for the three months ended April 30, 2017 were \$154,147 compared to \$489,569 for the same period in 2016. The decrease in research and development expenses was due to the conclusion of two large projects in the U.S. in Q3 FY2016.
- Sales and marketing expenses for the three months ended April 30, 2017 were \$118,570 compared to \$165,454 for the same period in 2016. The decrease in expenses was in line with management's expectations.
- Other direct costs for the three months ended April 30, 2017 were \$129,108, compared to \$189,501 for the same period in 2016.
- General and administrative expenses were \$339,783 for the three months ended April 30, 2017, compared to \$360,253 the same period in 2016. The decrease was due to management's ongoing strategic efficiency plan implemented in fiscal year 2015.



#### Non-operating expenses

Total non-operating expenses were \$126,541 in the three months ended April 30, 2017, compared to \$173,298 during the same period in fiscal year 2016.

#### **Year to date Analysis**

	For the nine m		
	30-Apr-17	30-Apr-16	Better(worse)
	\$	\$	\$
Product			
Product sales	598,411	739,389	(140,978)
Product cost of sales	(228,776)	(212,219)	(16,557)
Gross margin on product	369,635	527,170	(157,535)
Services			
Service sales	-	2,474,729	(2,474,729)
Service cost of sales	<u> </u>	(2,016,265)	2,016,265
Gross margin on services		458,464	(458,464)
Operating expenses			
Research and development	(262,820)	(1,233,982)	971,162
Sales and marketing	(398,268)	(543,356)	145,088
Other direct costs	(474,391)	(557,514)	83,123
General and administrative	(995,737)	(1,217,102)	221,365
Total operating expenses	(2,131,216)	(3,551,954)	1,420,738
Operating loss	(1,761,581)	(2,566,320)	804,739
Non-operating income (expenses)			
Financing	(341,600)	(530,082)	188,482
Net (loss) income	(2,103,181)	(3,096,402)	993,221

#### Product revenue and gross margin

The Company recorded revenue from product sales in the nine months ended April 30, 2017 of \$598,411 as compared to \$739,389 for the same period last year. Gross profit on product sales for the nine months ended April 30, 2017 was \$369,635 compared to \$527,170 for the same period in 2016. The Company's decreased revenue is primarily related to the change in ordering patterns of the Company's second largest U.S. distributor. The Company expects to balance out this delayed revenue within the next six months.

#### Services revenue and gross margin

The Company recorded revenue from service sales of \$0 in the nine months ended April 30, 2017 (April 30, 2016 – \$2,474,729) with a related gross margin of \$0 (April 30, 2016 – \$458,464). The Company earned revenue and gross margin on a research contract with the U.S. Army and private customers. The service sales revenue and the gross margin on services was in line with management's expectations. In previous quarters service sales revenue and the gross margin on services was driven by a product development contract with the U.S. military. This contract concluded in Q3 FY2016.

#### Operating expenses

Total operating expenses decreased by \$1,420,738 from \$3,551,954 for the nine months ended April 30, 2016 to



\$2,131,216 for the nine months ended April 30, 2017.

- Research and development expenses for the nine months ended April 30, 2017 were \$262,820 compared to \$1,233,982 for the same period in 2016. The decrease in research and development expenses was due to the conclusion of two large projects in the U.S. in Q3 FY2016.
- Sales and marketing expenses for the nine months ended April 30, 2017 were \$398,268 compared to \$543,356 for the same period in 2016. The decrease of \$145,088 was in line with the Company's focused market strategy implemented in FY2016. Under this plan the Company's main focus was in the high margin U.S. market.
- Other direct costs for the nine months ended April 30, 2017 were \$474,391, compared to \$557,514 for the same period in 2016.
- General and administrative expenses were \$995,737 for the nine months ended April 30, 2017, compared to \$1,217,102 for the same period in 2016. The Company's continuous drive to decrease costs by means of increasing efficiency has been demonstrated in the results of this fiscal year.

#### Non-operating expenses

Total non-operating expenses were \$341,600 in the nine months ended April 30, 2017, compared to \$530,082 during
the same period in 2016. The decrease has been attributed to the restructuring of various short-term loans and
forgiveness on interest payments.



#### **Geographic information**

The Company organizes and records the sales and distribution of its products based on major geographical territories around the world. The table below provides the three month geographic breakdown of revenue.

	Product R	evenue	Service Re	evenue
	30-Apr-17	30-Apr-16	30-Apr-17	30-Apr-16
	\$	\$		
North America	122,615	193,969	-	-
Latin America and the Caribbean	32,428	4,514	-	-
Asia Pacific	29,424	21,901	-	-
Europe	8,123	10,035		
Total revenue	192,590	230,419		-

The table below provides the nine month geographic breakdown of revenue.

	Product R	evenue	Service Re	evenue
	30-Apr-17	30-Apr-16	30-Apr-17	30-Apr-16
	\$	\$		
North America	371,113	547,973	-	2,474,729
Latin America and the Caribbean	129,340	128,125	-	-
Asia Pacific	56,752	31,687	-	-
Europe	41,206	31,604	<u>-</u>	-
Total revenue	598,411	739,389		2,474,729

## Liquidity and capital resources

#### Cash and working capital

The Company had a cash reserve of \$93,553 on April 30, 2017 as compared to \$46,120 on July 31, 2016. The Company's working capital deficit as at January 31, 2017 was \$7.8 million compared to the July 31, 2016 working capital deficit of \$7.6 million. The Company has incurred operational losses and negative cash flows on a cumulative basis since inception. For the nine months ended April 30, 2017, the Company incurred a net loss from operating activities of approximately \$1.8 million and negative cash flows from operations of \$1.7 million, compared to a net loss from operations of \$2.6 million and negative cash flows from operations of \$3.7 million for the same period in 2016.

### Operating activities

MedMira incurred negative cash flows from operations of approximately \$1.7 million for the nine months ended April 30, 2017, compared to negative cash flows of \$3.7 million for the nine months ended April 30, 2016.

#### Financing activities

Cash inflows from financing activities were \$1.7 million for the nine months ended April 30, 2017, compared to cash



inflow of \$3.7 million for the same period in 2016.

Investing activities

Cash outflows from investments were nil for the six months ended April 30, 2017, compared to cash outflows of \$27,249 for the same period in 2016.

#### Debt

As at April 30, 2017, the Company had loans payable with a carrying value of \$6.6 million compared to \$6.2 million at July 31, 2016. The Company's loans have an average remaining payment term of three years and interest rates varying between 3% and 5%. As of April 30, 2017, five of the loans was in default due to ongoing debt restructuring negotiations.

Further discussion on liquidity and capital resources can be found in this document in the Liquidity Risk section, Risk and Uncertainties section, as well as in the notes for the condensed interim financial statements for the nine months ended April 30, 2017 and the audited consolidated financial statements for the year ended July 31, 2016.

#### **Equity/Shares**

The Company is authorized to issue an unlimited number of common shares without par value. The number of issued and outstanding common shares on April 30, 2017 was 658,364,320. The Company is also authorized to issue an unlimited number of Series A preferred shares redeemable at \$0.01 per share after March 31, 2010, convertible into an equal number of common shares upon the Company meeting certain milestones. There were 5,000,000 Series A preferred shares issued and outstanding on April 30, 2017.

The Company had 2,594,7922 outstanding stock options on April 30, 2017 The outstanding stock options have a weighted average exercise price of \$0.10 per share and a weighted average remaining term of 1.99 years. The number of outstanding warrants on April 30, 2017 was 266,100,000. The outstanding warrants have a weighted average exercise price of \$0.10 per share.

#### Liquidity risk

The Company manages liquidity by forecasting and monitoring operating cash flows and through and share issuances.

The Company has incurred losses and negative cash flows from operations on a cumulative basis since inception. For the nine months ended April 30, 2017, the Company realized a net loss of approximately \$2.1 million (April 30, 2016 – net loss of \$3.1 million), consisting of a net loss from operations of \$1.8 million (April 30, 2016 – net loss \$2.6 million), and other non-operating expenses of \$0.3 million (April 30, 2016 – loss of \$0.5 million). Negative cash flows from operations were approximately \$1.7 million (April 30, 2016 – \$3.7 million). As at April 30, 2017, the Company had an accumulated deficit of approximately \$85.6 million (July 31, 2016 – \$83.5 million). In addition to its ongoing working capital requirements, the Company must secure sufficient funding for its research and development programs for existing commitments, including its current portion of loans of approximately \$6.0 million. These circumstances lend significant doubt as to the ability of the Company to meet its obligations as they come due and, accordingly, the appropriateness of the use of accounting principles applicable to a going-concern. Management plans to secure the necessary financing through new equity and debt arrangements. Nevertheless, there is no assurance that this initiative will be successful.

#### Foreign currency risk

MedMira receives most of its revenues in foreign currencies and incurs expenses in U.S. and Canadian currencies. As a result, the Company is subject to uncertainty as foreign exchange rates fluctuate. The exchange fluctuations from year to year have accounted for a significant portion of the company's exchange gain and loss. USD sales are recorded at the exchange rate prevailing on or near the transaction date and collected in a timely manner.

The Company also experiences currency exposure resulting from balance sheet fluctuations of U.S.-denominated cash,



accounts receivable, accounts payable and U.S.-denominated liabilities.

MedMira mitigates this currency risk by maintaining a balance of USD currency which is used to pay down U.S.-denominated liabilities and replenishes the balance through U.S.-denominated revenues. A one cent change in the USD/CAD exchange rate would have an estimated impact on revenue of \$7,616.

### **Related party transactions**

The following transactions were recorded with related parties during the nine months ended April 30, 2017

- Director fees totalling \$15,000 were incurred (July 31, 2016 \$14,166).
- Long term loans totalling \$30,000 were received from the Chief Operating Officer (July 31, 2016 \$0).
- A royalty agreement was entered into with Ritec AG valued at \$1,310,100 (July 31, 2016 \$0).
- Loans valued at CHF 300,000 was received from Ritec AG (July 31, 2016 \$0)

The following balances with related parties were outstanding at April 30, 2017:

- A long term loan totalling \$253,064 was due to the Chief Financial Officer (July 31, 2016 \$241,565).
- Accounts payable totalling \$94,248 was due to two officers (July 31, 2016 \$26,901).
- A royalty provision was owed to MedMira Holding AG of \$48,984 (July 31, 2016 \$31,991).
- A long term loan totalling \$9,000 was due to the Chief Operating Officer (July 31, 2016 \$0)
- Accounts payable totalling \$15,458 was due to directors (July 31, 2016 \$10,000)
- Long term loans totalling CHF 300,000 was due to Ritec AG (July 31, 2016 \$0)



# **Compensation summary**

# A) Officers for Q3 FY2017

Name and Principal Position	Paid Compensation (\$)	Accrued Compensation Current year (\$)	Share- and Option- based Awards* (\$)	All other compensation (\$)	Total Compensation for Q3 2017 (\$)	Paid Compensation related to previous fiscal periods (\$)	Accrued Compensation related to previous fiscal periods (\$)
Hermes Chan CEO	50,615	1	-	1	50,615	1	1
Sing Chan COO	-	-	-	-	-	-	-
Robyn Cook <i>CCO</i>	28,269	1	-	,	28,269	-	
Markus Meile <i>CFO</i>	-	39,881	-	-	39,881	24,754	44,025

<sup>\*</sup>The Company makes certain estimates and assumptions when calculating the fair value of option-based awards. The Company uses an option pricing model which includes significant assumptions including estimates of the expected volatility, expected life, expected dividend rate and expected risk-free rate of return. Changes in these assumptions may result in a material change to the amount recorded for the issuance of stock options.



#### B) Directors for Q3 FY2017

Name and Principal Position	Paid Compensation (\$)	Accrued Compensation Current year (\$)	Share- and Option- based Awards* (\$)	Total Compensation current year (\$)	Paid Compensation related to previous fiscal years (\$)	Accrued Compensation related to previous fiscal years (\$)
Hermes Chan Member of the Audit Committee	-	-	-	-	-	-
Dr. Shou-Ching Tang Director/Audit Committee Member/ Member of Nomination & Compensation Committee	-	2,500	-	2,500	-	2,500
Marvyn Robar Director/Chairman of the Board/Chairman of Audit Committee/ Member of Nomination & Compensation Committee	-	2,500	-	2,500	-	10,000

<sup>\*</sup>The Company makes certain estimates and assumptions when calculating the fair value of option-based awards. The Company uses an option pricing model which includes significant assumptions including estimates of the expected volatility, expected life, expected dividend rate and expected risk-free rate of return. Changes in these assumptions may result in a material change to the amount recorded for the issuance of stock options.

### Internal control systems and disclosure controls

To ensure the integrity and objectivity of the data, management maintains a system of internal controls comprising of written policies, procedures and a program of internal reviews which provides reasonable assurance that transactions are recorded and executed in accordance with its authorization that assets are properly safeguarded and that reliable financial records are maintained.

Management is currently updating existing standardized processes to improve internal controls and reduce compliance costs. The updated controls will help improve timeliness and accuracy of financial records as well as continue to ensure that the Company's assets are properly safeguarded.

Disclosure controls and procedures within MedMira have been designed to provide reasonable assurance that all relevant information is identified to the Disclosure Committee to ensure appropriate and timely decisions are made regarding public disclosure.



Management, under the supervision of the Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's internal control over financial reporting and based on this evaluation, has concluded that internal control over financial reporting was effective as at April 30, 2017.

Due to inherent limitations, internal control over financial reporting and disclosure controls can provide only reasonable assurances and may not prevent or detect misstatements. Furthermore, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Audit Committee of the Board of Directors of MedMira reviewed this MD&A, and the condensed interim consolidated financial statements of MedMira for April 30, 2017 and MedMira's Board of Directors approved these documents prior to release.

#### Risk and uncertainties

For the nine month period ended April 30, 2017, the Company has not identified any significant changes to the risks and uncertainties it is exposed to which were previously described in the annual MD&A for the year-ended July 31, 2016.