

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

**FORM 40-F**

(Check One)

- REGISTRATION STATEMENT PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934  
OR  
 ANNUAL REPORT PURSUANT TO SECTION 13(a) OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended: March 31, 2021

Commission File Number: 001-39458

**Medicenna Therapeutics Corp.**

(Exact name of Registrant as specified in its charter)

**Not Applicable**

(Translation of Registrant's name into English (if applicable))

**Canada**

(Province or other jurisdiction of incorporation or organization)

**2834**

(Primary Standard Industrial Classification Code Number (if applicable))

**Not Applicable**

(I.R.S. Employer Identification Number (if applicable))

**2 Bloor St. W., 7<sup>th</sup> Floor  
Toronto, Ontario  
M4W 3E2, Canada  
(416) 648-5555**

(Address and telephone number of Registrant's principal executive offices)

**CT Corporation System  
28 Liberty Street  
New York, NY  
10005  
(212) 894-8940**

(Name, address (including zip code) and telephone number (including area code) of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Ticker Symbol(s)	Name of each exchange on which registered
<b><u>Common Shares</u></b>	<b><u>MDNA</u></b>	<b><u>The NASDAQ Stock Market LLC</u></b>

---

Securities registered or to be registered pursuant to Section 12(g) of the Act:

**None**  
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

**None**  
(Title of Class)

For annual reports, indicate by check mark the information filed with this Form:

Annual information form  Audited annual financial statements

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report: 53,547,709

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

YES  NO

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

YES  NO

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 12b-2 of the Exchange Act.

Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

---



## EXPLANATORY NOTE

Medicenna Therapeutics Corp. (the “**Registrant**”) is a Canadian corporation eligible to file its Annual Report pursuant to Section 13(a) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), on Form 40-F. The Registrant is a “foreign private issuer” as defined in Rule 3b-4 under the Exchange Act. Equity securities of the Registrant are accordingly exempt from Sections 14(a), 14(b), 14(c), 14(f) and 16 of the Exchange Act pursuant to Rule 3a12-3 thereunder.

### CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report on Form 40-F are forward-looking statements within the meaning of Section 21E of the Exchange Act and Section 27A of the Securities Act of 1933, as amended (the “**Securities Act**”). Additionally, the safe harbor provided in Section 21E of the Exchange Act and Section 27A of the Securities Act applies to any forward-looking information provided pursuant to “Off-Balance Sheet Arrangements” and “Disclosure of Contractual Obligations” in this Annual Report on Form 40-F. Please see “Forward-Looking Statements” beginning on page 2 of the Management Discussion and Analysis for the fiscal year ended March 31, 2021 of the Registrant, attached as Exhibit 99.3 to this Annual Report on Form 40-F, and “Introduction and Forward-Looking Statements” beginning on page 1 of the Annual Information Form for the fiscal year ended March 31, 2021 of the Registrant, attached as Exhibit 99.1 to this Annual Report on Form 40-F.

### DIFFERENCES IN UNITED STATES AND CANADIAN REPORTING PRACTICES

The Registrant is permitted, under a multijurisdictional disclosure system adopted by the United States, to prepare this Annual Report on Form 40-F in accordance with Canadian disclosure requirements, which are different from those of the United States.

The Registrant prepares its consolidated financial statements, which are filed with this Annual Report on Form 40-F, in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board (“**IFRS**”). Such financial statements may not be comparable to financial statements prepared in accordance with United States generally accepted accounting principles.

Unless otherwise indicated, all dollar amounts in this Annual Report on Form 40-F are in Canadian dollars. The exchange rate of Canadian dollars into United States dollars, on March 31, 2021, based upon the Bank of Canada published daily average exchange rate, was U.S.\$1.00 = CDN\$1.2575.

Purchasing, holding, or disposing of securities of the Registrant may have tax consequences under the laws of the United States and Canada that are not described in this Annual Report on Form 40-F.

---

## PRINCIPAL DOCUMENTS

### ***Annual Information Form***

The Registrant's Annual Information Form for the fiscal year ended March 31, 2021 is filed as Exhibit 99.1 and incorporated by reference in this Annual Report on Form 40-F.

### ***Audited Annual Financial Statements***

The audited consolidated financial statements of the Registrant for the fiscal year ended March 31, 2021, including the Independent Auditor's Report with respect thereto, are filed as Exhibit 99.2 and incorporated by reference in this Annual Report on Form 40-F.

### ***Management Discussion and Analysis***

The Registrant's Management Discussion and Analysis for the fiscal year ended March 31, 2021 is filed as Exhibit 99.3 and incorporated by reference in this Annual Report on Form 40-F.

## CONTROLS AND PROCEDURES

### ***Certifications***

The required certifications are included in Exhibits 99.4, 99.5, 99.6 and 99.7 of this Annual Report on Form 40-F.

### ***Disclosure Controls and Procedures***

At the end of the period covered by this report, an evaluation of the effectiveness of the design and operation of the Registrant's "disclosure controls and procedures" (as such term is defined in Rules 13a-15(e) under the Exchange Act) was carried out by the Registrant's principal executive officer (the "CEO") and principal financial officer (the "CFO"). Based upon that evaluation, the Registrant's CEO and CFO have concluded that, as of the end of the period covered by this report, the design and operation of the Registrant's disclosure controls and procedures are effective to ensure that (i) information required to be disclosed in reports that the Registrant files or submits to regulatory authorities is recorded, processed, summarized and reported within the time periods specified by regulation, and (ii) is accumulated and communicated to management, including the Registrant's CEO and CFO, to allow timely decisions regarding required disclosure.

It should be noted that while the Registrant's CEO and CFO believe that the Registrant's disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect that the Registrant's disclosure controls and procedures will prevent all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

### ***Management Report on Internal Control Over Financial Reporting & Auditor Attestation***

This annual report does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of the Registrant's registered public accounting firm due to a transition period established by rules of the Commission for newly public companies.

---

### ***Changes in Internal Control over Financial Reporting***

During the year ended March 31, 2021, there were no changes in the Registrant’s internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Registrant’s internal control over financial reporting.

### **NOTICES PURSUANT TO REGULATION BTR**

There were no notices required by Rule 104 of Regulation BTR that the Registrant sent during the year ended March 31, 2021 concerning any equity security subject to a blackout period under Rule 101 of Regulation BTR.

### **AUDIT COMMITTEE AND AUDIT COMMITTEE FINANCIAL EXPERT**

#### ***Audit Committee***

The Board of Directors has a separately-designated standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Exchange Act for the purpose of overseeing the accounting and financial reporting processes of the Registrant and audits of the Registrant’s annual financial statements. As of the date of this Annual Report on Form 40-F, the members of the Audit Committee are Mr. Alberto Beraldo, Dr. Chandra Panchal and Ms. Karen Dawes.

The Board of Directors of the Registrant has determined that all members of the Audit Committee are “independent,” as such term is defined under the rules of The NASDAQ Stock Market LLC (“**NASDAQ**”). Further, the Registrant has determined that all members of the Audit Committee are financially literate, meaning that they must be able to read and understand fundamental financial statements.

#### ***Audit Committee Financial Expert***

The Board of Directors of the Registrant has determined that the Chairman of the Audit Committee, Mr. Alberto Beraldo, is an “audit committee financial expert,” as defined in General Instruction B(8)(b) of Form 40-F. The U.S. Securities and Exchange Commission (the “**Commission**”) has indicated that the designation of Mr. Alberto Beraldo as an audit committee financial expert does not make him an “expert” for any purpose, impose any duties, obligations or liability on him that are greater than those imposed on members of the audit committee and board of directors who do not carry this designation or affect the duties, obligations or liability of any other member of the audit committee.

### **CODE OF ETHICS**

The Registrant has adopted a written code of ethics for its directors, officers and employees entitled “Code of Business Conduct and Ethics” (the “**Code**”) that complies with Section 406 of the Sarbanes-Oxley Act of 2002 and with NASDAQ Listing Rule 5610. The Code includes, among other things, written standards for the Registrant’s CEO, CFO and principal accounting officer or controller, or persons performing similar functions, which are required by the Commission for a code of ethics applicable to such officers. A copy of the Code is posted on the Registrant’s website at [www.medicenna.com](http://www.medicenna.com) under “Investor Relations/Corporate Governance/Governance Documents.”

---

No substantive amendments to the Code were adopted during the year ended March 31, 2021. No “waiver” or “implicit waiver,” as such terms are defined in Note 6 to General Instruction B(9) of Form 40-F, was granted relating to any provision of the Code during the year ended March 31, 2021.

#### PRINCIPAL ACCOUNTANT FEES AND SERVICES

Davidson & Company LLP served as the Registrant’s independent audit firm for the fiscal year ended March 31, 2020. In August of 2020, the Registrant engaged PricewaterhouseCoopers LLP to serve as the Registrant’s independent audit firm for the fiscal year ended March 31, 2021. Aggregate fees billed to the Registrant for professional services rendered by Davidson & Company LLP and its affiliates during the fiscal year ended March 31, 2020 and by PricewaterhouseCoopers LLP and its affiliates during the fiscal year ended March 31, 2021 are detailed below (stated in Canadian dollars):

	<b>Fiscal Year Ended March 31, 2021</b>	<b>Fiscal Year Ended March 31, 2020</b>
Audit Fees	\$ 133,750	\$ 49,627
Audit-Related Fees	\$ 69,550	\$ 14,122
Tax Fees	\$ 18,190	\$ 5,750
All Other Fees	\$ -	\$ -
<b>Total Fees</b>	<b>\$ 221,490</b>	<b>\$ 69,499</b>

The nature of each category of fees is as follows:

##### ***Audit Fees***

Audit fees were paid for professional services rendered by the auditors for the audit of the Registrant’s annual financial statements (2020 – \$36,000 and 2021 – \$95,000 and reviews of the Registrant’s consolidated interim financial statements (2020 – \$13,627 and 2021 – \$38,750).

##### ***Audit-Related Fees***

Audit-related fees consist of the aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Registrant’s financial statements and are not reported under the Audit Fees item above. This category is comprised of fees billed for the provision of comfort letters and consents, the consultation concerning financial accounting and reporting of specific issues (2020 – \$4,000 and 2021 – \$53,965 and the review of documents filed with regulatory authorities (2020 – \$10,122 and 2021 – \$15,585).

---

### **Tax Fees**

Tax fees include fees billed for tax compliance, tax advice and tax planning services, including the preparation of original tax returns and claims for refund (2020 – \$5,750 and 2021 – \$18,190; tax consultations, such as assistance and representation in connection with tax audits and appeals, tax advice related to mergers and acquisitions, and requests for rulings or technical advice from taxing authorities (2020 – \$0 and 2021 – \$0); tax planning services; and consultation and planning services(2020 - \$0 and 2021 – \$0).

### **All Other Fees**

All Other Fees include the aggregate fees billed for products and services provided by the auditors, other than the services reported above.

### **Pre-Approval Policies and Procedures**

All audit and non-audit services performed by the Registrant’s auditor must be pre-approved by the Audit Committee of the Registrant. For the fiscal year ended March 31, 2021, all audit and non-audit services performed by the Registrant’s auditor were pre-approved by the Audit Committee of the Registrant, pursuant to Rule 2-01(c)(7)(i) of Regulation S-X.

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

As of March 31, 2021, the Registrant does not have any “off-balance sheet arrangements” (as that term is defined in paragraph 11(ii) of General Instruction B to Form 40-F) that have or are reasonably likely to have a current or future effect on its financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

### **DISCLOSURE OF CONTRACTUAL OBLIGATIONS**

The following table lists, as of March 31, 2021, information with respect to the Registrant’s known contractual obligations:

<b>Contractual Obligations</b>	<b>Payments Due by Period (All amounts in thousands of Canadian dollars)</b>				<b>Total</b>
	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>3-5 years</b>	<b>More than 5 years</b>	
Accounts payable and accrued liabilities	\$ 3,881	\$ -	\$ -	\$ -	\$ 3,881
Amounts due to directors	\$ 192	\$ -	\$ -	\$ -	\$ 192
Short term and low value leases	\$ 34	\$ -	\$ -	\$ -	\$ 34
Long-term leases	\$ -	\$ -	\$ -	\$ -	\$ -
Long-term debt	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 4,107</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 4,107</b>

## **INTERACTIVE DATA FILE**

The Registrant is submitting as Exhibit 101 to this Annual Report on Form 40-F its Interactive Data File.

## **MINE SAFETY DISCLOSURE**

Not applicable.

## **CORPORATE GOVERNANCE**

The Registrant is a “foreign private issuer” as defined in Rule 3b-4 under the Exchange Act and its common shares are listed on NASDAQ. NASDAQ Marketplace Rule 5615(a)(3) permits a foreign private issuer to follow its home country practices in lieu of certain requirements in the NASDAQ Listing Rules. A foreign private issuer that follows home country practices in lieu of certain corporate governance provisions of the NASDAQ Listing Rules must disclose each NASDAQ corporate governance requirement that it does not follow and include a brief statement of the home country practice the issuer follows in lieu of the NASDAQ corporate governance requirement(s), either on its website or in its annual filings with the Commission. A description of the significant ways in which the Registrant’s corporate governance practices differ from those followed by domestic companies pursuant to the applicable NASDAQ Listing Rules is disclosed on the Registrant’s website at [www.medicenna.com](http://www.medicenna.com) under “Investor Relations/Corporate Governance/Governance Documents/Corporate Documents.”

## **UNDERTAKING**

The Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to: the securities registered pursuant to Form 40-F; the securities in relation to which the obligation to file an Annual Report on Form 40-F arises; or transactions in said securities.

## **CONSENT TO SERVICE OF PROCESS**

The Registrant filed an Appointment of Agent for Service of Process and Undertaking on Form F-X with the Commission on June 3, 2020 with respect to the class of securities in relation to which the obligation to file this Annual Report on Form 40-F arises.

Any change to the name or address of the Registrant’s agent for service of process shall be communicated promptly to the Commission by an amendment to the Form F-X referencing the file number of the Registrant.

---

## EXHIBIT INDEX

<b><u>Exhibit No.</u></b>	<b><u>Title of Exhibit</u></b>
<a href="#">99.1</a>	<a href="#">Annual Information Form of the Registrant for the year ended March 31, 2021</a>
<a href="#">99.2</a>	<a href="#">Audited Consolidated Financial Statements of the Registrant for the year ended March 31, 2021, together with the Auditors' Report thereon</a>
<a href="#">99.3</a>	<a href="#">Management Discussion and Analysis of the Registrant for the year ended March 31, 2021</a>
<a href="#">99.4</a>	<a href="#">Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the United States Securities Exchange Act of 1934</a>
<a href="#">99.5</a>	<a href="#">Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the United States Securities Exchange Act of 1934</a>
<a href="#">99.6</a>	<a href="#">Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the United States Sarbanes Oxley Act of 2002</a>
<a href="#">99.7</a>	<a href="#">Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the United States Sarbanes Oxley Act of 2002</a>
<a href="#">99.8</a>	<a href="#">Consent of Independent Registered Public Accounting Firm – PricewaterhouseCoopers LLP</a>
<a href="#">99.9</a>	<a href="#">Consent of Independent Registered Public Accounting Firm – Davidson &amp; Company LLP</a>
101	XBRL Document

---

## SIGNATURES

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this Annual Report to be signed on its behalf by the undersigned, thereunto duly authorized.

### **Medicenna Therapeutics Corp.**

By: /s/ Elizabeth Williams  
Name: Elizabeth Williams  
Title: Chief Financial Officer

Date: May 28, 2021



**ANNUAL INFORMATION FORM  
FOR THE YEAR ENDED MARCH 31, 2021**

[www.medicenna.com](http://www.medicenna.com)

Unless otherwise indicated, all information in the Annual Information Form is presented as at and for the year ended March 31, 2021

**May 27, 2021**

---

## TABLE OF CONTENTS

INTRODUCTION AND FORWARD-LOOKING STATEMENTS	1
CORPORATE STRUCTURE	4
GENERAL DEVELOPMENT OF THE BUSINESS	5
NARRATIVE DESCRIPTION OF THE BUSINESS	11
RISK FACTORS	41
DIVIDENDS	61
SHARE CAPITAL	61
MARKET FOR SECURITIES	62
BOARD OF DIRECTORS AND MANAGEMENT	63
CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS	67
CONFLICTS OF INTEREST	68
LEGAL PROCEEDINGS AND REGULATORY ACTIONS	69
INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS	69
TRANSFER AGENT	69
MATERIAL CONTRACTS	69
INTEREST OF EXPERTS	70
ADDITIONAL INFORMATION	70
SCHEDULE A AUDIT COMMITTEE INFORMATION	71
APPENDIX 1 AUDIT COMMITTEE CHARTER	73

---

## INTRODUCTION AND FORWARD-LOOKING STATEMENTS

The information contained in this Annual Information Form (this “AIF”) is stated as at March 31, 2021, unless otherwise indicated.

All references in this AIF to “the Company”, “Medicenna”, “we”, “us”, or “our” and similar expressions refer to Medicenna Therapeutics Corp. and the subsidiaries through which it conducts its business, unless otherwise indicated.

All amounts are in Canadian dollars, unless otherwise indicated.

This AIF contains forward-looking statements within the meaning of applicable securities laws. These statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. All statements contained herein that are not clearly historical in nature are forward-looking, and the words such as “plan”, “expect”, “is expected”, “budget”, “scheduled”, “estimate”, “forecast”, “contemplate”, “intend”, “anticipate”, or “believe” or variations (including negative variations) of such words and phrases, or statements that certain actions, events or results “may”, “could”, “would”, “might”, “shall” or “will” be taken, occur or be achieved and similar expressions are generally intended to identify forward-looking statements. Forward-looking statements in this AIF include, but are not limited to, statements with respect to the Company’s:

- requirements for, and the ability to obtain, future funding on favourable terms or at all;
  - business strategy;
  - the potential impact of the COVID-19 pandemic on our business;
  - projected financial position and estimated cash burn rate, and the sufficiency of the Company’s financial resources to support its activities;
  - expected future loss and accumulated deficit levels;
  - expectations about the timing of achieving milestones and the cost of the Company’s development programs;
  - observations and expectations regarding the safety and effectiveness of MDNA55, MDNA11, and other product candidates and the potential benefits to patients;
  - impacts of the Phase 3 trial of MDNA55, including its design, approval by regulatory agencies, reduced number of participants, costs, timeline, survival data and partnership opportunities for MDNA55;
  - impacts of the Phase 1/2 trial of MDNA11, including its design, approval by regulatory agencies, costs, timeline, ability to start enrolment at therapeutic doses, completion of the study, data arising from the study including biomarker results, immunogenicity, safety, tumor response, survival data and ability to secure collaborations with pharma companies for supply of immunotherapies in combination portion of the clinical trial;
  - expectations regarding the progress, and the successful and timely completion, of the various stages of the regulatory approval process;
  - ability to initiate, progress, and successful and timely completion, of various preclinical and manufacturing activities associated with future clinical trials;
  - expectations about the Company’s products’ safety and efficacy;
  - expectations regarding the Company’s ability to arrange for the manufacturing of the Company’s products and technologies;
  - expectations regarding the filing and approval of various submissions by regulatory agencies regarding the conduct of new clinical trials;
  - ability to secure strategic partnerships with larger pharmaceutical and biotechnology companies;
-

- strategy to acquire and develop new products and technologies and to enhance the safety and efficacy of existing products and technologies;
- plans to market, sell and distribute the Company's products and technologies;
- expectations regarding the acceptance of the Company's products and technologies by the market;
- ability to retain and access appropriate staff, management, and expert advisers;
- expectations with respect to existing and future corporate alliances and licensing transactions with third parties, and the receipt and timing of any payments to be made by the Company or to the Company in respect of such arrangements; and
- strategy with respect to the protection of the Company's intellectual property.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.

The forward-looking information in this AIF does not include a full assessment or reflection of the unprecedented impacts of the COVID-19 pandemic and the ongoing and developing indirect global and regional economic impacts. The Company is currently experiencing uncertainty related to the ongoing COVID-19 situation. It is anticipated that the spread of COVID-19 and global measures to contain it and its variants, have had and continue to have an impact on the Company, however it is challenging to quantify the potential future magnitude of such impact at this time. The Company is regularly assessing the situation and remains in contact with its partners, clinical sites and investigators, contract research organizations ("CROs"), contract development and manufacturing organizations ("CDMOs") and suppliers to assess any impacts and risks. The Company believes that ongoing COVID-19 restrictions could impact CROs and associated IND-enabling studies of MDNA11, CDMOs and manufacturing timelines for MDNA11, as well as the planned clinical development timelines of the MDNA11 Phase 1/2a clinical trial as patient recruitment for clinical trials is currently being impacted. Medicenna has experienced delays in receiving components and supplies due to worldwide supply chain disruptions. The regulatory submissions to initiate the clinical study is planned for mid-calendar 2021 and it is not possible to predict the potential impact of patient recruitment however we are hopeful that as vaccination rates increase worldwide COVID-19 may not have a significant impact on patient recruitment.

All forward-looking statements reflect the Company's beliefs and assumptions based on information available at the time the assumption was made. In making the forward-looking statements included in this AIF, the Company has made various material assumptions, including but not limited to (i) securing adequate and timely supply of MDNA11 for clinical trials; (ii) obtaining positive results from pre-clinical studies and clinical trials; (iii) obtaining regulatory approvals; (iv) general business and economic conditions; (v) the availability of financing on reasonable terms; (vi) the Company's ability to attract and retain skilled staff; (vii) market competition; (viii) the products and technology offered by the Company's competitors; (ix) the Company's ability to protect patents and proprietary rights; and (x) the effect of COVID-19 on the Company's business and operations. By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, known and unknown, that contribute to the possibility that the predictions, forecasts, projections or other forward-looking statements will not occur. Factors which could cause future outcomes to differ materially from those set forth in the forward-looking statements include, but are not limited to:

- the effect of continuing operating losses on the Company's ability to obtain, on satisfactory terms, or at all, the capital required to maintain the Company as a going concern;

- the ability to obtain sufficient and suitable financing to support operations, preclinical development, manufacturing, clinical trials, and commercialization of products;
- the risks associated with the development of novel compounds at early stages of development in the Company's intellectual property portfolio;
- the risks of reliance on third parties for the planning, conduct and monitoring of clinical trials and for the manufacture of drug products;
- the risks of reliance on third parties for timely completion of ongoing clinical trial activities, conduct of statistical analysis, imaging analysis, preparation of study reports and regulatory submissions;
- the risks associated with the development of the Company's product candidates including the demonstration of efficacy and safety;
- the risks related to clinical trials including potential delays, cost overruns and the failure to demonstrate efficacy and safety;
- the risks of delays and inability to complete clinical trials due to difficulties in securing Institutional Review Board (IRB) or ethics committee approval and enrolling subjects;
- the risks associated with the Company's inability to successfully develop companion diagnostics for the Company's development candidates;
- the risks associated with the Company's inability to successfully access drug delivery technology or materials and components required for drug delivery;
- the risks associated with reliance on third parties for proper storage, packaging and shipment of active ingredients or other components required for preclinical or clinical trials;
- the risks associated with product loss or degradation or failure of manufacturing batches and not meeting specifications for use in preclinical or clinical trials;
- delays or negative outcomes from the regulatory approval process;
- the Company's ability to successfully compete in the Company's targeted markets;
- the Company's ability to attract and retain key personnel, collaborators and advisors;
- the risks relating to the increase in operating costs from expanding existing programs, acquisition of additional development programs and increased staff;
- risk of negative results of clinical trials or adverse safety events by the Company or others related to the Company's product candidates;
- the potential for product liability claims;
- the Company's ability to achieve the Company's forecasted milestones and timelines on schedule;
- the financial risks related to the fluctuation of foreign currency rates and expenses denominated in foreign currencies;
- the Company's ability to adequately protect proprietary information and technology from competitors;
- risks related to changes in patent laws and their interpretations;
- the Company's ability to source and maintain licenses from third-party owners;
- the risk of patent-related litigation and the ability to protect trade secrets; and
- the Company's internal computer systems, or those used by its contractors or consultants, may fail or suffer security breaches;

all as further and more fully described under the section of this AIF titled "Risk Factors".

Although the forward-looking statements contained in this AIF are based upon what the Company's management believes to be reasonable assumptions, the Company cannot assure readers that actual results will be consistent with these forward-looking statements.

Any forward-looking statements represent the Company's estimates only as of the date of this AIF and should not be relied upon as representing the Company's estimates as of any subsequent date. The Company undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events, except as may be required by securities laws.

## CORPORATE STRUCTURE

### **Corporate Information**

Medicenna, formerly A2 Acquisition Corp. (“A2”), is the resulting issuer following a “three-cornered” amalgamation involving A2, 1102209 B.C. Ltd. (“A2 Sub”), a wholly owned subsidiary of A2 incorporated pursuant to the *Business Corporations Act* (British Columbia) (“BCBCA”), and Medicenna Therapeutics Inc. (“MTI”), completed on March 1, 2017.

A2 was formed by articles of incorporation under the *Business Corporations Act* (Alberta) (“ABCA”) on February 2, 2015, and following its initial public offering, was a capital pool company (“CPC”) listed on the TSX Venture Exchange (“TSXV”). As a CPC, A2 had no assets other than cash and did not carry on any operations other than identifying and evaluating opportunities for the acquisition of an interest in assets or businesses for the completion of a qualifying transaction.

On March 1, 2017, A2 completed its qualifying transaction in accordance with the policies of the TSXV by way of reverse takeover of A2 by the shareholders of MTI (the “Qualifying Transaction”). In addition, on March 1, 2017 and prior to the completion of the Qualifying Transaction, the Company amended its articles as a result of (a) implementing a consolidation (the “Consolidation”) of its pre-Qualifying Transaction common shares (the “A2 Shares”) on the basis of one new common share of the Company (each, a “Common Share”) for every fourteen A2 Shares (1:14) and (b) changing its name to Medicenna Therapeutics Corp.

On August 2, 2017 Medicenna graduated to the main board of the Toronto Stock Exchange (“TSX”). On November 13, 2017, Medicenna continued under the *Canada Business Corporations Act* (“CBCA”).

On August 24, 2020, Medicenna began trading on the Nasdaq Capital Market (“NASDAQ”) under the symbol “MDNA”.

On March 30, 2021, the Company set up its wholly owned subsidiary Medicenna Australia PTY Ltd (“MAL”) (Australia).

On April 15, 2021, the Company set up a wholly owned subsidiary Medicenna Therapeutics UK Limited (“MTU”) (United Kingdom).

Medicenna’s head and registered office is located at 2 Bloor Street W, 7<sup>th</sup> Floor, Toronto, Ontario, M4W 3E2.

### **Intercorporate Relationships**

MTI is a wholly owned subsidiary of Medicenna and was incorporated pursuant to the provisions of the BCBCA on October 31, 2011. MTI has four wholly owned subsidiaries: Medicenna Biopharma Inc. (British Columbia), Medicenna Biopharma Inc. (Delaware), Medicenna Australia PTY Ltd (Australia), and Medicenna Therapeutics UK Limited. MTI’s head and registered office is located at 2 Bloor Street W, 7<sup>th</sup> Floor, Toronto, Ontario, M4W 3E2.

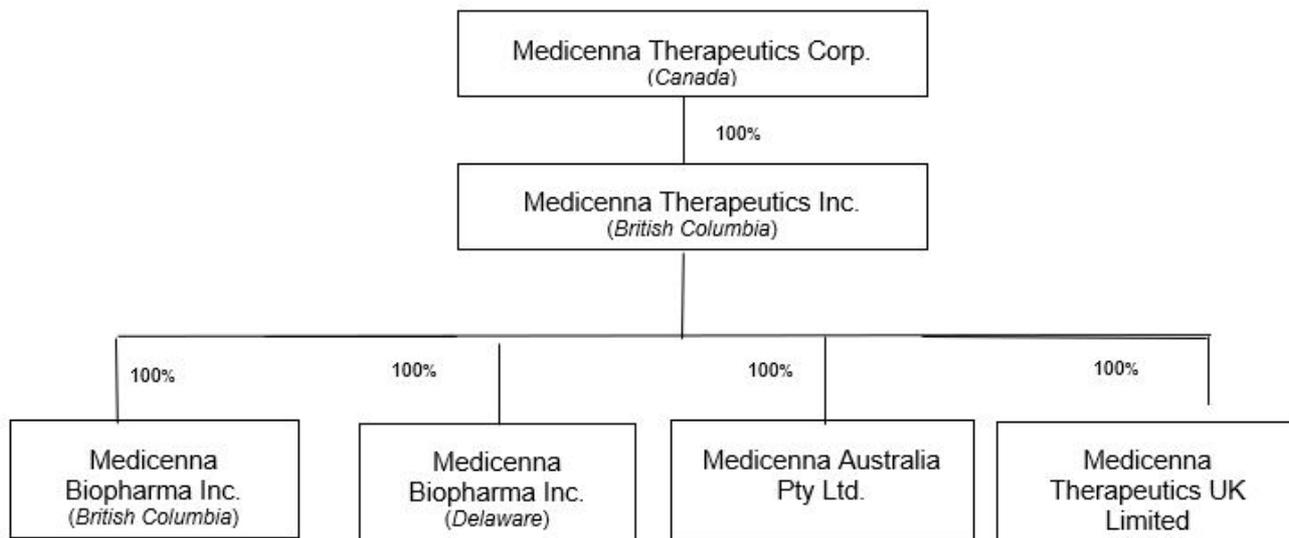
Medicenna Biopharma Inc. (British Columbia) was incorporated under the BCBCA on October 5, 2012. Its head and registered office is located 2 Bloor Street W, 7<sup>th</sup> Floor, Toronto, Ontario, M4W 3E2.

Medicenna Biopharma Inc. (Delaware) was incorporated in the State of Delaware on July 1, 2014. Its registered office is located at 1209 Orange Street, Wilmington, New Castle County, Delaware 19801 and its head office is at 1700 Post Oak Blvd, Suite 600, Houston, Texas 77056.

Medicenna Australia Pty Ltd. was incorporated in Adelaide, South Australia on March 30, 2021. Its registered office is located at Level 5, 63 Pirie Street, Adelaide, SA, 5000.

Medicenna Therapeutics UK Ltd. was incorporated in London, United Kingdom on April 15, 2021. Its registered office is located at 1<sup>st</sup> Floor, Sackville House, 143-149 Fenchurch Street, London, United Kingdom.

The following organizational chart demonstrates the corporate structure of the Company:



#### GENERAL DEVELOPMENT OF THE BUSINESS

*Year ended March 31, 2019*

On May 2, 2018, Medicenna announced that half of the patients in the ongoing Phase 2b clinical trial of MDNA55 for the treatment of recurrent glioblastoma (“rGBM”) had been recruited and the data demonstrated favorable safety results and early signals of potential efficacy. The findings were reviewed by the MDNA55 Safety Review and Clinical Advisory Committees, comprised of key opinion leaders and study investigators. Following the recruitment milestone, the protocol was amended to allow higher doses and volumes of MDNA55 for treatment of the remaining patients.

On August 2, 2018, Medicenna announced preliminary preclinical data on MDNA109 (a pre-cursor to MDNA11), an interleukin-2 (“IL-2”) with high affinity to the CD122 receptor to boost cancer fighting T cells, suggesting that fusions of MDNA109 with inactive protein scaffolds are long-acting and provide the convenience of easier dosing without sacrificing its safety and efficacy.

On August 10, 2018, Medicenna received US\$1,219,871 from the Cancer Prevention and Research Institute of Texas (“CPRIT”) for the reimbursement of previously incurred expenses.

On October 22, 2018, the Company presented results and participated in a poster discussion session at the European Society for Medical Oncology (“ESMO”) Congress held in Munich. Based on interim data from patients treated at low doses implemented during the first half of the Phase 2b study of MDNA55, the presentation highlighted the benefits of using advanced imaging modalities in order to help tumor response evaluation and identify pseudo-progression in some patients which ultimately translates into tumor shrinkage, and potential treatment benefit.

On October 31, 2018, Medicenna provided an interim update from the ongoing Phase 2b clinical trial of MDNA55 for the treatment of rGBM. These results were superseded by data reported at subsequent dates.

On December 5, 2018, Medicenna received a US\$1.2 million reimbursement of past expenses from CPRIT.

On December 21, 2018, the Company closed a short-form prospectus offering of 4,000,000 units for gross proceeds of \$4,000,000. Each such unit was issued at a price of \$1.00 per unit and consisted of one Common Share and one-half common share purchase warrant of the Company. Each whole warrant entitles the holder to purchase one Common Share at an exercise price of \$1.20 until December 21, 2023. In addition, 280,000 broker warrants, allowing holders to acquire one Common Share at an exercise price of \$1.20 until December 21, 2020, were issued pursuant to the offering.

On February 6, 2019, the Company presented new results on MDNA109 and its long acting variants. The presentation outlined that MDNA109 (a) is an engineered IL-2 Superkine exhibiting 1000-fold enhanced affinity toward the CD122 receptor, (b) has potential best-in-class potency toward cancer killing effector T cells, (c) was not immunogenic in-vivo and (d) potently synergized with anti-PD-1 or anti-CTLA-4 checkpoint inhibitors to eliminate tumors in the majority of tumor-bearing mice.

On February 7, 2019 Medicenna presented new clinical study results in a podium presentation entitled “The IL4 Receptor as a Biomarker and Immunotherapeutic Target for Glioblastoma: Preliminary Evidence with MDNA55, a Locally Administered IL-4 Guided Toxin”, by John H. Sampson, MD, PhD, Robert H. and Gloria Wilkins Distinguished Professor and Chair of Neurosurgery at Duke University, during the 5<sup>th</sup> Annual Immuno-Oncology 360<sup>o</sup> Conference held in New York, NY. These data were subsequently updated as described below.

*Year ended March 31, 2020*

On April 30, 2019, the Company announced completion of enrolment in the MDNA55 Phase 2b clinical study for the treatment of rGBM.

On May 1, 2019, Medicenna received US\$757,940 from CPRIT for reimbursement of past expenses.

On June 3, 2019, a poster entitled “MDNA55: A Locally Administered IL4 Guided Toxin as a Targeted Treatment for Recurrent Glioblastoma” was presented at the 55th Annual Meeting of the American Society of Clinical Oncology (“ASCO”) held in Chicago, IL. The presentation by Dr. Dina Randazzo, of Duke University School of Medicine and a Principal Investigator, focused on the development of a new biomarker test for the interleukin-4 receptor (“IL4R”) that may enable better selection and superior treatment outcomes for patients with rGBM.

On June 18, 2019, Dr. Fahar Merchant presented results from the Phase 2b MDNA55 clinical trial for rGBM at the Inaugural Immuno-Oncology Pharma Congress in Boston, MA. The study found disease control in up to 83% of the patients, according to immunotherapy Response Assessment in Neuro-Oncology (“iRANO”) criteria, which measure tumor response relative to the largest tumor size post-treatment (nadir). In addition, safety data from the Phase 2b clinical trial showed a similar safety profile to previous MDNA55 trials, with no systemic toxicities, no clinically significant laboratory abnormalities and no drug-related deaths.

On June 20, 2019, Medicenna presented a poster entitled “Engineering a long-acting CD122 biased IL-2 superkine displaying potent anti-tumoral responses”. The presentation highlighted pre-clinical data demonstrating that MDNA109-LA (a precursor of MDNA19) when combined with checkpoint inhibitors (a) demonstrated durable tumor control with strong memory response; (b) enhancing activation of naive CD8 T cells and natural killer (“NK”) cells (responsible for attacking tumor cells) and (c) attained long term tumor control with fewer treatment cycles and a less frequent dosing regimen.

On June 26, 2019, the Company reported preclinical data on MDNA55 which showed promising results in ovarian cancer models.

On July 9, 2019, Medicenna announced the receipt of US\$1,915,372 from CPRIT reimbursement of past expenses.

On September 24, 2019, Medicenna announced the appointment of Ms. Karen Dawes to our Board of Directors. Ms. Dawes is an experienced and highly regarded leader in the life sciences industry with extensive strategic expertise and considerable commercial background.

On September 25, 2019, the Company presented updated efficacy results from the Phase 2b clinical trial (MDNA55-05) in the first 33 rGBM patients enrolled in the study. MDNA55 is a potent immunotherapy agent, as it potently targets the IL4R, which is overexpressed in glioblastoma (“GBM”), as well as non-cancerous cells that make up the brain tumor microenvironment (“TME”). The data suggest that targeting the TME, particularly in GBM, is critical where almost half of the tumor mass is made up of the TME – a cancer swamp that hides the tumor from the immune system. The TME is emerging as one of the key reasons why glioblastoma is extremely aggressive, and continues to be one of the most difficult cancers to treat. Since MDNA55 can simultaneously kill both the tumor cells and the TME by targeting the IL4R, the results to date indicate that MDNA55 could emerge as a new treatment for this deadly disease.

On September 26, 2019, Medicenna announced the publication of a peer-reviewed article in the August 2019 edition of *Nature Communications*, presenting results of a study by independent third-party researchers supporting the potential efficacy of Medicenna’s IL-2 Superkine platform, MDNA109.

On September 30, 2019, the Company announced the presentation of new preclinical data from its IL-2 Superkine program to support the differentiating characteristics of long-acting MDNA109 variants and their potency *in vitro* and *in vivo* from other long-acting IL-2 programs.

On October 17, 2019, Medicenna completed a public offering raising total gross proceeds of \$6,900,000. The Company issued 5,307,693 units at a price of \$1.30, each such unit consisting of one Common Share and one-half common share purchase warrant. Each such whole warrant is exercisable at a price of \$1.75 until October 17, 2022.

On November 21, 2019, the Company announced new positive results on drug distribution from the Phase 2b clinical trial of MDNA55. Results suggest that implementing new advances in convection-enhanced delivery ("CED"), that were previously not available allows us to bypass the blood-brain barrier and deliver high concentrations of MDNA55 directly to the tumor and the at-risk area immediately surrounding it, without exposure to the rest of the body. Delivering MDNA55 to where it needs to be, along with the ability to continuously monitor distribution using real-time imaging, may allow us to dramatically improve drug delivery and maximize tumor coverage.

On November 25, 2019, Medicenna announced the presentation of updated clinical results from the Phase 2b trial of MDNA55, by Dr. John Sampson at the 24<sup>th</sup> SNO annual meeting. Dr. Sampson discussed updated efficacy results from the Phase 2b clinical trial of MDNA55 in rGBM patients using the IL4R as an immunotherapy target.

On December 12, 2019, Medicenna announced a presentation by Dr. Fahar Merchant at the Inaugural Glioblastoma Drug Development Annual Summit. The presentation reported subgroup analysis from the first 40 patients treated with MDNA55 in a Phase 2b clinical trial for patients with rGBM.

On January 8, 2020, the Company announced receipt of \$1.3 million in proceeds from the exercise of previously issued warrants.

On January 13, 2020, Medicenna announced results from a retrospective study of subjects with rGBM who matched eligibility requirements of subjects enrolled in the MDNA55-05 clinical trial (Synthetic Control Arm, "SCA") receiving standard therapies and compared their survival versus subjects treated with MDNA55, in the Phase 2b rGBM clinical. The SCA comprised 81 rGBM patients receiving standard therapies including Avastin<sup>®</sup>, lomustine and temozolomide ("TMZ") with similar baseline features as patients treated in the MDNA55 trial such as age, tumor size, ineligibility for surgery, lack of isocitrate dehydrogenase ("IDH") mutations, IL4R expression and other parameters known to affect survival. When comparing IL4R High groups across the two populations, a 150% survival advantage was seen in patients who received MDNA55.

On March 17, 2020, the Company closed a public offering of 11,290,323 Common Shares at a price of \$3.10 per share for gross proceeds of approximately \$35 million.

On March 25, 2020, Medicenna presented preclinical data, including non-human primate ("NHP") data from its IL-2 Superkine program, highlighting data from the long-acting variant MDNA19, engineered to have enhanced binding to CD122 without binding to CD25. This may allow MDNA19 to specifically activate naive CD8 T cells and NK cells with minimal stimulation of regulatory T cells ("Tregs"), thereby circumventing toxicity and demonstrating potential for best-in-class features which was supported by the NHP data.

*Year ended March 31, 2021*

On April 15, 2020, Medicenna announced the closing of the full over-allotment option to purchase an additional 1,693,548 common shares of Medicenna at a price of \$3.10 per share, in connection with its public offering of common shares initially closed on March 17, 2020 (the "2020 Public Offering"). The total gross proceeds arising from this financing was \$40.25 million.

On May 29, 2020, Medicenna announced presentation of data from its Phase 2b trial of MDNA55 at the virtual 2020 Annual Meeting of the American Society of Clinical Oncology ("ASCO"). The oral poster discussion focused on additional data supporting the clinical efficacy of MDNA55 in patients with rGBM. These data indicated that MDNA55 has the potential to benefit all rGBM patients treated at the high dose (3 180 mg) irrespective of IL4R expression. Results of this and earlier clinical trials reflect a favorable safety profile with the high dose (maximum tolerated dose ("MTD") = 240 mg). Based on these findings Medicenna has determined that a Proposed Population for future clinical development shall comprise of IL4R High (irrespective of dose) as well as IL4R Low patients receiving the high dose as these patients were shown to benefit the most from a single treatment of MDNA55. Median survival and OS-12 in this population (n = 32) was 15.8 months and 62% vs 7.0 months and 18%, respectively, when compared to the eligibility matched Synthetic Control Arm ("SCA").

On May 29, 2020, Medicenna announced presentation of data on MDNA11, one of its candidates from the IL-2 Superkine program, at the virtual 2020 ASCO Annual Meeting. The poster presentation focused on encouraging data in non-human primates (“NHP”) for MDNA11, a long-acting IL-2 variant engineered to have enhanced affinity to CD122 with no binding to CD25. We believe this engineering allows MDNA11 to specifically expand cancer fighting naïve CD8 T cells as well as NK cells with minimal stimulation of T regulatory cells (“Tregs”) and eosinophils (associated with vascular leak syndrome). As such, the use of MDNA11 circumvents both immune-suppression and toxicity normally observed with Proleukin. In addition, we believe MDNA11 has several advantages over other long-acting IL-2 variants, as it permits enhanced accumulation in the tumor vicinity and can be recycled in vivo due to its albumin content, thus exhibiting prolonged circulation in the blood stream and thereby reducing the frequency of treatment.

On July 29, 2020 we received approval from the Depository Trust Company (“DTC”), making Medicenna’s shares DTC eligible and allowing non-Canadian investors to easily trade the Company’s shares through the broker of their choice.

On August 24, 2020, Medicenna began trading on the NASDAQ under the symbol “MDNA”.

On September 30, 2020, Dr. Jack Geltosky, an experienced pharmaceutical licensing executive with a strong research and development background, was elected to Medicenna’s Board of Directors.

On October 15, 2020, we announced positive outcomes following the EOP2 meeting with the FDA. The FDA agreed that we could conduct an innovative open-label hybrid Phase 3 registration trial that allows use of a substantial number of patients (two-thirds) from a matched external control arm to support regulatory approval of MDNA55 for rGBM. The FDA also expressed their willingness to consider interim analysis of the trial if certain criteria are met. Unlike conventional randomized control trials, the hybrid trial design will reduce the overall number of subjects needed to enroll in the study to achieve the primary endpoint, as well as reduce the cost and timelines associated with completing the trial.

On October 26, 2020, we announced a poster presentation at the 32nd ENA Symposium on Molecular Targets and Cancer Therapeutics. The preclinical data, which featured results with MDNA11 as well as data related to a long acting bispecific IL-2/IL-13 Superkine that is designed to simultaneously activate cancer killing immune cells while reversing anti-inflammatory TME. The results sustained the potent therapeutic efficacy of MDNA11 as a monotherapy agent in multiple tumor models. Medicenna’s novel bispecific IL-2/IL-13 Superkines demonstrated the potential of the platform to address a critical unmet need by effectively targeting immunologically “cold” tumors that are often resistant to immunotherapeutic agents.

On October 26, 2020, we also announced a Late Breaking Abstract poster presentation at the 32nd ENA Symposium on Molecular Targets and Cancer Therapeutics. Amongst an all-comer population, a single treatment with MDNA55 resulted in at least 100% increase in both 12-month progression free survival (“PFS-12”) (27% versus 2 to 10%) and 2-year survival (“OS-24”) (20% vs 5 to 10%) when compared to what is achieved with approved therapies. In a subset of all-comer patients treated with transient low dose bevacizumab, to reduce steroid use, median survival (“mOS”) was 21.8 months and OS-24 was 44%.

On November 4, 2020 Medicenna held a positive Scientific Advice Meeting for MDNA11 (similar to a pre-IND meeting) with the United Kingdom (UK) Medicines and Healthcare products Regulatory Agency (MHRA). MHRA confirmed that our plans for CMC, pre-clinical and Phase 1/2a clinical trial were appropriate for submission of an Investigational Medical Product Dossier (“IMPD”) in calendar 2021 in order to commence first in human studies with MDNA11 in the UK.

On December 9, we presented at an oral session at the 2nd Annual Glioblastoma Drug Development Summit. The presentation included updated data from the MDNA55 Phase 2b clinical trial, as well as an overview of the planned MDNA55 Phase 3 registration trial.

On December 11, 2020, we hosted a key opinion leader (“KOL”) call on MDNA55 featuring presentations by KOLs who provided an overview on the current treatment landscape for rGBM, highlighted the results from the MDNA55 Phase 2b clinical trial and addressed the advantages of the hybrid Phase 3 design agreed by the FDA.

On December 30, 2020, we announced that we entered into a sales agreement (the “ATM Agreement”) with SVB Leerink LLC (“SVB Leerink”) acting as sales agent, pursuant to which the Company may, from time to time sell, through the at-the-market (“ATM”) offering, such number of common shares as would have an aggregate offering price of up to US\$25.0 million (the “ATM Facility”). We plan to use the net proceeds of the ATM offering for general corporate purposes including, but not limited to working capital expenditures, research and development expenditures, and clinical trial expenditures. During the fourth quarter of fiscal 2021, a total of 1,398,357 common shares were sold under the ATM Facility for total gross proceeds of U.S.\$5.8 (\$7.1 million). As at March 31, 2021, U.S.\$19.2 million (\$24 million) remained available under the ATM Facility.

On March 25, 2021, Medicenna presented preclinical data from the Company’s Superkine platform programs at the virtual Cytokine-Based Cancer Immunotherapies Summit. The presentation included data showing that treatment with MDNA11 alone or in combination with anti-PD-1 therapy led to tumor growth inhibition and complete responses in a murine MC38 tumor model as well as preclinical data demonstrating the ability of MDNA413, an IL-13 super-antagonist, to reverse M2a polarization of tumor associated macrophages, which are known to accumulate in the tumor micro environment (“TME”) and promote cancer growth.

#### *Subsequent Events*

On April 12, 2021, we announced new preclinical data demonstrating the potentially potent immune modulatory effects of MDNA19-MDNA413, an IL-2/IL-13 dual specific cytokine derived from the Company’s BiSKITs™ platform. The data were featured in an electronic poster presentation at the 2021 American Association for Cancer Research (AACR) Annual Meeting. Data presented in the poster suggest that this molecule simultaneously activates a pro-inflammatory anti-tumor response, due to its highly selective binding and signaling via the intermediate affinity IL-2 receptor (CD122/CD132), while inhibiting pro-tumoral immune pathways by blocking IL4/IL13 signaling via the Type 2 IL-4 receptor (IL-4R/IL-13R1). We believe that MDNA19-MDNA413’s ability to mediate both IL-2 and IL-4/IL-13 signaling has the potential to address a significant unmet medical need for effective therapies against immunologically cold tumors which are often resistant to checkpoint inhibitors and other immunotherapeutic agents due to their immunosuppressive TME.

On April 21, 2021, we announced the appointment of Kevin Moulder, PhD, as the Company’s Chief Scientific Officer (CSO). Dr. Moulder brings over 30 years of experience in drug discovery and development in the fields of protein design, antibody technology, immuno-oncology, inflammation and autoimmune disease. Kevin holds a first class honors degree in biological sciences and a Ph.D. in Immunology from the University of London.

On May 12, 2021, we announced the appointment of Mann Muhsin, MD, as the Company’s Chief Medical Officer. Dr. Muhsin is an accomplished industry leader with more than 20 years of experience in medical practice and drug development and has an outstanding track record of innovation in oncology and immuno-oncology trial design. Dr. Muhsin received his doctorate of medicine MBChB (MD) and internal medicine training from Baghdad University School of Medicine prior to practicing civilian medicine, and at the US Army Medical Corps Combat Support Hospitals (CSH).

### ***Significant Acquisitions***

Except as set forth herein, the Company has not completed any significant acquisitions for which disclosure would be required under Part 8 of National Instrument 51-102 as at the date hereof.

## **NARRATIVE DESCRIPTION OF THE BUSINESS**

### ***Overview***

Medicenna is an immunotherapy company developing novel, highly selective versions of interleukin-2 (“IL-2”), interleukin-4 (“IL-4”) and interleukin-13 (“IL-13”) tunable cytokines, called “Superkines”. These Superkines can be developed either on their own as short or long-acting therapeutics or fused with cell killing proteins in order to generate Empowered Superkines that precisely deliver potent toxins to cancer cells without harming adjacent healthy cells. Superkines can also be fused with a large variety of proteins, antibodies and even other Superkines in order to incorporate two synergistic therapeutic activities into one molecule, creating novel Bi-Functional SuperKine ImmunoTherapies referred by Medicenna as BiSKITs<sup>TM</sup>. Medicenna’s mission is to become the leader in the development and commercialization of Superkines, Empowered Superkines and BiSKITs for the treatment of a broad range of cancers and other diseases. The Company seeks to achieve its goals by drawing on its expertise, and that of world-class collaborators and advisors, in order to develop a unique set of therapeutic Superkines. Compared to naturally occurring cytokines – that bind to multiple receptors on many cell types – superkines are engineered with unique specificity toward specific receptor subtypes and defined target cell subsets in order to precisely activate or inhibit relevant signalling pathways or immune cells in order to improve therapeutic efficacy and safety.

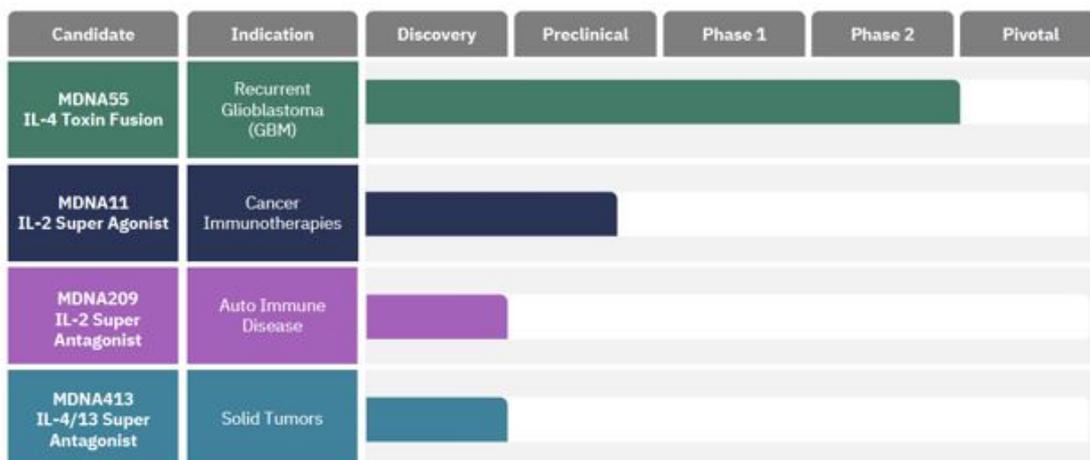
Medicenna has completed a Phase 2b clinical trial of MDNA55, Medicenna's Empowered Superkine, for the treatment of recurrent glioblastoma ("rGBM"), the most common and uniformly fatal form of brain cancer. MDNA55 is a fusion of a circularly permuted version of IL-4, fused to a potent fragment of the bacterial toxin, Pseudomonas exotoxin (PE), and is designed to preferentially target tumor cells that over-express the interleukin 4 receptor ("IL-4R"). MDNA55 has been studied in 5 clinical trials in 132 patients, including 112 patients with rGBM, which supports potentially superior efficacy when compared to the current standard of care (SOC). MDNA55 has secured Orphan Drug Status from the United States Food and Drug Administration ("FDA") and the European Medicines Agency ("EMA") as well as Fast Track Designation from the FDA for the treatment of rGBM and other types of high grade glioma. On September 29, 2020, Medicenna had an End of Phase 2 ("EOP2") meeting with the FDA and provided an update on October 15, 2020 announcing that the FDA agreed for Medicenna to conduct an innovative open-label hybrid Phase 3 trial that allows use of a substantial number of patients (two-thirds) from a matched external control arm to support regulatory approval of MDNA55 for rGBM. This hybrid trial design will reduce the overall number of subjects needed to enroll in the study to achieve the primary endpoint, and notably reduce the number of subjects that would be randomized to SOC treatment under a conventional 1:1 randomization. We are currently pursuing a strategic partnership to assist with additional clinical development of MDNA55.

Complementing MDNA55, the Company has built a deep pipeline of promising preclinical Superkine candidates such as IL-2 agonists (MDNA109), IL-2 antagonists (MDNA209), dual IL-4/IL-13 antagonists (MDNA413) and IL-13 Superkine (MDNA132) all in-licensed from Leland Stanford Junior University ("Stanford"). The most advanced of these programs is the MDNA109 platform (MDNA11 and MDNA19), of which MDNA11 is the only genetically engineered IL-2 Superkine designed to specifically target CD122 (IL-2R $\beta$ ) with high affinity without CD25 dependency. We believe both MDNA11 and MDNA19, which unlike native IL-2 (Proleukin), have superior pharmacokinetic properties, lack CD25 binding in order to improve safety, potently stimulate effector T cells, reverse natural killer ("NK") cell anergy and act with exceptional synergy when combined with checkpoint inhibitors.

MDNA19 and MDNA11 originate from the same base molecule engineered from the MDNA109 platform. This base molecule, MDNA109, has a very short half-life which would require frequent daily dosing and therefore would not be convenient for cancer patients. To address this issue, Medicenna fused both Fc (MDNA19) and albumin (MDNA11) to MDNA109 with the effect of increasing the size of the molecule and its half-life. After completing pilot non-human primate studies with both MDNA19 and MDNA11, it became apparent that MDNA11 was the more promising molecule and has therefore been selected as the lead IL-2 candidate to advance into clinical development over MDNA19. Medicenna is thus working towards submitting an application to regulatory agencies in mid-calendar 2021 in order to start a Phase 1/2a clinical study for MDNA11. Due to similarities in cancer patients that can be treated by MDNA11 and MDNA19, Medicenna is not planning to advance clinical development of MDNA19, which was previously identified as the Company's lead IL-2 candidate. Nevertheless, MDNA19 remains relevant for Medicenna as it is derived from the same platform as MDNA11 and may be used as part of our BiSKITs™ platform.

Our **BiSKITs™** platform allows us to develop designer Superkines by fusing them to other proteins, antibodies or naked IL-2, IL-4 and IL-13 Superkines in order to combine two distinct and yet synergistic mechanisms of action into one molecule: a **BiSKIT™**. Medicenna is working towards selecting a lead BiSKIT™ candidate to begin IND enabling studies before the end of calendar 2021.

**OUR PRODUCT CANDIDATES**



**MDNA55**

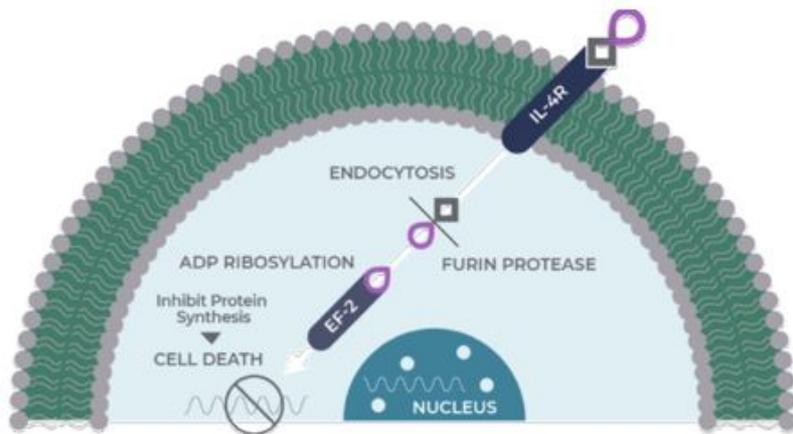
MDNA55 is a novel, locally acting, anti-cancer therapeutic being developed by Medicenna for the treatment of tumors of the brain in adults, of which GBM is the most aggressive type. GBM is also the most common form of adult brain cancer, with 27,500 new cases diagnosed each year and the second most common cause of brain cancer deaths. MDNA55 has obtained Fast Track Designation from the FDA as well as Orphan Drug Designation from the FDA and the EMA.

**MDNA55: Structure and Mechanism of Action**

MDNA55 is a targeted fusion protein being developed by Medicenna for the treatment of tumors that over-express the IL4R. MDNA55 (below) consists of a high-affinity circularly permuted variant of IL-4 (cpIL-4) fused with a truncated version of PE.



MDNA55 binds with high affinity to IL-4R overexpressed on the surface of tumor cells and is endocytosed. Following cleavage and activation by furin-like proteases found in the endosome of cancer cells, the catalytic domain of the truncated PE is released into the cytosol where it induces cell death via ADP-ribosylation of elongation factor-2 (below).



Expression levels of IL4R are low on the surface of healthy and normal cells, but increase 10- to 100-fold on cancer cells. This differential expression of IL4R therefore provides MDNA55 a wide therapeutic window.

The IL4R is an ideal target for the development of cancer therapeutics, as it is frequently and intensely expressed on a wide variety of human carcinomas. However, the IL4R target is currently under-exploited. Analysis of over 2,000 biopsies show IL4R over-expression in 20 different cancers affecting over a million cancer patients every year. Furthermore, the IL-4/IL4R bias is a marker for highly aggressive forms of cancer, plays a central role in the establishment of an immunosuppressive TME and is generally associated with poor survival outcomes. By disrupting this pro-tumoral IL-4/IL4R axis, MDNA55 directly interferes with multiple networks that support cancer.

### ***Glioblastoma***

GBM is an aggressive brain tumor characterized by rapid proliferation of undifferentiated cells, extensive infiltration, and a high propensity to recur. It is a rapidly progressing and universally fatal cancer. First-line treatment for primary GBM generally includes surgical resection of the bulk tumor to the maximal extent possible, followed by radiotherapy, often in combination with chemotherapy consisting of TMZ. The approval of TMZ represented a breakthrough in treatment; the drug offers improvements in overall survival (“OS”), although the actual benefits are modest. When used in combination with radiotherapy following surgery, TMZ provided a median survival of 58.4 weeks for newly diagnosed GBM patients compared to 48.4 weeks for radiotherapy alone. TMZ is less effective in GBM patients who harbor unmethylated O6-methylguanine-methyltransferase (“MGMT”) promoters in the tumor tissue; more than half of GBM patients have unmethylated MGMT promoters. In practice, even patients without MGMT promoter methylation are prescribed TMZ because of a lack of approved treatment alternatives.

### ***Recurrent Glioblastoma (rGBM)***

Unlike treatment of newly diagnosed GBM, no consensus exists regarding the optimal treatment of rGBM. Recurrence rates for newly diagnosed GBM patients treated with the current SOC is high, even in completely resected patients.

Drugs currently approved in the United States for treatment of rGBM are Gliadel® and bevacizumab (Avastin®). In a Phase 3 study, placing a Gliadel implant directly into the tumor cavity after surgical resection of the tumor, 56% of rGBM treated subjects survived 6 months and the median survival was 26 weeks. However, the majority of patients with rGBM are not candidates for additional surgery, resulting in a large unmet need for this patient population.

Avastin<sup>®</sup> is an anti-angiogenic antibody that targets the vascular endothelial growth factor receptors. It is indicated as a single agent for adult patients with rGBM but has not been shown to improve disease-related symptoms or survival. Avastin<sup>®</sup> was granted accelerated approval on the basis of an objective response rate (“ORR”) of 28% following an open label Phase 2 study in 85 patients receiving Avastin<sup>®</sup> only. In 2013, Avastin<sup>®</sup> completed its confirmatory trial in newly diagnosed GBM patients and did not meet its primary endpoint of overall survival. Based on the results of this trial, Genentech, for Avastin<sup>®</sup>, did not receive approval in the European Union for newly diagnosed GBM; however, Avastin<sup>®</sup> remains indicated in the United States and Japan for rGBM.

### ***Rationale for Development of MDNA55 for rGBM***

MDNA55 has been initially developed for the treatment of rGBM. Using current treatment paradigms, most GBM patients experience tumor recurrence/progression after standard first line treatment. Treatment options for patients with rGBM are very limited and the outcome is generally unsatisfactory. Specifically, chemotherapy regimens for recurrent or progressive GBM have been unsuccessful, producing toxicity without benefit. As overall survival remains dismal, novel anti-cancer modalities, with greater tumor specificity, more robust cytotoxic mechanisms and novel delivery techniques are needed for the treatment of recurrent GBM.

MDNA55 is one such novel therapeutic that is intended to provide a targeted treatment approach whereby tumor cells are more sensitive to the toxic effects of the drug than normal cells. When combined with a novel precision delivery to the brain using CED, a single administration of MDNA55 could be an ideal approach for the treatment of rGBM and other brain tumors that over-express the IL4R. Cells that do not express the IL4R target do not bind to MDNA55 and are, therefore, not subject to the effects of the toxic payload.

Many features of MDNA55 make it a potentially attractive choice for the treatment of recurrent GBM:

1. The majority of cancer biopsy and autopsy samples from adult and pediatric primary and metastatic brain cancers, including rGBM, have been shown to over-express the IL4R with little or no IL4R expression in normal adult and pediatric brain tissue.
2. MGMT positive cancer cells (harboring unmethylated MGMT promoters) are common in GBM, making them resistant to TMZ. However, MGMT positive cancer tumors are extremely sensitive to MDNA55, suggesting that MDNA55 could provide a treatment option for GBM patients who would not benefit from TMZ.
3. GBM has a robust immunosuppressive TME and may comprise up to 40% of the tumor mass. It has been shown that malignant gliomas have a T-helper cell type-2 (“Th2”) bias and are heavily infiltrated by myeloid derived suppressor cells (“MDSCs”) and tumor associated macrophages (“TAMs”) and that the IL-4/IL4R bias mediates their immunosuppressive functions. Furthermore, IL4R is up-regulated on glioma-infiltrating myeloid cells but not in the periphery or in normal brain. Thus, purging Th2 cells, MDSCs, and TAMs using MDNA55 may alleviate the immune block associated with cancer (in a manner similar to immunomodulators such as ipilimumab, pembrolizumab or nivolumab), thereby promoting anti-tumor immunity and aid in long-term disease control.

The MDNA55 program therefore offers a promising approach to address serious unmet needs for brain cancer patients. Furthermore, to our knowledge, MDNA55 is the only treatment in development that has the potential to simultaneously target the bulk tumor and the immunosuppressive TME. Accordingly, we are of the view that MDNA55 has the potential of altering the treatment paradigm for many brain cancer patients.

### ***Convection Enhanced Delivery (CED) of MDNA55***

As with most protein therapeutics, MDNA55 does not cross the blood-brain barrier, and therefore must be delivered directly to the tumor (also known as intra-tumoral therapy) via local one time infusion procedure called CED. Medicenna's development platform includes rights to all oncology indications for MDNA55, a novel image guided CED of MDNA55 and a novel formulation used to prepare an infusate for delivery of MDNA55 in the brain. These technologies are protected by patents either owned or exclusively licensed by Medicenna.

### ***Development History of MDNA55***

The targeting domain and payload for Medicenna's lead candidate, MDNA55, were developed in the laboratories of Dr. Ira Pastan at the National Cancer Institute (NCI) and Dr. Raj Puri at Center for Biologics Evaluation and Research, at the FDA. The targeting domain (IL-4) was engineered to improve the binding affinity of IL-4 to the IL4R and thereby increase potency of MDNA55. The payload domain (pseudomonas toxin) of MDNA55 was engineered in order to remove off-target binding components further improving safety. Preclinical and clinical development of MDNA55 for the treatment of brain as well as other non-brain tumors is described in over 50 publications.

In March 2013, Medicenna acquired all clinical, regulatory and material assets for MDNA55 from Sophiris Bio Inc. (formerly Protox Therapeutics, Inc.) ("Sophiris"). The acquisition was comprised of two Investigational New Drug Applications ("IND") with the FDA, Fast Track Designation from the FDA, Orphan Drug Designations from the FDA and the EMA, clinical data from 72 patients enrolled in three different brain cancer studies, clinical data from 14 patients enrolled in a Phase 1 solid tumor study and all cell banks and reference material required to manufacture MDNA55. Subsequent to the purchase agreement with Sophiris, Medicenna and the National Institutes of Health ("NIH") entered into license agreements (the "NIH License Agreements") covering composition, methods of use, combination therapy and delivery of MDNA55. A summary of the clinical trials related to the treatment of high grade gliomas is provided below.

Three clinical trials were previously conducted with MDNA55 in 72 patients with recurrent high grade glioma (66 rGBM and 6 recurrent anaplastic astrocytoma ("rAA") patients). In a majority of the patients, MDNA55 was delivered only once by intratumoral infusion using CED via ventricular catheters.

A Phase 1 single centre investigator initiated study (United States) was conducted in a single United States site enrolling nine subjects with rGBM. Doses evaluated ranged from 0.2 to 6.0 µg/mL (total dose 6 to 720 µg). One subject remained disease free at >18 months after the procedure; 6 out of 8 subjects had partial to extensive tumor necrosis confirmed by pathology. Most subjects had transient increased intracranial pressure treated readily with craniotomy.

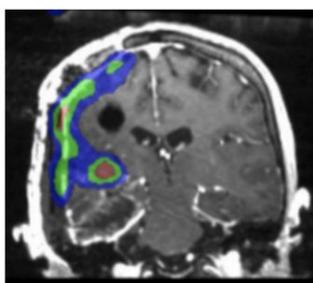
A Phase 1 sponsor initiated multi-centre study (Germany and United States) was carried out in 31 subjects of whom 25 subjects had rGBM and six subjects had rAA. Treatment with MDNA55 using intratumoral CED infusion was dose escalated from 240 to 900 µg. In approximately 40% of the subjects, anti-MDNA55 antibodies were observed. Systemic toxicity was not observed. Although not designed to measure efficacy, results showed MDNA55 administration was followed by rapid tumor necrosis with an ORR (i.e. ≥50% decrease in tumor size) of 46%. These data compare favourably with an ORR of 5% with current therapies and ORR of 28% achieved by Avastin®. These results, including a complete response rate (100% decrease in tumor size) of 20% following a single treatment with MDNA55 were encouraging given that nearly half of the subjects enrolled in the trial had multiple relapses and had poor prognosis due to late stage of the disease. Furthermore, catheter placement and CED of MDNA55 were not optimized at that time.

In the Phase 2a multi-centre study (United States and Germany), MDNA55 was administered by intratumoral infusion via CED in 32 subjects with rGBM at doses of 90 µg, 240 µg or 300 µg. Approximately 3 weeks post-infusion, surgical resection was performed and therefore tumor response analysis was not performed. Tissue samples pre- and post-treatment were adequate for assessment in 10 to 32 subjects. Seven subjects showed a marked reduction in tumor cellularity post-treatment. Of these seven cases, five showed little or no cellular tumor in the resection samples, while the other two had at least a 75% reduction of cellular tumor. The remaining three subjects showed no change compared to baseline. These results, although preliminary, were consistent with ORR observed in the earlier studies. As in the previous studies, systemic toxicity was not observed.

### Improvements in CED Technology for MDNA55

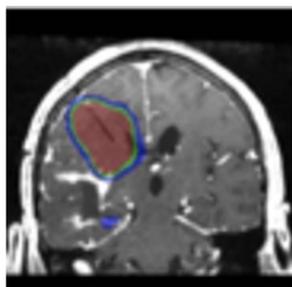
Since the above mentioned clinical trials, there have been many improvements to the CED technology. This includes use of newly developed techniques for high precision placement of catheters into the tumor bed as well as novel stepped design catheters that prevent backflow of MDNA55 during treatment. Furthermore, by co-infusion of an MRI contrast agent with MDNA55, drug distribution can be monitored in real-time ensuring complete coverage of the tumor bed and the tumor margins. Unlike previous clinical trials, each of these improvements has facilitated highly accurate targeting and uniform distribution of MDNA55 to regions of active tumor growth in the current clinical trial.

#### 1<sup>st</sup> Generation CED

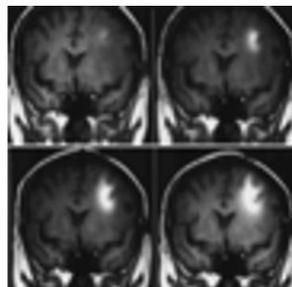


Inaccurate catheter placement  
Drug leakage caused by backflow  
Inadequate tumor coverage

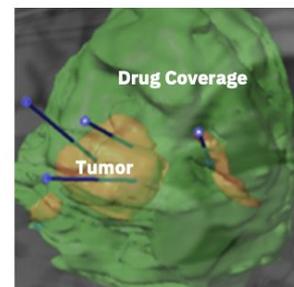
#### Next-Gen High Flow CED



Unique stepped design  
to **prevent backflow**



**Image-guided**  
catheter placement



**Novel delivery**  
improves tumor  
coverage

Medicenna has obtained an exclusive license from the NIH to patents covering CED and the use of a surrogate tracer for real-time monitoring of MDNA55 delivery and distribution.

### ***Phase 2b Study Outline for Glioblastoma at First Recurrence or Progression***

The Phase 2b trial with MDNA55 using enhanced CED delivery was a multi-center, open-label, single-arm study in up to 52 patients (at least 46 intent-to-treat (“ITT”) patients evaluable for survival and 35 patients evaluable for response), with first or second recurrence or progression of GBM after surgery or radiotherapy ± adjuvant therapy or other experimental therapies.

The primary endpoint of the study was mOS comparing an expected null survival rate of 8.0 months (based on historical control) with an alternative pursue rate of 11.5 months (1-sided alpha = 0.10 and 80% power for approximately 46 ITT or per protocol subjects). IL4R expression levels in tumor biopsies and their potential impact on survival outcomes following treatment with MDNA55, were retrospectively evaluated.

### ***Phase 2b Study Update***

In April 2017, we treated the first rGBM patient in the Phase 2b clinical trial of MDNA55 and enrolled patients at eight clinical sites across the United States and 1 site in Europe with enrolment in the study (46 ITT patients) completed in April 2019 of which 44 patients met all the protocol eligibility requirements (per protocol population).

On September 28, 2017, we announced that based on encouraging drug distribution and safety data observed we implemented an amended protocol allowing higher doses and volumes of MDNA55 as well as an increase in study size to up to 52 subjects. This protocol amendment was based on a planned safety analysis following a unanimous recommendation from MDNA55’s Safety Review Committee.

It was reported on May 2, 2018 that half the patients in the study had been recruited and the data to date demonstrated solid safety results and early signals of efficacy based on the findings of the Safety Review and Clinical Advisory Committees. Following the Safety Review, Medicenna amended the protocol at the recommendation of clinical advisors to further improve the chances for demonstrating increased therapeutic benefit for patients. The amendment allowed the implementation of optimal methodologies including more personalized dosing based on the tumor load, incorporation of advanced imaging modalities to measure treatment responses more reliably, use of sub-therapeutic dose of Avastin® in patients that could not tolerate steroid use to control edema and inflammation and allowing investigators to administer a second dose of MDNA55 where appropriate.

Review of some patients who had been withdrawn from the study, believing that their disease had progressed, found that the apparent increases in tumor volumes, seen on brain scans, were, in fact, due to tissue necrosis, inflammation and edema. This is a known effect of immunotherapeutic agents such as MDNA55, called pseudo-progression, which poses a challenge to patient retention, management and data interpretation. When evaluating images from such patients, using multi-modal imaging, Medicenna found evidence of biological activity of MDNA55 suggesting that these patients were benefiting from the treatment, and in multiple cases following withdrawal from the study, surgical resection showed significant tumor necrosis. This amendment allowed a biopsy and/or advanced multi-modal imaging to more accurately discriminate between necrosis/inflammation and true disease progression. These tools would encourage subjects to remain in the study, where appropriate, giving time for the pseudo-progression to resolve and increase the likelihood of clinical responses.

Following the amended protocol as announced on May 2, 2018 and after receiving the necessary regulatory and site approvals patient enrolment was resumed at higher doses provided that the pre-established MTD of 240 mg was not to be exceeded.

The protocol amendments announced September 28, 2017 and May 2, 2018 resulted in increased timelines for completion of the MDNA55 Phase 2b clinical trial due to an increase in the original number of patients as well as a slowdown of patient recruitment while the necessary regulatory reviews and approvals were completed.

On April 30, 2019, Medicenna announced that enrolment in the study was complete with 46 evaluable patients (ITT population) of which 44 patients were subsequently identified as meeting protocol eligibility requirements without major deviations (per protocol population).

On May 29, 2020, Medicenna announced presentation of data from its Phase 2b trial of MDNA55 in patients with rGBM, at the 2020 ASCO Annual Meeting. The oral poster discussion led by Dr. Ian F. Parney, MD, PhD (Mayo Clinic), and a presentation by Dr. John Sampson, MD, PhD (Robert H. and Gloria Wilkins Distinguished Professor of Surgery, Duke University School of Medicine), focused on additional data demonstrating clinical superiority of MDNA55 in patients with rGBM.

Highlights from the ASCO presentation included:

- Comparison of MDNA55 with an eligibility-matched External Control Arm (“ECA” or also known as Synthetic Control Arm, SCA) using propensity-score weighting (Li et al.), an unbiased approach to select patients that match the baseline characteristics of MDNA55 treated patients based on 11 key baseline prognostic factors, demonstrated an improvement in mOS of 72%. When stratified by IL4R status, IL4R High subjects in the MDNA55 arm demonstrated improved mOS by 116% (Table 1).

**Table 1.**

Propensity-Weighted Groups	N	mOS (months)	Improvement in mOS	HR
MDNA55 All-comers	43	12.4	72%	0.63
ECA All-comers	40.8	7.2		
MDNA55 IL4R High	17	13.2	116%	0.52
ECA IL4R High	16.8	6.1		

Irrespective of IL4R expression, subjects showed a tumor control rate (“TCR”) (tumor shrinkage or stabilization) of 76% based on modified RANO criteria; these subjects demonstrated mPFS of 4.6 months, PFS at six months (“PFS-6”) of 40%, PFS-12 of 33%, mOS of 15.0 months and OS-12 of 57%.

Additional updated results (not presented at ASCO) include the following:

Patients with Low IL4R expression (H-Score  $\leq$  60) had a similar TCR as patients with High IL4R expression (H-Score  $>$  60); TCR of 75% vs. 76%, respectively. However, the majority of the IL4R Low patients (11 of 16) received high doses of MDNA55 (180 – 240 mg; median 180 mg) whereas only 9 of 21 IL4R High patients received the high dose of MDNA55.

The IL4R Low group receiving high dose also showed improved survival (mOS Not Reached, OS-12 of 53%) when compared to the low dose group (mOS = 8 months, OS-12 = 13%).

The Proposed Population (n=32), comprised of all IL4R High (irrespective of dose) as well as IL4R Low patients receiving the high dose, were shown to benefit the most from a single treatment of MDNA55. Median survival and OS-12 in this population was 15.8 months and 62% vs 7.0 months and 18%, respectively, when compared to the eligibility matched ECA. (Table 2).

**Table 2.**

<b>Eligibility-Matched</b>	<b>N</b>	<b>mOS</b>	<b>Improvement in mOS</b>	<b>HR</b>	<b>OS-12</b>
Proposed Population	32	15.8	126%	0.45	62%
ECA	40	7.0			18%
<b>Propensity-Weighted</b>					
Proposed Population	32	15.7	118%	0.52	NA
ECA	33.9	7.2			NA

TCR in the Proposed Population was 81% based on radiologic assessment by mRANO criteria.

These data indicate that MDNA55 has the potential to benefit all rGBM patients treated at the high dose (180 – 240 mg; median 180 mg) irrespective of IL4R expression. The high dose has already shown an acceptable safety profile in this and earlier clinical trials (MTD = 240 mg).

On October 26, 2020, Dr. John Sampson, MD, PhD (Robert H. and Gloria Wilkins Distinguished Professor of Surgery, Duke University School of Medicine) updated clinical data from the Phase 2b trial of MDNA55 in rGBM as a Late Breaking Abstract poster at the 32nd ENA Symposium on Molecular Targets and Cancer Therapeutics. Highlights from the poster included updated results following a longer follow-up duration and new data based on transient low-dose use of bevacizumab:

- Data from all trial participants show that a single MDNA55 treatment led to a mOS of 11.9 months (expected 6-9 months) which is comparable to earlier reported mOS of 11.6 months, an OS-24 of 20% (expected 0-10%), and a PFS-12 of 27% (expected 2-10%).
- In Medicenna’s proposed patient population, mOS was 14.0 months (comparable to mOS of 15 months reported earlier), OS-24 was 20%, and PFS-12 was 24%. The proposed patient population included all MDNA55-treated trial participants with high IL4R expression and participants with low IL4R expression that received a high dose of MDNA55 treatment.
- Unmethylated *MGMT* promoter affects more than 50% of GBM patients and is associated with treatment resistance and poorer survival outcomes. However, *MGMT* status did not negatively affect MDNA55 treatment. In the proposed population (N=17), mOS was 14.9 months with an OS-24 of 22%.
- Following MDNA55 treatment, transient (median of 3 cycles) low dose (5 mg/Kg q2w or 7.5 mg/Kg q3w) administration of Avastin<sup>®</sup>, used for symptom control and steroid sparing in patients receiving high concentrations of MDNA55, further improved patient survival. Amongst all comers (N=9) and the proposed population (N=8), mOS was 21.8 months and 18.6 months and OS-24 was of 44% and 38%, respectively.

On September 29, 2020, Medicenna had an EOP2 meeting with the FDA to discuss future development and commercialization of MDNA55 for rGBM. On October 15, 2020, we announced positive outcomes following the EOP2 meeting with the FDA. The FDA agreed that we could conduct an innovative open-label hybrid Phase 3 trial that allows use of a substantial number of patients (two-thirds) from a matched external control arm to support regulatory approval of MDNA55 for rGBM. The FDA also expressed their willingness to consider interim analysis of the trial if certain criteria are met. Unlike conventional randomized control trials, the hybrid trial design will reduce the overall number of subjects needed in the study to achieve the primary endpoint as well as reduce the cost and timelines associated with completing the trial.

The Company expects the completion of a pivotal Phase 3 clinical trial of MDNA55 to full approval to last until at least 2024, with a projected aggregate cost of up to approximately \$75 million, incremental to the current cash on hand. The Company continues to work to out-license the program to one or more partners who would fund or co-fund Phase 3 clinical development of MDNA55 as well as prepare the program for commercialization and its subsequent launch in various countries where approval has been granted. In addition to development and regulatory approval of MDNA55.

**Potential Market: MDNA55**

The incidence of glioblastoma multiforme (GBM) in the 8 major markets (“8MM”) (United States, UK, Italy, Spain, France, Germany, Japan and China) exceeded 50,000 in 2017 (50,212). Although treatment options exist, including surgery, radiation, chemotherapy, Tumor Treating Fields and targeted therapeutics, the 5-year survival rate is less than 10%. The incidence of GBM in the 8MM is expected to increase to 61,938 in 2027 with therapeutic sales projected to reach US\$1.4 billion (Source: GlobalData, *Glioblastoma Multiforme (GBM): Opportunity Analysis and Forecasts to 2027*).

Treatment options for rGBM are severely limited. With the exception of Avastin<sup>®</sup>, providing limited survival benefits, no universal SOC exists for rGBM. Avastin<sup>®</sup> has not been approved by the EMA for newly diagnosed GBM or rGBM, although it has been granted accelerated approval by the FDA for rGBM. Management believes that MDNA55 is currently well positioned for the rGBM indication, when used either as monotherapy or in combination with other approved therapies. Line extension for metastatic brain cancer, newly diagnosed GBM and pediatric gliomas has the potential to increase MDNA55 revenues.

**MDNA55 Competition: Emerging Therapies for Adult GBM**

The SOC for newly diagnosed GBM, consisting of surgery, radiotherapy and concurrent TMZ followed by adjuvant TMZ has not changed for over a decade. The lack of effective treatment options extends to a shortage of approved targeted therapies for GBM. Development of novel agents for the treatment of GBM is therefore an active area of research, and multiple agents and drug classes are being assessed for GBM.

Northwest Biotherapeutics’ DCVax-L, an autologous dendritic cell vaccine, is one of the furthest along in development for GBM. DCVax-L is being evaluated in newly diagnosed GBM patients who have received a complete surgical resection and received radiotherapy and concurrent TMZ. Northwest has completed a Phase 3 clinical trial in patients with newly diagnosed GBM for which database lock was announced in October 2020 but results have not yet been announced.

DNAtrix’s DNX-2401, an oncolytic immunotherapy, has completed enrolment in a Phase 2 clinical trial in collaboration with Merck which evaluated the efficacy and safety of DNX-2401 in combination with pembrolizumab (KEYTRUDA), Merck’s anti-PD-1 therapy. Adult subjects diagnosed with GBM or gliosarcoma that have experienced disease progression after initial treatment were candidates for the trial. Positive Phase 2 data was presented in November 2020 and DNAtrix has disclosed plans to initiate a Phase 3 clinical study.

Kintara Therapeutics' (previously Delmar Pharmaceuticals) product VAL-083 is a "first-in-class" small molecule chemotherapeutic and is enrolling patients in a Phase 2 clinical trial of VAL-083 in patients with MGMT unmethylated, bevacizumab-naïve rGBM. The study is expected to be completed in 2021. In July 2019 Kintara began enrolling patients in a Phase 2/3 response adaptive randomization platform trial designed to evaluate multiple regimens in newly diagnosed and recurrent GBM expected to be complete in 2023.

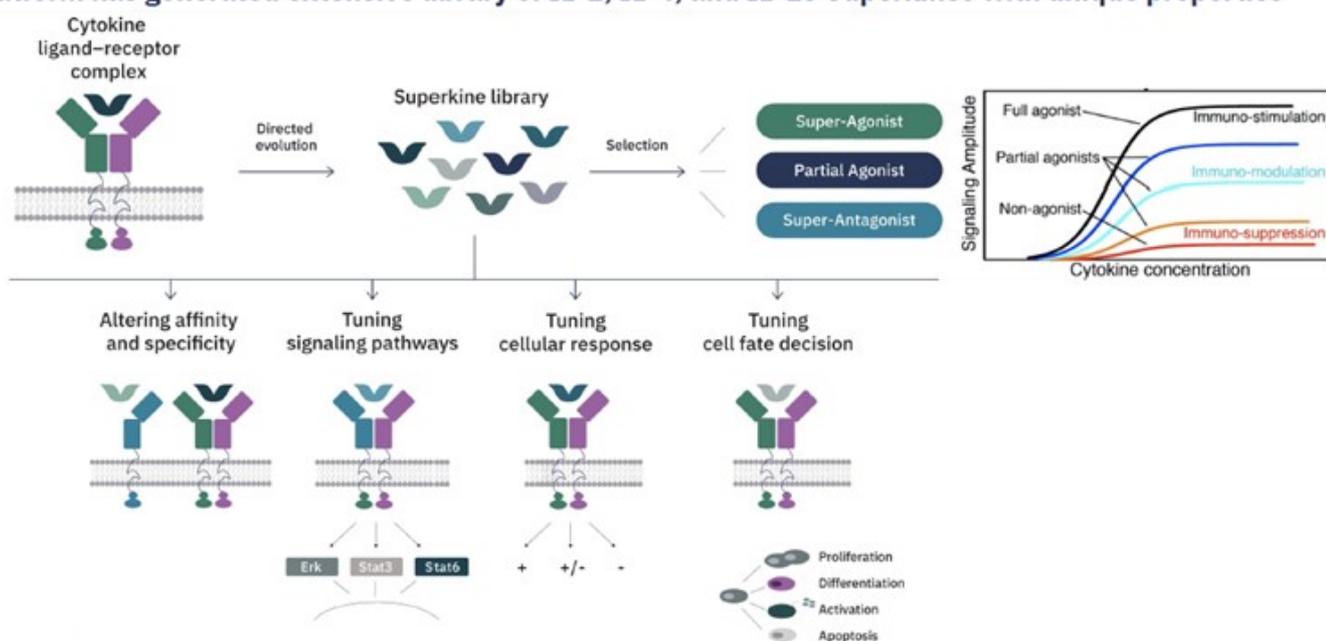
Kazia Therapeutics is developing Paxalisib, a brain-penetrant inhibitor of the PI3K / Akt / mTOR pathway, which is disordered in the vast majority of patients with glioblastoma. In January 2021 Kazia announced that patient recruitment had commenced for paxalisib in the GBM AGILE platform study, which is expected to serve as the basis for registration in key territories.

Istari Oncology announced in November 2020 that it had dosed the first patient in a Phase 2 clinical trial, assessing the safety and efficacy of PVSR1PO in combination with the immune checkpoint inhibitor pembrolizumab (Keytruda®) in patients with rGBM.

### Superkines

Developed by scientists at Stanford, Medicenna has exclusively licensed an impressive library of highly selective versions of interleukin-2 ("IL-2"), interleukin-4 ("IL-4") and interleukin-13 ("IL-13") tunable cytokines, called "Superkines". These Superkines can be developed either on their own as short or long-acting therapeutics or fused with cell killing proteins in order to generate Empowered Superkines that precisely deliver potent toxins to cancer cells without harming adjacent healthy cells. Compared to naturally occurring cytokines – that bind to multiple receptor types on many cell types – Superkines are engineered with unique specificity toward defined target cell subsets to enable precise activation or inhibition of relevant immune cells in order to improve therapeutic efficacy and safety. Superkines can also be fused with a large variety of proteins, antibodies and even other Superkines to incorporate two synergistic mechanisms of action into one molecule: a BiSKITs™ – (Bi-functional SuperKine ImmunoTherapies).

### Platform has generated extensive library of IL-2, IL-4, and IL-13 Superkines with unique properties

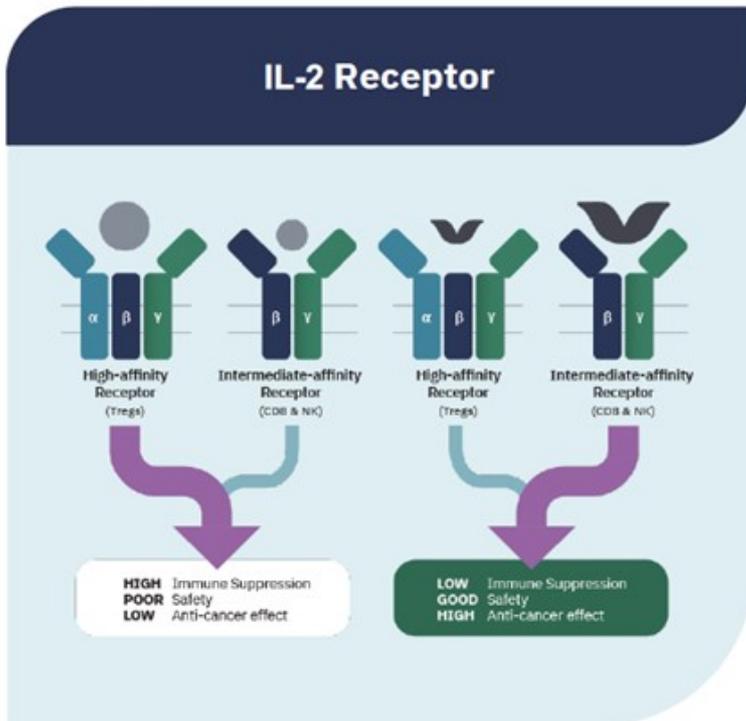


## IL-2 Superkines

IL-2 was one of the first effective immunotherapies developed to treat cancer due to its proficiency at expanding T cells, the central players in cell-mediated immunity. Originally discovered as a growth factor for T cells, IL-2 can also drive the generation of activated immune cells, immune memory cells, and immune tolerance.

In contrast, IL-2 induced overstimulation of immune cells can lead to an imbalance in the ratio of effector and regulatory T cells, resulting in autoimmune diseases. Part of the reason for this is due to the nature of the IL-2 receptor. The IL-2 receptor is composed of three different subunits, IL-2R $\alpha$  (also known as CD25), IL-2R $\beta$  (CD122) and IL-2R $\gamma$  (CD132). The arrangement of these different proteins determines the response to IL-2 signaling.

The IL-2 $\beta$  and IL-2 $\gamma$  components together make a receptor capable of binding IL-2, but only moderately so. When all three components are together, including IL-2R $\alpha$ , the receptor binds IL-2 with a much higher affinity. This complete receptor is usually found on regulatory T cells, which dampens an ongoing immune response. The lower affinity receptor, composed of just the IL-2 $\beta$  and IL-2 $\gamma$  components, is more often found on “naïve” immune cells, which are awaiting instructions before seeking out cancer cells.

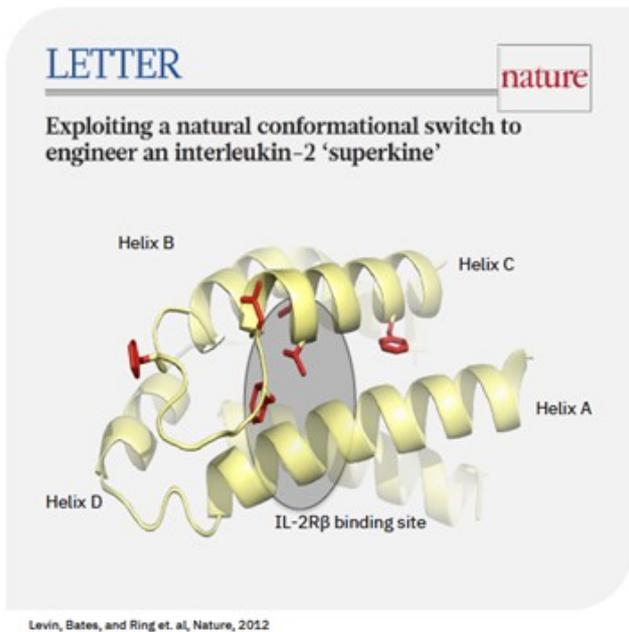


Altering IL-2's propensity for binding these receptors could encourage greater immune cell activation and/or block the function of regulatory cells. Medicenna's MDNA109 (MDNA11) and MDNA209 platforms take advantage of this dynamic by binding to specific receptors and either activating (MDNA109) or blocking them (MDNA209). The majority of development has been focused on the MDNA109 platform candidates where promising results have been demonstrated in various animal tumour models, as described below.

Like the MDNA109 platform, MDNA209 therapeutics bind with exceptional affinity to IL-2R $\beta$ , but are unable to bind to the common IL-2 $\gamma$  receptor which in turn blocks signaling and activation of NK cells and effector CD8 T cells. MDNA209 platform offers a variety of candidates that are either partial agonists, partial antagonists or complete antagonists, enabling us to dampen the signaling properties of an over-active immune system to an amplitude that elicits desired therapeutic function without causing undesired toxicity. We believe MDNA209 variants can therefore be used to treat a host of autoimmune diseases such as multiple sclerosis and preliminary studies (Mitra et al., 2015) have shown that MDNA209 variants can also mitigate graft versus host disease (GvHD) following transplantation. Limited work on MDNA209 has been initiated but development timelines have not been established at this time.

### MDNA11

MDNA109 (a precursor to MDNA19 and MDNA11) is an enhanced version of IL-2 that binds up to 200 times more effectively to IL-2R $\beta$ , thus greatly increasing its ability to activate and proliferate the immune cells needed to fight cancer. Because it preferentially binds IL-2R $\beta$  and not the receptor containing IL-2R $\alpha$ , MDNA109 preferentially drives effector T cell responses over regulatory T cells.



Medicenna's MDNA109 platform produced first generation IL-2 variants with 200-fold higher affinity for CD122 (IL-2R $\beta$ ), which is key for the activation of immune cells responsible for cancer killing (CD8+ T cells, naïve T cells, NK cells), yet similar affinity to CD25

	Similar affinity to CD25	200X increased affinity to CD122
SPR data (nM)	CD25	CD122
IL-2	6.6	280
MDNA109	6.6	1.4

Additionally, MDNA109 reverses NK cell anergy and acts with exceptional synergy when combined with checkpoint inhibitors.

One of the development challenges with MDNA109 was its short half-life, similar to native IL-2, which would require frequent dosing. In order to extend the half-life of MDNA109, Medicenna fused inactive protein scaffolds to MDNA109 including Fc-fusions (Fc) and Albumin fusions (Alb) and, on August 2, 2018, we announced preliminary preclinical data on long acting variants of MDNA109, showing that these fusions have better pharmacokinetic properties enabling less frequent dosing without sacrificing its efficacy or safety.

Further modifications were made to MDNA109 in its extended half-life forms to enhance pharmacodynamics and further enhance selectivity in order to reduce binding to CD25 which is associated with the toxic side effect profile of Proleukin. These modifications have provided us with two candidates in development, MDNA19 and MDNA11, and Medicenna plans to advance MDNA11 into Phase 1 clinical development, subject to discussions and approval by the relevant regulatory authorities.



On February 6, 2019, the Company presented results on MDNA109 and its long acting variants in a podium presentation entitled “Putting Pedal to the Metal: Combining IL-2 Superkine (MDNA109) with Checkpoint Inhibitors” at the 5th Annual Immuno-Oncology 360° Meeting in New York, NY.

The results presented demonstrated that MDNA109 (a pre-cursor to MDNA11) exhibited 1000-fold enhanced affinity toward the CD122 receptor and best-in-class potency toward cancer killing effector T cells. When tested *in vivo*, MDNA109 was not immunogenic and led to potent delay in the growth of pre-established B16F10 melanoma tumors compared to IL-2. Likewise, significant delay in the growth of pre-established MC38 and CT-26 colon cancer was observed in syngeneic mice receiving MDNA109, whereas its co-administration with anti-PD1 checkpoint inhibitor eliminated tumors in 90% of MC38 tumor-bearing mice. Furthermore, MDNA109 in combination with anti-CTLA-4 antibody, complete responses were observed in a majority of mice in the CT26 model. When cured animals were re-challenged on the counter-lateral flank with CT26 tumor cells, tumor growth was blocked at the secondary site clearly suggesting the generation of potent memory responses.

Medicenna presented a poster entitled “Engineering a long-acting CD122 biased IL-2 superkine displaying potent anti-tumoral responses” at the Inaugural Immuno-Oncology Pharma Congress, held from June 18-20, 2019 during World Pharma Week in Boston, MA. The data presented at this conference were subsequently updated as described below.

On September 26, 2019, Medicenna announced the publication of a peer-reviewed article in the August 2019 edition of *Nature Communications* presenting results of a study by independent third-party researchers supporting the efficacy of Medicenna’s IL-2 Superkine platform, MDNA109. The publication, titled “A next-generation tumor-targeting IL-2 preferentially promotes tumor infiltrating CD8+ T cell response and effective tumor control”, describes the safety, efficacy, pharmacokinetics, immunogenicity as well as efficacy profile in different tumor models of long-acting variants of MDNA109 including fusions to antibodies to create tumor targeted immunocytokines. The work reported in the publication is covered by Medicenna’s patents and patents in-licensed by the Company.

On September 30, 2019, Medicenna announced the presentation of preclinical data to support the differentiating characteristics of long-acting MDNA109 variants and their potency *in vitro* and *in vivo* from other long-acting IL-2 programs.

Highlights from the presentation included:

- o High potency towards naive effector T cells but diminished potency on unwanted regulatory T cells (Tregs).
- o Potent effects as monotherapy with improved PK characteristics.
- o Compelling preclinical synergism with immune checkpoint inhibition in a pre-established colon cancer CT26 model
- o Strong Memory Response.

On March 25, 2020, Medicenna announced preclinical data, including non-human-primate (“NHP”) data from MDNA19, during a conference call and webcast.

The presentation highlighted data from the long-acting variant MDNA19, engineered to have enhanced binding to CD122 without binding to CD25 and included:

- Kinetic studies in NHP showed a dose-dependent upregulation of Ki67 in CD8 T cells lasting for almost two weeks post-MDNA19 administration, with no apparent toxicity.
- When administered to NHP, MDNA19 increases the absolute number of circulating CD8 T cells in the absence of Treg and eosinophil stimulation (the latter being a major source of IL-5 production which is responsible for triggering vascular leak syndrome and associated toxicity)

On May 29, 2020, Medicenna announced the virtual presentation of data on MDNA11 at the 2020 ASCO Annual Meeting. The poster presentation by Dr. Moutih Rafei, PhD (Associate Professor of Pharmacology and Physiology at the Université de Montréal), focused on new data arising from studies with MDNA11. The poster presentation focused on encouraging data in NHP for MDNA11, a long-acting IL-2 variant engineered to have enhanced affinity to CD122 without binding to CD25. This engineering allows MDNA11 to specifically expand cancer fighting naïve CD8 T cells as well as NK cells with minimal stimulation of Tregs and eosinophils (associated with vascular leak syndrome). As such, the use of MDNA11 circumvents both immune-suppression and toxicity normally observed with Proleukin. In addition, we believe MDNA11 has several advantages over other long-acting IL-2 variants as it permits enhanced accumulation in the tumor vicinity and can be recycled *in vivo* thus exhibiting prolonged circulation in the blood stream thereby reducing the frequency of treatment. The presentation also demonstrated that MDNA11 had better *in-vitro* and *in-vivo* characteristics than MDNA19 and has therefore been selected as the lead candidate to move into clinical development.

On October 26, 2020, we announced a poster presentation at the 32nd ENA Symposium on Molecular Targets and Cancer Therapeutics. The presentation of preclinical results featured data on MDNA11 as well as data related to long acting bispecific IL-2/IL-13 Superkine that is designed to simultaneously activate cancer killing immune cells while reversing anti-inflammatory TME. These results support the potent therapeutic efficacy of MDNA11 monotherapy in multiple tumor models. Highlights from the poster and corresponding abstract include:

- Data show that compared to native IL-2, MDNA11 exhibits enhanced potency towards anti-tumor CD8+ T and natural killer (NK) cells, and diminished activity toward pro-tumor Treg cells.
- MDNA11 inhibited B16F10 melanoma tumor growth and improved survival as a monotherapy and in combination with a tumor-antigen targeting antibody by inducing a durable increase in tumor infiltrating lymphocytes.
- Treatment with MDNA11 alone or in combination with an immune checkpoint inhibitor resulted in long-term tumor regression and a strong memory response in a preclinical colon cancer model.
- Repeat dosing of non-human primates with MDNA11 did not trigger cytokine release syndrome, anti-drug antibody response nor eosinophilia (associated with vascular leak syndrome).

On November 4, 2020 Medicenna held a positive Scientific Advice Meeting for MDNA11 (similar to a pre-IND meeting) with the UK MHRA. MHRA confirmed that our plans for CMC, pre-clinical and Phase 1/2a clinical trial design would be appropriate for submission of an IMPD in calendar 2021 in order to commence first in human studies with MDNA11 in the UK.

On March 25, 2021, Medicenna presented preclinical data from the Company's Superkine platform programs at the virtual Cytokine-Based Cancer Immunotherapies Summit. The presentation included data showing that treatment with MDNA11 alone or in combination with anti-PD-1 therapy led to tumor growth inhibition and complete responses in a murine MC38 tumor model.

Medicenna is currently in the process of advancing MDNA11 into a Phase 1/2a clinical trial in Australia and the United Kingdom followed by expansion to the United States. We continue to make good progress towards the initiation of the trial, as we wrap-up our IND-enabling studies. We are on track to submit a Clinical Trial Notification to the Australian Human Research Ethics Committee by the end of June. Additionally, we have chosen CROs for the trial and site selection is already underway in Australia. Initiation of the trial is expected in the third quarter of calendar 2021. The clinical trial encompasses a dose-escalation MDNA11 monotherapy phase, which will then be followed by a dose expansion phase. The dose expansion phase will evaluate both MDNA11 monotherapy as well as MDNA11 in combination with a checkpoint inhibitor.

Additional funding will be required to achieve the Company's business objectives with respect to the completion of the clinical development (Phase 2b and 3 clinical trials) and commercialization of MDNA11. The Company expects the completion of clinical development of MDNA11, if undertaken by Medicenna, to last until at least 2027, with a projected aggregate cost of approximately \$150 million, incremental to the current funds available to the Company. It is anticipated that following the completion of a Phase 1/2a clinical trial, the Company will either license the program to one or more partners who would continue the clinical development or raise additional capital at that time. Additional time and capital would also be required to obtain pre-market approval for MDNA11 and to complete business development, marketing and other pre-commercialization activities related to commercial launch.

## **IL2 Superkine Competition**

The development of next-generation IL-2 agonists for cancer immunotherapy is an area of intense interest within the biotechnology industry. The Company is aware of several IL-2 agonists in various stages of clinical development as noted in the table below.

<b>Developer</b>	<b>Name</b>	<b>Stage</b>
Nektar Therapeutics	NKTR-214	Phase 3
Roche	RG7461	Phase 2
Alopexx	DI-Leu16-IL2	Phase 2
Philogen	Darleukin	Phase 2
Alkermes	ALKS 4230	Phase 2
Cue Biopharma	CUE-101	Phase 1
Sanofi (formerly Synthorx)	THOR-707	Phase 1
Neoleukin	NL-201	Phase 1
Anaveon	ANV419	Phase 1
Bright Peak Therapeutics	BPT143	Preclinical
Werewolf Therapeutics	WTX-124	Preclinical
BioNTech	BNT151	Preclinical
Xilio Therapeutics	XTX202	Preclinical
Ascendis Pharma	Transcon IL-2	Preclinical
SyntheKine	STK012	Preclinical
AsherBio	AB248	Preclinical

Many of the programs in development that are ahead of Medicenna are engineered variants of IL-2 that each attempt to reduce CD25 binding and extend the therapeutic window of native IL-2. To our knowledge MDNA11 is the only IL-2 product in development which significantly reduces CD25 binding while also increasing CD122 binding and its efficacy while maintaining greater than 95% sequence homology to native IL-2. In addition to these benefits our candidates MDNA19 and MDNA11 also increase the half-life to allow for dosing every 2 or 3 weeks.

## **BiSKITs™ (Bi-functional SuperKine ImmunoTherapies) Platform**

Our **BiSKITs™** platform allows us to develop designer Superkines by fusing them to other proteins, antibodies or naked IL-2, IL-4 and IL-13 Superkines in order to combine two distinct and yet synergistic mechanisms of action into one molecule: a **BiSKIT™**. Medicenna is working towards selecting a lead **BiSKIT™** candidate to begin IND enabling studies before the end of calendar 2021.

Medicenna's IL-4 and IL-13 Superkines are engineered versions of wild type cytokines which possess enhanced affinity and selectivity for either the Type 1 or Type 2 IL4 receptors or dedicated IL13 receptors such as IL13Ra2. This selectivity is achieved through mutations of the IL-4 or IL-13 proteins to enhance affinity for binding to specific IL4R or IL13R subunits. Additional mutations have also been engineered to modulate their bioactivity, resulting in Superkines with enhanced signaling (super-agonists) or the ability to block signaling (super-antagonists).

One promising IL-13 Superkine antagonist is MDNA413. Compared to wild type IL-13, MDNA413 has been engineered to have 2,000-fold higher selectivity for the Type 2 IL4R and which potently blocks IL-4 and IL-13 signaling (Moraga et al., 2015). Blocking of Type 2 IL4R by MDNA413 may be relevant not only for targeting solid tumors that overexpress this receptor, but also the Th2 biased tumour microenvironment, which shields the cancer from the immune system. As part of our **BiSKITs™** platform, MDNA413 has been fused with MDNA19 (a long acting Fc-IL2 Superkine) and was the basis of data presented at AACR as described below.

On October 26, 2020, we announced a poster presentation at the 32<sup>nd</sup> ENA Symposium on Molecular Targets and Cancer Therapeutics. The presentation of preclinical results featured data on MDNA11 as well as data related to long acting bispecific IL-2/IL-13 Superkine that is designed to simultaneously activate cancer killing immune cells while reversing anti-inflammatory TME. Our bispecific IL-2/IL-13 Superkines are novel and demonstrate the potential of the BiSKITs<sup>TM</sup> platform to address a critical unmet need by effectively targeting immunologically “cold” tumors that are often resistant to immunotherapeutic agents. Data included in the poster and corresponding abstract showed that Medicenna’s bispecific IL-2/IL13 Superkine induced anti-tumor Th1 immune responses and inhibited pro-tumor IL-4/IL-13 signaling.

Subsequent to the year end, on April 12, 2021, we announced new preclinical data supporting the potent immune modulatory effects of MDNA19-MDNA413, an IL-2/IL-13 dual specific cytokine derived from the Company’s BiSKITs<sup>TM</sup> platform. The data were featured in an electronic poster presentation at the 2021 American Association for Cancer Research (AACR) Annual Meeting. Data presented in the poster indicate that this molecule simultaneously activates a pro-inflammatory anti-tumor response, due to its highly selective binding and signaling via the intermediate affinity IL-2 receptor (CD122/CD132), while inhibiting pro-tumoral immune pathways by blocking IL4/IL13 signaling via the Type 2 IL-4 receptor (IL-4R/IL-13R1). MDNA19-MDNA413’s ability to mediate both IL-2 and IL-4/IL-13 signaling has the potential to address a significant unmet medical need for effective therapies against immunologically cold tumors which are often resistant to checkpoint inhibitors and other immunotherapeutic agents due to their immunosuppressive TME.

Medicenna is currently screening and optimizing a variety of IL-2/IL-4/IL-13 superkines as part of our BiSKITs<sup>TM</sup> platform and intends to announce a lead candidate in the second half of calendar 2021.

Another promising IL-13 Superkine is MDNA132. Unlike MDNA413, MDNA132 is an IL-13 ligand that has been engineered to increase affinity for IL13Ra2 overexpressed on certain solid tumors while exhibiting sharply decreased affinity for IL13Ra1. Medicenna believes MDNA132 has superior targeting compared to other IL-13 variants in development, and is an attractively differentiated targeting domain cell-based immunotherapies such as the CAR-T platform. Development timelines for MDNA132 have yet to be established. MDNA132 is also being evaluated as a potential fusion protein in our BiSKITs<sup>TM</sup> platform.

### **Trends**

The Company anticipates that its current level of cash and cash equivalents and marketable securities, will be sufficient to execute its current planned expenditures for more than the next 12 months without further financing being obtained. This estimate assumes completion of non-GLP and GLP pre-clinical studies and GMP manufacturing for MDNA11 as well as initiation and completion of the Phase 1 clinical study for MDNA11 as well as continued development towards the selection of a lead candidate from the BiSKIT platform. This estimate assumes any further development of MDNA55 will be completed by a partner.

The Company does not earn any revenues from its drug candidates and is therefore considered to be in the development stage. As required, the Company will continue to finance its operations through the sale of equity or pursue non-dilutive funding sources available to the Company in the future. The continuation of research and development activities for MDNA55, MDNA11 and the BiSKITs<sup>TM</sup> platform and the commercialization of MDNA55 is dependent upon the Company’s ability to successfully finance and complete its research and development programs through a combination of equity financing and revenues from strategic partners. The Company has no current sources of revenues from strategic partners.

Medicenna currently anticipates an increase in expenditures relating to Medicenna's preclinical programs, specifically MDNA11 from the MDNA109 platform as it moves toward the clinic in mid-2021 and work is completed to identify a lead candidate from the BiSKIT platform. Accordingly, the Company has sufficient capital to execute its planned operations for more than the next 12 months.

### ***Intellectual Property and Partnerships***

Medicenna regards its intellectual property rights as one of the foundation blocks upon which it continues to build a successful biopharmaceutical development company. Medicenna has established a strong and defensive intellectual property position to protect its proprietary technologies. To date, Medicenna has 15 patent families providing patent protection in the US and in contracting states to the Patent Corporation Treaty. The Company has a total of 14 issued patents and several patent applications pending in the United States, as well as a number of granted and pending applications worldwide.

Patent families owned or licensed by Medicenna related to MDNA55 (granted US cases listed):

1. Method for Convection Enhanced Delivery of Therapeutic Agents (U.S. Patent No. 7,371,225)
2. Targeted Cargo Protein Combination Therapy (U.S. Patent No. 9,629,899)
3. IL-4 Fusion Formulations for Treatment of Central Nervous System (CNS) Tumors (patent application pending)
4. ILR4 as a Biomarker in Cancer (patent application pending)

Expiry dates for the above patents and related family members range from 2023 to 2040.

In addition to the above patent protection, MDNA55 has been granted Orphan Drug Designation in the United States and Europe for the treatment of GBM, which would result in 7 and 10 years of orphan drug exclusivity in the U.S. and Europe, respectively. Additionally, upon approval, MDNA55 as a biologic, is expected to be eligible for 12 years Reference Product Exclusivity in the United States, 8 years data exclusivity plus 2 years market exclusivity in Europe, 6 years data exclusivity plus 2 years market exclusivity in Canada and other markets where similar means of exclusivity are available.

Patent families owned or licensed by Medicenna related to the Superkine and Empowered Superkine platforms (granted US cases listed):

1. Superagonists and Antagonists of Interleukin-2 (U.S. Patent No. 9,428,567 and U.S. Patent No. 10,183,980)
2. Superkines and Synthekines: Repurposed Cytokines with New and Enhanced Signaling Activities (U.S. Patent No. 9,738,696 and US Patent No. 10,738,096)
3. Therapeutic IL-13 Polypeptides (U.S. Patent No. 9,512,194, U.S. Patent No. 9,732,133, and U.S. Patent No. 10,227,389)
4. Interleukin-4 Receptor-Binding Fusion Proteins and Uses Thereof (Pro-apoptotic Fusions) (U.S. Patent No. 10,093,708)
5. Interleukin-4 Receptor Binding Fusion Proteins and Uses Thereof (Anti-apoptotic Fusions) (U.S. Patent No. 10,106,592)
6. IL-13 Superkine: Immune Cell Targeting Constructs and Methods of Use Thereof
7. Interleukin-2 Fusion Proteins and Uses Thereof (US Patent No. 10,781,242)
8. Superagonists, Partial Agonists and Antagonists of Interleukin-2 (U.S. Patent No. 10,150,802 and US Patent No. 10,654,905)
9. IL-2 Superagonists in Combination with Anti-PD-1 Antibodies
10. Uses and Methods for Oncolytic Virus Targeting of IL-4/IL-13 and Fusions (patent application pending)
11. IL-13/IL-4 Superkine: Immune Cell Targeting Constructs and Methods of Use Thereof

Expiry dates for the above patents and related family members range from 2031 to 2039. Upon approval, the above programs are expected to be eligible for 12 years Reference Product Exclusivity in the United States, 8 years data exclusivity plus 2 years market exclusivity in Europe, 6 years data exclusivity plus 2 years market exclusivity in Canada and other markets where similar means of exclusivity are available.

#### ***CPRIT Agreement***

In February 2015, the Company received notice that it had been awarded a grant by CPRIT whereby the Company is eligible to receive up to US\$14.1 million on eligible expenditures over a three year period related to the development of the Company's Phase 2b clinical program for MDNA55. In October 2017, the Company was granted a one-year extension to the grant allowing expenses to be claimed over a four-year period ending February 28, 2019. On February 4, 2019 the Company was approved for a further six-month extension ending August 31, 2019, on July 25, 2019 an additional six-month extension was granted to February 28, 2020 and on January 6, 2020 an additional six-month extension was granted to August 28, 2020. The grant expired on August 28, 2020 and as of March 31, 2021 the grant with CPRIT is substantially complete.

Ongoing program funding from CPRIT is subject to a number of conditions including the satisfactory achievement of milestones that must be met to release additional CPRIT funding, proof the Company has raised 50% matching funds and maintaining substantial functions of the Company related to the project grant in Texas as well as using Texas-based subcontractor and collaborators wherever possible. There can be no assurances that the Company will continue to meet the necessary CPRIT criteria, satisfactorily achieve milestones, or that CPRIT will continue to advance additional funds to the Company.

If the Company is found to have used any grant proceeds for purposes other than intended, is in violation of the terms of the grant, or relocates its MDNA55 related operations outside of the state of Texas, then the Company is required to repay any grant proceeds received.

Under the terms of the grant, the Company is also required to pay a royalty to CPRIT, comprised of 3-5% of revenues on net sales of MDNA55 until aggregate royalty payments equal 400% of the grant funds received at which time the ongoing royalty will be 0.5%.

### ***Business Strategy***

Medicenna's strategy to reduce risk is to diversify the assets in Medicenna's pipeline based on their stage of development, mechanism of action and target product profile. To achieve this goal, we in-licensed the Superkine platform from Stanford. These candidates, namely IL-2, IL-4 and IL-13 Superkines, of which the lead preclinical program is based on the IL-2 super-agonist platform, MDNA109 (of which the lead candidate is MDNA11) are expected to enable the Company to develop a library of cytokine candidates as has been demonstrated by the BiSKIT<sup>TM</sup> platform announced in 2021. The resulting preclinical product candidates derived from the Superkine and Empowered Superkine platforms have a different mechanism of action and target product profile compared to MDNA55, Medicenna's late stage candidate. By adopting a balanced approach, Medicenna is less reliant on a single product in Medicenna's pipeline, with greater upside potential through opportunities to partner or develop on its own, multiple products. Medicenna believes that establishing a pipeline of drug candidates with distinct mechanisms of actions targeting multiple disease indications mitigates development risk. Medicenna intends to achieve its business strategy by focusing on the following key areas:

1. Maximize the potential clinical and commercial success of Medicenna's drug candidates by pursuing development programs based on sound scientific rationale for multiple disease indications where there are significant unmet clinical needs. In the near-term, Medicenna's focus will be to complete a partnership transaction for MDNA55 as well advance MDNA11 into Phase 1/2a clinical development;
2. Developing next generation Superkines, including selecting a lead candidate from the BiSKIT<sup>TM</sup> platform for future clinical development;
3. Optimize the therapeutic potential of Medicenna's drug candidates by selecting sub-populations of patients who stand an improved chance of responding to treatment and employing the latest technologies and strategies for optimizing drug delivery;
4. Establish collaborations and relationships with leading scientific and clinical centres to effectively maximize the success of Medicenna's drug development programs; and
5. Assess strategic alliances with select pharmaceutical and/or biotechnology companies where such alliances may enable successful development and commercialization of Medicenna's drug candidates while maximizing its return on investment. Medicenna may conduct transactions with established strategic partners on a regional or worldwide basis to accelerate product development, improve Medicenna's marketing strength and enhance its capability of bringing products to the markets worldwide.

Medicenna will continue to seek sources of non-dilutive funding as well as additional funds through equity financings and/or through collaborative arrangements with pharmaceutical and/or biotechnology companies for any of Medicenna's products and technologies under development. Cash resources are carefully managed and focused on priority programs and initiatives. Accordingly, some initiatives may not be pursued or advanced in the near term as a prudent measure to preserve cash.

## **Regulatory Process**

Government authorities in the United States, including federal, state, and local authorities, and in other countries, extensively regulate, among other things, the manufacturing, research and clinical development, marketing, labeling and packaging, storage, distribution, post-approval monitoring and reporting, advertising and promotion, and export and import of biological products, such as those Medicenna is developing. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local, and foreign statutes and regulations require the expenditure of substantial time and financial resources.

Securing final regulatory approval for the manufacture and sale of biological products in the United States, Europe, Canada and other commercial territories, is a long and costly process that is controlled by that particular territory's regulatory agency. The regulatory agency in the United States is the FDA, in Canada it is Health Canada, and in Europe it is the EMA. Other regulatory agencies have similar regulatory approval processes, but each regulatory agency has its own approval processes. Approval in the United States, Canada or Europe does not assure approval by other regulatory agencies, although often test results from one country may be used in applications for regulatory approval in another country.

None of Medicenna's products have been completely developed or tested and, therefore, Medicenna is not yet in a position to seek regulatory approval to market any of Medicenna's products. The time required to obtain approval by such regulatory authorities is unpredictable but typically takes many years following the commencement of preclinical studies and clinical trials and will require significant additional capital. See "Risk Factors" below.

### **United States Government Regulation**

In the United States, the FDA regulates drugs under the *Federal Food, Drug, and Cosmetic Act* ("FDCA"), and its implementing regulations, and biologics under the FDCA and the *Public Health Service Act* ("PHSA"), and its implementing regulations. FDA approval is required before any new unapproved drug or biologic or dosage form, including a new use of a previously approved drug, can be marketed in the United States. Drugs and biologics are also subject to other federal, state, and local statutes and regulations. If Medicenna fails to comply with applicable FDA or other requirements at any time during the product development process, clinical testing, the approval process or after approval, Medicenna may become subject to administrative or judicial sanctions. These sanctions could include the FDA's refusal to approve pending applications, license suspension or revocation, withdrawal of an approval, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, civil monetary penalties or criminal prosecution. Any FDA enforcement action could have a material adverse effect on Medicenna.

The process required by the FDA before product candidates may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests and preclinical animal studies, all performed in accordance with the Good Laboratory Practices ("GLP") regulations;

- completion of extensive CMC (chemistry, manufacturing and control) to produce drug in accordance with current Good Manufacturing Practices (“cGMP”);
- submission to the FDA of an IND, which must become effective before human clinical trials may begin and must be updated annually;
- approval by an independent institutional review board (“IRB”) or ethics committee representing each clinical site before each clinical trial may be initiated;
- performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the product candidate for each proposed indication;
- preparation of and submission to the FDA of a new drug application (“NDA”) or biologics license application (“BLA”) after completion of all pivotal clinical trial;
- potential review of the product application by an FDA advisory committee, where appropriate and if applicable;
- a determination by the FDA within 60 days of its receipt of an NDA or BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facilities where the proposed product is produced to assess compliance with GMP.
- a potential FDA audit of the preclinical research and clinical trial sites that generated the data in support of the NDA or BLA; and
- FDA review and approval of an NDA or BLA prior to any commercial marketing or sale of the product in the United States

The preclinical research, including production of cGMP material, clinical testing and approval process require substantial time, effort, and financial resources, and Medicenna cannot be certain that any approvals for Medicenna’s product candidates will be granted on a timely basis, if at all.

An IND is a request for authorization from the FDA to administer an investigational new drug product to humans in clinical trials. The central focus of an IND submission is on the general investigational plan and the protocol(s) for human clinical trials. The IND also includes description of the manufacturing process and testing of the batch, results of animal studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; and any available human data or literature to support the use of the investigational new drug. An IND must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to the proposed clinical trials. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before clinical trials can begin. Accordingly, submission of an IND may or may not result in the FDA allowing clinical trials to commence.

### ***Clinical Trials***

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with Good Clinical Practices (“GCP”), which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety, and the efficacy criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. Additionally, approval must also be obtained from each clinical trial site’s IRB or ethics committee, before the trials may be initiated, and the IRB or ethics committee must monitor the trial until completed. There are also requirements governing the reporting of ongoing clinical trials and clinical trial results to public registries.

The clinical investigation of a drug is generally divided into three or four phases. Although the phases are usually conducted sequentially, they may overlap or be combined.

- Phase 1. The drug is introduced into healthy human subjects or subjects with the target disease or condition. These studies are designed to evaluate safety, dosage tolerance, metabolism and pharmacologic actions of the investigational new drug in humans, the side effects associated with increasing doses, and where possible, to gain early evidence on effectiveness.
- Phase 2. The drug is administered to a limited patient population to evaluate dosage tolerance and optimal dosage, identify possible adverse side effects and safety risks, and preliminarily evaluate efficacy.
- Phase 3. The drug is administered to an expanded patient population, generally at geographically dispersed clinical trial sites to generate enough data to statistically evaluate dosage, clinical effectiveness and safety, to establish the overall benefit-risk relationship of the investigational new drug product, and to provide an adequate basis for physician labeling.
- Phase 4. In some cases, the FDA may condition approval of an NDA or BLA for a product candidate on the sponsor's agreement to conduct additional clinical trials after approval. In other cases, a sponsor may voluntarily conduct additional clinical trials after approval to gain more information about the drug. Such post-approval studies are typically referred to as Phase 4 clinical trials.

Clinical trial sponsors must also report to the FDA, within certain timeframes, serious and unexpected adverse reactions, any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator's brochure, or any findings from other studies or animal testing that suggest a significant risk in humans exposed to the product candidate. The FDA, the IRB or ethics committee, or the clinical trial sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether or not a trial may move forward at designated check points based on access to certain data from the trial.

The clinical trial process can take years to complete, and there can be no assurance that the data collected will support FDA approval or licensure of the product. Results from one trial are not necessarily predictive of results from later trials. Medicenna may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

### ***Submission of BLA to the FDA***

Assuming successful completion of all required preclinical studies and clinical testing in accordance with all applicable regulatory requirements, detailed investigational new drug product information is submitted to the FDA in the form of a BLA requesting approval to market the product for one or more indications. Under federal law, the submission of most BLAs is subject to an application user fee. For the year 2021, the application user fee is US\$2.876 million. This fee is typically increased annually. Applications for orphan drug products are exempted from the BLA application user fee, unless the application includes an indication for other than a rare disease or condition.

A BLA must include all relevant data available from pertinent preclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. Data come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product and may also come from a number of alternative sources, including trials initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and efficacy of the investigational new drug product to the satisfaction of the FDA.

Once a BLA has been submitted, the FDA's goal is to review the application within ten months after it accepts the application for filing, or, if the application relates to an unmet medical need in a serious or life-threatening indication, six months after the FDA accepts the application for filing. The review process is often significantly extended by the FDA's requests for additional information or clarification.

Before approving a BLA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with GMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP.

The FDA is required to refer a BLA for a novel drug (in which no active ingredient has been approved in any other application) to an advisory committee or explain why such referral was not made. Typically, an advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

### ***The FDA's Decision on a BLA***

After the FDA evaluates the NDA or BLA and conducts inspections of manufacturing facilities where the product will be produced, the FDA will issue either an approval letter or a complete response letter ("Complete Response Letter"). An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application is not ready for approval. In order to satisfy deficiencies identified in a Complete Response Letter, additional clinical data and/or additional Phase 3 clinical trial(s), and/or other significant, expensive and time-consuming requirements related to clinical trials, preclinical studies or manufacturing may be required for the product candidate. Even if such additional information is submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. The FDA could also approve the NDA or BLA with a risk evaluation and mitigation strategy, plan to mitigate risks, which could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling, development of adequate controls and specifications, or a commitment to conduct one or more post-market studies or clinical trials. Such post-market testing may include Phase 4 clinical trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization. New government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of Medicenna's products under development.

### ***Additional Controls for Biologics***

To help reduce the increased risk of the introduction of adventitious agents, the PHSA emphasizes the importance of manufacturing controls for products whose attributes cannot be precisely defined. The PHSA also provides authority to the FDA to immediately suspend biologics licenses in situations where there exists a danger to public health, to prepare or procure products in the event of shortages and critical public health needs, and to authorize the creation and enforcement of regulations to prevent the introduction or spread of communicable diseases within the United States.

After a BLA is approved, the product may also be subject to official lot release as a condition of approval. As part of the manufacturing process, the manufacturer is required to perform certain tests on each lot of the product before it is released for distribution. If the product is subject to official release by the FDA, the manufacturer submits samples of each lot of product to the FDA together with a release protocol showing a summary of the lot manufacturing history and the results of all of the manufacturer's tests performed on the lot. The FDA may also perform certain confirmatory tests on lots of some products, such as viral vaccines, before allowing the manufacturer to release the lots for distribution. In addition, the FDA conducts laboratory research related to the regulatory standards on the safety, purity, potency, and effectiveness of biological products. As with drugs, after approval of a BLA, biologics manufacturers must address any safety issues that arise, are subject to recalls or a halt in manufacturing, and are subject to periodic inspection after approval.

### ***Other Healthcare Laws***

Pharmaceutical manufacturers are subject to additional healthcare laws, regulation, and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. Such laws include, without limitation, U.S. federal anti-kickback, anti-self-referral, false claims, transparency, including the federal Physician Payments Sunshine Act, consumer fraud, pricing reporting, data privacy, data protection, and security laws and regulations as well as similar foreign laws in the jurisdictions outside the U.S. Similar state and local laws and regulations may also restrict business practices in the pharmaceutical industry, such as state anti-kickback and false claims laws, which may apply to business practices, including but not limited to, research, distribution, sales, and marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, or by patients themselves; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information; state and local laws which require the tracking of gifts and other remuneration and any transfer of value provided to physicians, other healthcare providers and entities; and state and local laws that require the registration of pharmaceutical sales representatives; and state and local laws governing the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

### ***Coverage and Reimbursement***

Sales of any pharmaceutical product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance, and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Significant uncertainty exists as to the coverage and reimbursement status of any newly approved product. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. One third-party payor's decision to cover a particular product does not ensure that other payors will also provide coverage for the product. As a result, the coverage determination process can require manufacturers to provide scientific details, information on cost-effectiveness, and clinical support for the use of a product to each payor separately. This can be a time-consuming process, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

In addition, third-party payors are increasingly reducing reimbursements for pharmaceutical products and related services. The U.S. government and state legislatures have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged, examining the medical necessity and reviewing the cost effectiveness of pharmaceutical products, in addition to questioning their safety and efficacy. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product.

### ***Comparable European and Other International Government Regulation***

In addition to FDA regulations in the United States, we will be subject to a variety of comparable regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries.

Some countries outside of the United States have a similar process that requires the submission of a clinical trial application, or CTA, much like the IND prior to the commencement of human clinical trials. In Europe, for example, a CTA must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the CTA is approved in accordance with a country's requirements, clinical trial development may proceed. To obtain regulatory approval to commercialize a new drug under European Union regulatory systems, we must submit a marketing authorization application, or MAA. The MAA is similar to the NDA, with the exception of, among other things, country-specific document requirements and environmental impact assessments.

For other countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCPs and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

### ***Australia***

Conducting clinical trials for therapeutic drug candidates in Australia is subject to regulation by Australian governmental entities. Approval for inclusion in the Australian Register of Therapeutic Goods, or the ARTG, is required before a pharmaceutical drug product may be marketed in Australia.

Typically, the process of obtaining approval of a new therapeutic drug product for inclusion in the ARTG requires compilation of clinical trial data. Clinical trials conducted using “unapproved therapeutic goods” in Australia, being those which have not yet been evaluated by the Therapeutic Goods Administration, or TGA, for quality, safety and efficacy must occur pursuant to either the Clinical Trial Notification, or CTN, or Clinical Trial Exemption, or CTX, process.

The CTN process broadly involves:

- completion of pre-clinical laboratory and animal testing;
- submission to a Human Research Ethics Committee, or the HREC, of all material relating to the proposed clinical trial, including the trial protocol. The TGA does not review any data relating to the clinical trial;
- the institution or organization at which the trial will be conducted, referred to as the “Approving Authority” gives the final approval for the conduct of the trial at the site, having due regard to the advice from the HREC; and
- CTN trials cannot commence until the trial has been notified to the TGA.

Under the CTX process:

- a sponsor submits an application to conduct a clinical trial to the TGA for evaluation and comment; and
- a sponsor cannot commence a CTX trial until written advice has been received from the TGA regarding the application and approval for the conduct of the trial has been obtained from an ethics committee and the institution at which the trial will be conducted.

In each case, it is required that:

- adequate and well-controlled clinical trials demonstrate the quality, safety and efficacy of the therapeutic product;
- evidence is compiled which demonstrates that the manufacture of the therapeutic drug product complies with the principles of GMP;
- manufacturing and clinical data is derived to submit to the Australian Committee on Prescription Medicines, which makes recommendations to the TGA as to whether or not to grant approval to include the therapeutic drug product in the ARTG; and
- an ultimate decision is made by the TGA whether to include the therapeutic drug product in the ARTG.

Pre-clinical studies include laboratory evaluation of the therapeutic drug product as well as animal studies to assess the potential safety and efficacy of the drug. The results of the pre-clinical studies form part of the materials submitted to the investigators HREC in the case of a CTN trial and part of the application to the TGA in the case of a CTX trial.

Clinical trials involve administering the investigational product to healthy volunteers or patients under the supervision of a qualified principal investigator. The TGA has developed guidelines for a CTN. Under the CTN process, all material relating to the proposed trial is submitted directly to the HREC of each institution at which the trial is to be conducted. An HREC is an independent review committee set up under guidelines of the Australian National Health and Medical Research Council. The role of an HREC is to ensure the protection of rights, safety and wellbeing of human subjects involved in a clinical trial by, among other things, reviewing, approving and providing continuing review of trial protocols and amendments, and of the methods and material to be used in obtaining and documenting informed consent of the trial subjects. The TGA is formally notified by submission of a CTN application but does not review the safety of the drug or any aspect of the proposed trial. The approving authority of each institution gives the final approval for the conduct of the clinical trial, having due regard to advice from the HREC. Following approval, responsibility for all aspects of the trial conducted under a CTN application remains with the HREC of each investigator's institution.

The standards for clinical research in Australia are set by the TGA and the National Health and Medical Research Council, and compliance with GCPs is mandatory. Guidelines, such as those promulgated by the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use, or ICH, are required across all fields, including those related to pharmaceutical quality, nonclinical and clinical data requirements and study designs. The basic requirements for preclinical data to support a first-in- human study under ICH guidelines are applicable in Australia. Requirements related to adverse event reporting in Australia are similar to those required in other major jurisdictions.

### ***Specialized Skill and Knowledge***

Medicenna's business requires personnel with specialized skills and knowledge in the fields of basic and applied immunotherapy and immunology, oncology in general, the treatment of GBM, as well as drug delivery to the brain. Medicenna has subcontracted out several key functions to highly specialized individuals and companies to conduct the preclinical development of MDNA19 and MDNA11, manufacturing of MDNA11 for the Phase 1 clinical trial as well as MDNA55 as well as the clinical program and regulatory activities associated with the EOP2 meetings with the FDA. These programs will be overseen by Medicenna's Chief Executive Officer, Chief Medical Officer, Chief Scientific Officer and Chief Development Officer, to ensure proper and timely completion of the required activities. Medicenna worked with world renowned brain cancer treatment centres for Medicenna's Phase 2b clinical trial of MDNA55. In addition, some of the leading experts in North America and Europe with respect to drug delivery to the brain, contribute towards Medicenna's clinical and regulatory efforts.

### ***Employees***

As at March 31, 2021, Medicenna had 13 full-time employees and one part-time consultant, including eight holding PhD degrees and other employees holding M.Sc. and MBA degrees or CPA designations. Subsequent to the year-end Medicenna appointed a Chief Scientific Officer, a Chief Medical Officer and two additional employees to increase the headcount to 17 full-time employees and one part-time consultant with ten holding PhD degrees and one holding an MD degree.

Medicenna's employees are not governed by a collective bargaining agreement. Medicenna depends on certain key members of its management and scientific staff and the loss of services of one or more of these persons could adversely affect the Company.

Medicenna also uses consultants and outside contractors to carry on many of Medicenna's activities, including preclinical testing and validation, formulation, assay development, manufacturing, clinical and regulatory affairs, toxicology and clinical trials.

### ***Legal Proceedings***

To Medicenna's knowledge, there have not been any legal or arbitration proceedings, including those relating to bankruptcy, receivership or similar proceedings, those involving any third party, and governmental proceedings pending or known to be contemplated, which may have, or have had in the recent past, significant effect Medicenna's financial position or profitability.

To Medicenna's knowledge, there have been no material proceedings in which any director, any member of senior management, or any of Medicenna's affiliates is either a party adverse to Medicenna or any of Medicenna's subsidiaries or has a material interest adverse to Medicenna or any of Medicenna's subsidiaries.

## **RISK FACTORS**

*An investment in the Common Shares involves a high degree of risk and should be considered speculative. An investment in the Common Shares should only be undertaken by those persons who can afford the total loss of their investment. Investors should carefully consider the risks and uncertainties set forth below, as well as other information described elsewhere in this AIF. The risks and uncertainties below are not the only ones the Company faces. Additional risks and uncertainties not presently known to Medicenna or that Medicenna believes to be immaterial may also adversely affect Medicenna's business. If any of the following risks occur, Medicenna's business, financial condition and results of operations could be seriously harmed and you could lose all or part of your investment. Further, if Medicenna fails to meet the expectations of the public market in any given period, the market price of Medicenna's Common Shares could decline. Medicenna operates in a highly competitive environment that involves significant risks and uncertainties, some of which are outside of Medicenna's control.*

### ***Risks Related to the Company's Business and the Company's Industry***

*The Company has no sources of product revenue and will not be able to maintain operations and research and development without sufficient funding.*

The Company has no sources of product revenue and cannot predict when or if it will generate product revenue. The Company's ability to generate product revenue and ultimately become profitable depends upon its ability, alone or with partners, to successfully develop the product candidates, obtain regulatory approval, and commercialize products, including any of the current product candidates, or other product candidates that may be developed, in-licensed or acquired in the future. The Company does not anticipate generating revenue from the sale of products for the foreseeable future. The Company expects research and development expenses to increase in connection with ongoing activities, particularly as MDNA55 is advanced through clinical trials and the MDNA109 platform (MDNA19 or MDNA11) is advanced towards the clinic.

The Company will require significant additional capital resources to expand its business, in particular the further development of its proposed products. Advancing its product candidates or acquisition and development of any new products or product candidates will require considerable resources and additional access to capital markets. In addition, the Company's future cash requirements may vary materially from those now expected.

The Company can potentially seek additional funding through corporate collaborations and licensing arrangements, through public or private equity or debt financing, or through other transactions. However, if clinical trial results are neutral or unfavourable, or if capital market conditions in general, or with respect to life sciences companies such as Medicenna, are unfavourable, the Company's ability to obtain significant additional funding on acceptable terms, if at all, will be negatively affected. Additional financing that it may pursue may involve the sale of the Common Shares or financial instruments that are exchangeable for, or convertible into, the Common Shares, which could result in significant dilution to its shareholders. If sufficient capital is not available, the Company may be required to delay the implementation of its business strategy, which could have a material adverse effect on its business, financial condition, prospects or results of operations.

The Company is highly dependent upon certain key personnel and their loss could adversely affect its ability to achieve its business objective.

The loss of Dr. Fahar Merchant, the President and Chief Executive Officer, Rosemina Merchant, the Chief Development Officer, or other key members of the scientific and operating staff could harm the Company. Employment agreements exist with Dr. Merchant and Ms. Merchant, although such employment agreements do not guarantee their retention. The Company also depends on scientific and clinical collaborators and advisors, all of whom have outside commitments that may limit their availability. In addition, the Company believes that future success will depend in large part upon its ability to attract and retain highly skilled scientific, managerial, medical, clinical and regulatory personnel. Agreements have been entered into with scientific and clinical collaborators and advisors, key opinion leaders and academic partners in the ordinary course of business as well as with physicians and institutions who recruited patients into the MDNA55 clinical trial and will recruit patients into future clinical trials. Notwithstanding these arrangements, there is significant competition for these types of personnel from other companies, research and academic institutions, government entities and other organizations. The loss of the services of any of the executive officers or other key personnel could potentially harm the Company's business, operating results or financial condition.

If the Company breaches any of the agreements under which it licenses rights to product candidates or technology from third parties, it can lose license rights that are important to its business. The Company's current license agreements may not provide an adequate remedy for breach by the licensor.

The Company is developing MDNA55, the MDNA109 platform (MDNA19 and MDNA11) and other earlier stage preclinical and discovery drug candidates pursuant to license agreements with NIH and Stanford (collectively, the "Licensors"). The Company is subject to a number of risks associated with its collaboration with the Licensors, including the risk that the Licensors may terminate the license agreement upon the occurrence of certain specified events. The license agreement requires, among other things, that the Company makes certain payments and use reasonable commercial efforts to meet certain clinical and regulatory milestones. If the Company fails to comply with any of these obligations or otherwise breach this or similar agreements, the Licensors or any future licensors may have the right to terminate the license in whole. The Company can also suffer the consequences of non-compliance or breaches by Licensors in connection with the license agreements. Such non-compliance or breaches by such third parties can in turn result in breaches or defaults under the Company's agreements with other collaboration partners, and the Company can be found liable for damages or lose certain rights, including rights to develop and/or commercialize a product or product candidate. Loss of the Company's rights to the licensed intellectual property or any similar license granted to it in the future, or the exclusivity rights provided therein, can harm the Company's financial condition and operating results.

Clinical drug development involves a lengthy and expensive process with an uncertain outcome, results of earlier studies and trials may not be predictive of future trial results, and the Company's product candidates may not have favourable results in later trials or in the commercial setting.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials may not be predictive of the results of later-stage clinical trials. In the case of MDNA55, the promising results seen in the Phase 2b clinical study may not be replicated in a randomized, controlled Phase 3 clinical study. Success in preclinical or animal studies and early clinical trials does not ensure that later large-scale efficacy trials will be successful nor does it predict final results. This is applicable to the MDNA109 platform (MDNA19 and MDNA11) as the promising preclinical data may not be replicated in a clinical setting. Favourable results in early trials may not be repeated in later trials. There is no assurance the FDA, the EMA or other similar government bodies will view the results as the Company does or that any future trials of its proposed products for other indications will achieve positive results. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials.

The Company will be required to demonstrate through larger-scale clinical trials that any potential future product is safe and effective for use in a diverse population before it can seek regulatory approvals for commercial sale of its product. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical and post-approval trials. If MDNA55 and other product candidates fail to demonstrate sufficient safety and efficacy in future clinical trials, the Company's operations and financial condition will be adversely impacted.

If the Company's competitors develop and market products that are more effective than the Company's existing product candidates or any products it may develop, or if they obtain marketing approval before it does, the Company's products may be rendered obsolete or uncompetitive.

Technological competition from pharmaceutical companies, biotechnology companies and universities is intense and is expected to increase. Many of the Company's competitors and potential competitors have substantially greater product development capabilities and financial, scientific, marketing and human resources than the Company does. Our future success depends in part on our ability to maintain a competitive position, including our ability to further progress MDNA55 and the MDNA109 platform (MDNA19 and MDNA11) through the necessary preclinical and clinical trials towards regulatory approval for sale and commercialization. Other companies may succeed in commercializing products earlier than we are able to commercialize our products or they may succeed in developing products that are more effective than our products. While the Company will seek to expand its technological capabilities in order to remain competitive, there can be no assurance that developments by others will not render its products non-competitive or that the Company or its licensors will be able to keep pace with technological developments. Competitors have developed technologies that could be the basis for competitive products. Some of those products may have an entirely different approach or means of accomplishing the desired therapeutic effect than the Company's products and may be more effective or less costly than its products. In addition, other forms of medical treatment may offer competition to the products. The success of the Company's competitors and their products and technologies relative to its technological capabilities and competitiveness could have a material adverse effect on the future preclinical and clinical trials of its products, including its ability to obtain the necessary regulatory approvals for the conduct of such trials.

The Company is subject to the restrictions and conditions of the CPRIT agreement. Failure to comply with the CPRIT agreement may adversely affect the Company's financial condition and results of operations.

The Company has obtained a grant from CPRIT to fund a portion of its operations to date. The CPRIT grant is subject to the Company's compliance with the scope of work outlined in the CPRIT agreement and demonstration of its progress towards achievement of the milestones set forth in the CPRIT agreement. If the Company fails to comply with the terms of the CPRIT agreement, it may not receive the remaining US\$1.4 million tranche of the CPRIT grant or it may be required to reimburse some or the entire CPRIT grant. Further, the CPRIT grant may only be applied to a limited number of allowable expenses. Failure to obtain the remaining tranche of the CPRIT grant or being required to reimburse all or a portion of the CPRIT grant may cause a halt or delay in ongoing operations, which may adversely affect the Company's financial condition and operating results.

The Company relies and will continue to rely on third parties to plan, conduct and monitor preclinical studies and clinical trials, and their failure to perform as required could cause substantial harm to the Company's business.

The Company relies and will continue to rely on third parties to conduct a significant portion of clinical development and planned preclinical activities. Preclinical activities include *in vivo* studies providing access to specific disease models, pharmacology and toxicology studies, and assay development. Clinical development activities include trial design, regulatory submissions, clinical patient recruitment, clinical trial monitoring, clinical data management and analysis, safety monitoring and project management. If there is any dispute or disruption in the Company's relationship with third parties, or if the third party is unable to provide quality services in a timely manner and at a reasonable cost, any active development programs could face delays. Further, if any of these third parties fails to perform as expected or if their work fails to meet regulatory requirements, testing could be delayed, cancelled or rendered ineffective.

The Company relies on contract manufacturers over whom the Company has limited control. If the Company is subject to quality, cost or delivery issues with the preclinical and clinical grade materials supplied by contract manufacturers, business operations could suffer significant harm.

The Company has limited manufacturing experience and relies on contract development and manufacturing organizations ("CDMOs"), to manufacture MDNA55 for clinical trials and the MDNA109 platform (MDNA19 or MDNA11) for preclinical and clinical development. The Company relies on CDMOs for manufacturing, filling, packaging, storing and shipping of drug product in compliance with cGMP, regulations applicable to its products. The FDA ensures the quality of drug products by carefully monitoring drug manufacturers' compliance with cGMP regulations. The cGMP regulations for drugs contain minimum requirements for the methods, facilities and controls used in manufacturing, processing and packing of a drug product.

There can be no assurances that the CDMOs selected will be able to meet future timetables and requirements. If the Company is unable to arrange for alternative third-party manufacturing sources on commercially reasonable terms or in a timely manner, it may delay the development of the product candidates. Further, contract manufacturers must operate in compliance with cGMP and failure to do so could result in, among other things, the disruption of product supplies. The Company's dependence upon third parties for the manufacture of its products may adversely affect profit margins and ability to develop and deliver products on a timely and competitive basis.

*The Company's future success is dependent primarily on the regulatory approval of a single product.*

The Company does not have any products that have gained regulatory approval. Currently, its only clinical product candidate is MDNA55. As a result, the Company's near-term prospects, including its ability to finance its operations and generate revenue, are substantially dependent on its ability to obtain regulatory approval for, and, if approved, to successfully commercialize MDNA55 in a timely manner. The Company cannot commercialize MDNA55 or other future product candidates in the United States without first obtaining regulatory approval for the product from the FDA; similarly, it cannot commercialize MDNA55 or other future product candidates outside of the United States without obtaining regulatory approval from comparable foreign regulatory authorities. Although MDNA55 has received Orphan Drug (FDA, EMA) and Fast Track (FDA) designations, there can be no assurance regulatory approval will be granted. Before obtaining regulatory approvals for the commercial sale of MDNA55 or other future product candidates for a target indication, the Company must demonstrate with substantial evidence gathered in preclinical and clinical studies to the satisfaction of the relevant regulatory authorities, that the product candidate is safe and effective for use for that target indication and that the manufacturing facilities, processes and controls are adequate. Many of these factors are beyond the Company's control. If the Company, or its potential commercialization collaborators, are unable to successfully commercialize MDNA55, the Company may not be able to earn sufficient revenues to continue its business.

*The Company may not achieve its publicly announced milestones according to schedule, or at all.*

From time to time, the Company may announce the timing of certain events expected to occur, such as the anticipated timing of results from clinical trials. These statements are forward-looking and are based on the best estimates of management at the time relating to the occurrence of such events. However, the actual timing of such events may differ from what has been publicly disclosed. The timing of events such as initiation or completion of a clinical trial, filing of an application to obtain regulatory approval, or announcement of additional clinical trials for a product candidate may ultimately vary from what is publicly disclosed. These variations in timing may occur as a result of different events, including the ability to recruit patients in a clinical trial in a timely manner, the nature of results obtained during a clinical trial or during a research phase, problems with a CDMO or a contract research organization ("CRO"), or any other event having the effect of delaying the publicly announced timeline. The Company undertakes no obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as otherwise required by law. Any variation in the timing of previously announced milestones could have a material adverse effect on the business plan, financial condition or operating results and the trading price of the Common Shares.

MDNA55 is in the mid stages of clinical development and the MDNA109 platform (MDNA19 and MDNA11) in preclinical development and, as a result, the Company will be unable to predict whether it will be able to profitably commercialize its product candidates.

The Company has not received regulatory approval for the sale of MDNA55 in any market. Accordingly, the Company has not generated any revenues from product sales. A substantial commitment of resources to conduct clinical trials and for additional product development will be required to commercialize all of our product candidates. There can be no assurance that MDNA55, the MDNA109 platform (MDNA19 and MDNA11) or any of our other product candidates will meet applicable regulatory standards, be capable of being produced in commercial quantities at reasonable cost or be successfully marketed, or that the investment made by the Company in the commercialization of the products will be recovered through sales, license fees or related royalties.

The Company is subject to extensive government regulation that will increase the cost and uncertainty associated with gaining final regulatory approval of its product candidates.

Securing final regulatory approval for the manufacture and sale of human therapeutic products in the United States, Canada and other markets is a long and costly process that is controlled by that particular country's national regulatory agency. Approval in the United States, Canada or Europe does not assure approval by other national regulatory agencies, although often test results from one country may be used in applications for regulatory approval in another country. Other national regulatory agencies have similar regulatory approval processes, but each is different.

Prior to obtaining final regulatory approval to market a drug product, every national regulatory agency has a variety of statutes and regulations which govern the principal development activities. These laws require controlled research and testing of products, government review and approval of a submission containing preclinical and clinical data establishing the safety and efficacy of the product for each use sought, approval of manufacturing facilities including adherence to cGMP during production and storage and control of marketing activities, including advertising and labelling. There can be no assurance that MDNA55 or the MDNA109 platform (MDNA19 and MDNA11) will be successfully commercialized in any given country. There can be no assurance that the Company's licensed products will prove to be safe and effective in clinical trials under the standards of the regulations in the various jurisdictions or receive applicable regulatory approvals from applicable regulatory bodies.

Negative results from clinical trials or studies of third parties and adverse safety events involving the targets of the Company's products may have an adverse impact on future commercialization efforts.

From time to time, studies or clinical trials on various aspects of biopharmaceutical products are conducted by academic researchers, competitors or others. The results of these studies or trials, when published, may have a significant effect on the market for the biopharmaceutical product that is the subject of the study. The publication of negative results of studies or clinical trials or adverse safety events related to the Company's product candidates, or the therapeutic areas in which the Company's product candidates compete, could adversely affect the share price and ability to finance future development of the Company's product candidates, and the business and financial results could be materially and adversely affected.

The Company faces the risk of product liability claims, which could exceed its insurance coverage and produce recalls, each of which could deplete cash resources.

The Company is exposed to the risk of product liability claims alleging that use of its product candidate MDNA55, and in the future, the MDNA109 platform (MDNA19 and MDNA11), caused an injury or harm. These claims can arise at any point in the development, testing, manufacture, marketing or sale of product candidates and may be made directly by patients involved in clinical trials of product candidates, by consumers or healthcare providers or by individuals, organizations or companies selling the products. Product liability claims can be expensive to defend, even if the product or product candidate did not actually cause the alleged injury or harm.

Insurance covering product liability claims becomes increasingly expensive as a product candidate moves through the development pipeline to commercialization. Currently the Company maintains clinical trial liability insurance coverage of \$5 million. However, there can be no assurance that such insurance coverage is or will continue to be adequate or available at a cost acceptable to the Company or at all. The Company may choose or find it necessary under its collaborative agreements to increase the insurance coverage in the future but may not be able to secure greater or broader product liability insurance coverage on acceptable terms or at reasonable costs when needed. Any liability for damages resulting from a product liability claim could exceed the amount of the coverage, require payment of a substantial monetary award from the Company's cash resources and have a material adverse effect on the business, financial condition and results of operations. Moreover, a product recall, if required, could generate substantial negative publicity about the products and business, inhibit or prevent commercialization of other products and product candidates or negatively impact existing or future collaborations.

Changes in government regulations, although beyond the Company's control, could have an adverse effect on the Company's business.

The Company depends upon the validity of its licenses and access to the data for the timely completion of clinical research. Any changes in the drug development regulatory environment or shifts in political attitudes of a government are beyond the Company's control and may adversely affect its business. The Company's business may also be affected in varying degrees by such factors as government regulations with respect to intellectual property, regulation or export controls. Such changes remain beyond the Company's control and the effect of any such changes cannot be predicted. These factors could have a material adverse effect on the Company's ability to further develop its licensed products.

The Company's significant shareholders may have material influence over its governance and operations.

Dr. Fahar Merchant and Ms. Rosemina Merchant (collectively, the "Merchants"), hold a significant interest in the Company's outstanding Common Shares on a fully diluted basis. For as long as the Merchants maintain a significant interest in the Company, they may be in a position to affect the Company's governance and operations. In addition, the Merchants may have significant influence over the passage of any resolution of the Company's shareholders (such as those that would be required to amend the constituting documents or take certain other corporate actions) and may, for all practical purposes, be able to ensure the passage of any such resolution by voting for it or prevent the passage of any such resolution by voting against it. The effect of this influence may be to limit the price that investors are willing to pay for the Common Shares. In addition, the potential that the Merchants may sell their Common Shares in the public market (commonly referred to as "market overhang"), as well as any actual sales of such Common Shares in the public market, could adversely affect the market price of the Common Shares.

If the Company is unable to enroll subjects in clinical trials, it will be unable to complete these trials on a timely basis.

It is anticipated that the COVID-19 pandemic crisis may continue to impact ongoing trial activities across the industry due to the pressure placed on the healthcare system as well as governmental and institutional restrictions. The Company is not currently enrolling patients in a clinical study and does not plan to enroll additional patients until mid-2021. As the roll-out of vaccines in Canada, the United States, the United Kingdom and Australia progresses it is anticipated that the COVID-19 pandemic will become more manageable and will not have a significant impact on our ability to recruit patients to our clinical trials. On an ongoing basis our clinical team will need to work closely with each clinical site and a CRO to ensure that patient safety and the integrity of data is maintained despite any pandemic related impacts. It is noted that some clinical sites have paused or slowed enrollment in clinical trials, while other sites, less impacted, are continuing activities as planned.

Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors including the size and nature of the patient population, the proximity of subjects to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, ability to obtain and maintain patient consents, risk that enrolled subjects will drop out before completion, competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications the Company is investigating. Furthermore, the Company relies on CROs and clinical trial sites to ensure the proper and timely conduct of its clinical trials, and while it has agreements governing their committed activities, the Company has limited influence over their actual performance.

If the Company experiences delays in the completion or termination of any clinical trial of its proposed products or any future product candidates, the commercial prospects of its product candidates will be harmed and its ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing clinical trials will increase costs, slow down product candidate development and approval process and can shorten any periods during which the Company may have the exclusive right to commercialize its product candidates or allow its competitors to bring products to market before it does. Delays can further jeopardize the Company's ability to commence product sales, which will impair its ability to generate revenues and may harm the business, results of operations, financial condition and cash flows and future prospects. In addition, many of the factors that can cause a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of its proposed products or its future product candidates.

The Company's discovery and development processes involve use of hazardous and radioactive materials which may result in potential environmental exposure.

The Company's discovery and development processes involve the controlled use of hazardous and radioactive materials. The Company is subject to federal, provincial, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. Although the Company believes that the current safety procedures for handling and disposing of such materials comply with the standards prescribed by such laws and regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, the Company could be held liable for any damages that result and any such liability could exceed the Company's resources. The Company is not specifically insured with respect to this liability. Although the Company believes that the Company is in compliance in all material respects with applicable environmental laws and regulations and currently does not expect to make material capital expenditures for environmental control facilities in the near term, there can be no assurance that the Company will not be required to incur significant costs to comply with environmental laws and regulations in the future, or that the operations, business or assets will not be materially adversely affected by current or future environmental laws or regulations.

If the Company is unable to successfully develop companion diagnostics for its therapeutic product candidates, or experience significant delays in doing so, the Company may not achieve marketing approval or realize the full commercial potential of its therapeutic product candidates.

The Company plans to develop companion diagnostics for its therapeutic product candidates. It is expected that, at least in some cases, regulatory authorities may require the development and regulatory approval of a companion diagnostic as a condition to approving a therapeutic product candidate. The Company has limited experience and capabilities in developing or commercializing diagnostics and plans to rely in large part on third parties to perform these functions. The Company does not currently have any agreement in place with any third party to develop or commercialize companion diagnostics for any of its therapeutic product candidates.

Companion diagnostics are subject to regulation by the FDA, Health Canada and comparable foreign regulatory authorities as medical devices and may require separate regulatory approval or clearance prior to commercialization. If the Company, or any third parties that the Company engages to assist, are unable to successfully develop companion diagnostics for the Company's therapeutic product candidates, or experience delays in doing so, the Company's business may be substantially harmed.

Significant disruption in availability of key components for ongoing clinical studies could considerably delay completion of potential clinical trials, product testing and regulatory approval of potential product candidates.

The Company relies on third parties to supply ingredients and excipients for the manufacture and formulation of its drugs, compatible infusion systems for drug delivery, catheters required to deliver the drug to the brain as well as imaging software to accurately place catheters in the tumor ("Components"). Each of the suppliers of these Components in turn need to comply with regulatory requirements. Any significant disruption in supplier relationships could harm the Company's business, including the potential impact of COVID-19 which continues to cause supply chain instability. Any significant delay in the supply of a Component, for a potential ongoing clinical study could considerably delay initiation or completion of potential clinical trials, drug manufacturing, drug testing and regulatory approval of potential product candidates. If the Company or its suppliers are unable to purchase these Components after regulatory approval has been obtained for the product candidates, or the suppliers decide not to manufacture these Components or provide support for any of the Components, clinical trials or the commercial launch of that product candidate would be delayed or there would be a shortage in supply, which would impair the ability to generate revenues from the sale of the product candidates. It may take several years to establish an alternative source of supply for such Components and to have any such new source approved by the FDA and other regulatory agencies.

Even if any product candidates we develop receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors, and others in the medical community necessary for commercial success.

The commercial success of any of our product candidates will depend upon its degree of market acceptance by physicians, patients, third party payors, and others in the medical community. Even if any product candidates we may develop receive marketing approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors, and others in the medical community. The degree of market acceptance of any product candidates we may develop, if approved for commercial sale, will depend on a number of factors, including:

the efficacy and safety of such product candidates as demonstrated in pivotal clinical trials and published in peer-reviewed journals;

- the potential and perceived advantages compared to alternative treatments;
- the ability to offer our products for sale at competitive prices;
- the ability to offer appropriate patient access programs, such as co-pay assistance;
- the extent to which physicians recommend our products to their patients;
- convenience and ease of dosing and administration compared to alternative treatments;
- the clinical indications for which the product candidate is approved by the FDA, EMA or other comparable foreign regulatory agencies;
- product labeling or product insert requirements of the FDA, EMA or other comparable foreign regulatory authorities, including any limitations, contraindications or warnings contained in a product's approved labeling;
- restrictions on how the product is distributed;
- the timing of market introduction of competitive products;
- publicity concerning our products or competing products and treatments;
- the effectiveness of marketing and distribution efforts by us and other licenses and distributors;
- sufficient governmental and third party coverage or reimbursement; and
- the prevalence and severity of any side effects.

If any product candidates we develop do not achieve an adequate level of acceptance by physicians, healthcare payors, patients and the medical community, we will not be able to generate significant revenue, and we may not become or remain profitable. The failure of any of our product candidates to find market acceptance would harm our business prospects.

## ***Risks Related to Intellectual Property and Litigation***

### ***The Company's success depends upon its ability to protect its intellectual property and its proprietary technology.***

The Company's success depends, in part, on its ability and its licensors' ability to obtain patents, maintain trade secrets protection and operate without infringing on the proprietary rights of third parties or having third parties circumvent its rights. Certain licensors and the institutions that they represent, in certain cases, have filed and are actively pursuing certain applications for Canadian and foreign patents. The patent position of pharmaceutical and biotechnology firms is uncertain and involves complex legal and financial questions for which, in some cases, certain important legal principles remain unresolved. There can be no assurance that the patent applications made in respect of the owned or licensed products will result in the issuance of patents, that the term of a patent will be extendable after it expires in due course, that the licensors or the institutions that they represent will develop additional proprietary products that are patentable, that any patent issued to the licensors or the Company will provide it with any competitive advantages, that patents of others will not impede its ability to do business or that third parties will not be able to circumvent or successfully challenge the patents obtained in respect of the licensed products. The cost of obtaining and maintaining patents is high and may affect the Company's financial condition. Furthermore, there can be no assurance that third parties will not independently develop competitor products which duplicate any of the owned/licensed products under patent pending protection or, if patents are issued to such owned/licensed products, will not design around such patents. There can be no assurance that the Company's processes or products or those of its licensors do not or will not infringe upon the patents of third parties or that the scope of its patents or those of its licensors will successfully prevent third parties from developing similar and competitive products.

Much of the Company's know-how and technology may not be patentable, though it may constitute trade secrets. There can be no assurance, however, that the Company will be able to meaningfully protect its trade secrets. To help protect its intellectual property rights and proprietary technology, the Company requires employees, consultants, advisors and collaborators to enter into confidentiality agreements. There can be no assurance that these agreements will provide meaningful protection for its intellectual property rights or other proprietary information in the event of any unauthorized use or disclosure.

### ***The Company's potential involvement in intellectual property litigation could negatively affect its business.***

The Company's future success and competitive position depends in part upon its ability to maintain and develop its intellectual property portfolio. There can be no assurance that any patents will be issued from any existing or future patent applications. Even if such patents are issued, there can be no assurance that the scope or validity of any patents issued or licensed to the Company will not be successfully challenged. The Company's ability to establish and maintain a competitive position may require in part successfully prosecuting claims against others who it believes are infringing its rights and successfully defending claims brought by others who believe that the Company is infringing their rights. In addition, enforcement of its patents in foreign jurisdictions will depend on the legal procedures in those jurisdictions. Even if the Company is successful in intellectual property litigation, the Company's involvement in such litigation could have a material adverse effect on its ability to out-license any products that are the subject of such litigation. In addition, its involvement in intellectual property litigation could result in significant expense, which could materially adversely affect the use or licensing of related intellectual property and divert the efforts of its valuable technical and management personnel from their principal responsibilities, whether or not such litigation is resolved in its favour.

The Company's reliance on third parties requires it to share its trade secrets, which increases the possibility that a competitor will discover them.

Because the Company relies on third parties to develop its products, it must share trade secrets with them. The Company seeks to protect its proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with its collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically restrict the ability of the Company's collaborators, advisors, employees and consultants to publish data potentially relating to the Company's trade secrets. The Company's academic collaborators typically have rights to publish data, provided that the Company is notified in advance and may delay publication for a specified time in order to secure its intellectual property rights arising from the collaboration. In other cases, publication rights are controlled exclusively by the Company, although in some cases it may share these rights with other parties. The Company also conducts joint research and development programs which may require it to share trade secrets under the terms of research and development collaboration or similar agreements. Despite the Company's efforts to protect its trade secrets, its competitors may discover its trade secrets, either through breach of these agreements, independent development or publication of information including its trade secrets in cases where the Company does not have proprietary or otherwise protected rights at the time of publication. A competitor's discovery of the Company's trade secrets may impair its competitive position and could have a material adverse effect on its business and financial condition.

Product liability claims are an inherent risk of the Company's business, and if the Company's clinical trial and product liability insurance prove inadequate, product liability claims may harm its business.

Human therapeutic products involve an inherent risk of product liability claims and associated adverse publicity. There can be no assurance that the Company will be able to obtain or maintain product liability insurance on acceptable terms or with adequate coverage against potential liabilities. Such insurance is expensive, difficult to obtain and may not be available in the future on acceptable terms, or at all. An inability to obtain sufficient insurance coverage on reasonable terms or to otherwise protect against potential product liability claims could have a material adverse effect on the Company's business by preventing or inhibiting the commercialization of its products, licensed and owned, if a product is withdrawn or a product liability claim is brought against the Company.

Generally, a litigation risk exists for any company that may compromise its ability to conduct its business.

All industries are subject to legal claims, with and without merit. Defense and settlement costs can be substantial, even with respect to claims that have no merit. Due to the inherent uncertainty of the litigation process, the resolution of any particular legal proceeding could have a material adverse effect on the Company's business, prospects, financial condition and results of operations.

## **Other Risks**

Our Common Share price has been volatile in recent years, and may continue to be volatile.

The market prices for securities of biotechnology companies, including ours, have historically been volatile. In the year ended March 31, 2021, our Common Shares traded on the TSX at a high of \$7.25 and a low of \$2.15 per share and on the NASDAQ at a high of US\$6.84 and a low of US\$3.34 per share. A number of factors could influence the volatility in the trading price of our Common Shares, including changes in the economy or in the financial markets, industry related developments, the results of product development and commercialization, changes in government regulations, and developments concerning proprietary rights, litigation and cash flow. Our quarterly losses may vary because of the timing of costs for clinical trials, manufacturing and preclinical studies. Also, the reporting of clinical data or the lack thereof, adverse safety events involving our products and public rumors about such events could cause our share price to decline or experience periods of volatility. Each of these factors could lead to increased volatility in the market price of our Common Shares. In addition, changes in the market prices of the securities of our competitors may also lead to fluctuations in the trading price of our Common Shares.

Future sales or issuances of equity securities or the conversion of securities into Common Shares could decrease the value of the Common Shares, dilute investors' voting power, and reduce earnings per share.

The Company may sell additional equity securities in future offerings, including through the sale of securities convertible into equity securities, to finance operations, acquisitions or projects, and issue additional Common Shares if outstanding securities are converted into Common Shares, which may result in dilution.

The Company's board of directors will have the authority to authorize certain offers and sales of additional securities without the vote of, or prior notice to, shareholders. Based on the need for additional capital to fund expected expenditures and growth, it is likely that the Company will issue additional securities to provide such capital.

Sales of substantial amounts of securities, or the availability of such securities for sale, as well as the issuance of substantial amounts of Common Shares upon conversion or exchange of outstanding convertible or exchangeable securities, could adversely affect the prevailing market prices for securities and dilute investors' earnings per share. A decline in the future market prices of the Company's securities could impair its ability to raise additional capital through the sale of securities should it desire to do so.

In the past, following periods of volatility in the market price of a company's securities, shareholders have instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm the Company's profitability and reputation.

The market price for the Common Shares may also be affected by the Company's ability to meet or exceed expectations of analysts or investors. Any failure to meet these expectations, even if minor, may have a material adverse effect on the market price of the Common Shares.

The Company is subject to foreign exchange risk relating to the relative value of the United States dollar.

A material portion of the Company's expenses are denominated in United States dollars. As a result, the Company is subject to foreign exchange risks relating to the relative value of the Canadian dollar as compared to the United States dollar. A decline in the Canadian dollar would result in an increase in the actual amount of its expenses and adversely impact financial performance.

The Company's disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

The Company's disclosure controls and procedures are designed to reasonably assure that information required to be disclosed by the Company in reports it files or submits under applicable securities laws is accumulated and communicated to management, recorded, processed, summarized and reported within the time periods specified under applicable securities laws. The Company believes that any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in the Company's control system, misstatements or insufficient disclosures due to error or fraud may occur and not be detected.

Any failure to maintain an effective system of internal controls may result in material misstatements of the Company's consolidated financial statements or cause the Company to fail to meet the reporting obligations or fail to prevent fraud; and in that case, shareholders could lose confidence in the Company's financial reporting, which would harm the business and could negatively impact the price of the Common Shares.

Effective internal controls are necessary to provide reliable financial reports and prevent fraud. If there is a failure to maintain an effective system of internal controls, the Company might not be able to report financial results accurately or prevent fraud; and in that case, shareholders could lose confidence in the Company's financial reporting, which would harm the business and could negatively impact the price of the Common Shares. While the Company believes that it will have sufficient personnel and review procedures to maintain an effective system of internal controls, no assurance can be provided that potential material weaknesses in internal control could arise. Even if it is concluded that the internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with IFRS, as issued by the International Accounting Standards Board (IASB), because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm results of operations or cause a failure to meet future reporting obligations.

Our internal computer systems, or those used by our contractors or consultants, may fail or suffer security breaches.

Despite the implementation of security measures, our internal computer systems, and those of our third parties on which we rely, are vulnerable to damage from cyber-attacks, computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures. The risk of a security breach or disruption, particularly through cyber-attacks, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions have increased. If such an event were to occur and cause interruptions in our operations or those of our third parties, it could result in a material disruption of our product development programs and our business operations. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. In some cases, data cannot be reproduced. Likewise, we rely on third parties for the manufacture of our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security breach results in a loss of or damage to our data, or inappropriate disclosure of confidential or proprietary information, we could incur significant liability and damage to our reputation and the further development and commercialization of our future product candidates could be delayed. Our insurance coverage may not be adequate to cover all the costs related to such breaches or attacks.

In addition, the unauthorized dissemination of sensitive personal information could expose us or other third parties to regulatory fines or penalties, litigation and potential liability, or otherwise harm our business.

Failure to comply with the U.S. Foreign Corrupt Practices Act (“FCPA”), the Canadian Corruption of Foreign Public Officials Act (“CFPOA”), and other global anti-corruption and anti-bribery laws could subject the Company to penalties and other adverse consequences.

The FCPA and the CFPOA, as well as any other applicable domestic or foreign anti-corruption or anti-bribery laws to which the Company is or may become subject generally prohibit corporations and individuals from engaging in certain activities to obtain or retain business or to influence a person working in an official capacity and requires companies to maintain accurate books and records and internal controls, including at foreign-controlled subsidiaries.

Compliance with these anti-corruption laws and anti-bribery laws may be expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, these laws present particular challenges in the pharmaceutical industry, because, in many countries, hospitals are operated by the government, and physicians and other hospital employees are considered to be foreign officials. Certain payments by other companies to hospitals in connection with clinical trials and other work have been deemed to be improper payments to governmental officials and have led to FCPA enforcement actions.

The Company’s internal control policies and procedures may not protect it from reckless or negligent acts committed by the Company’s employees, future distributors, licensees or agents. The Company can make no assurance that they will not engage in prohibited conduct, and the Company may be held liable for their acts under applicable anti-corruption and anti-bribery laws. Noncompliance with these laws could subject the Company to investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension or debarment from contracting with certain persons, the loss of export privileges, whistleblower complaints, reputational harm, adverse media coverage, and other collateral consequences. Any investigations, actions or sanctions or other previously mentioned harm could have a material negative effect on the Company’s business, operating results and financial condition.

*If we fail to comply with healthcare laws, we could face substantial penalties and our business, operations and financial conditions could be adversely affected.*

Healthcare providers, physicians and payors play a primary role in the recommendation and prescription of any product candidates for which we may obtain marketing approval. Our future arrangements with payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any product candidates for which we may obtain marketing approval. Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third party payors, federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights are and will be applicable to our business. Restrictions under applicable federal, state and foreign healthcare laws and regulations may affect our ability to operate and expose us to areas of risk, including:

- federal civil and criminal false claims laws and civil monetary penalty laws, including the False Claims Act, which impose criminal and civil penalties, including through civil "qui tam" or "whistleblower" actions, against individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid, or other third party payors that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government. A person or entity does not need to have actual knowledge of these statutes or specific intent to violate them in order to have committed a violation;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization;
- the federal Physician Payments Sunshine Act, created under the ACA, and its implementing regulations, which require manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program to report annually to the U.S. Department of Health and Human Services under the Open Payments Program, information related to payments or other transfers of value made to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members, as well as other state and foreign laws regulating marketing activities;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and
- analogous state and foreign laws and regulations, such as state and foreign anti-kickback, false claims, consumer protection and unfair competition laws which may apply to pharmaceutical business practices, including, but not limited to, research, distribution, sales and marketing arrangements as well as submitting claims involving healthcare items or services reimbursed by any third party payer, including commercial insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government that otherwise restricts payments that may be made to healthcare providers and other potential referral sources; state laws that require drug manufacturers to file reports with states regarding pricing and marketing information, such as the tracking and reporting of gifts, compensations and other remuneration and items of value provided to healthcare professionals and entities; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could, despite our efforts to comply, be subject to challenge under one or more of such laws. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

*Any future profits will likely be used for the continued growth of the business and products and will not be used to pay dividends on the issued and outstanding shares.*

The Company will not pay dividends on the issued and outstanding Common Shares in the foreseeable future. If the Company generates any future earnings, such cash resources will be retained to finance further growth and current operations. The board of directors will determine if and when dividends should be declared and paid in the future based on the Company's financial position and other factors relevant at the particular time. Until the Company pays dividends, which it may never do, a shareholder will not be able to receive a return on his or her investment in the Common Shares unless such Common Shares are sold. In such event, a shareholder may only be able to sell his, her or its Common Shares at a price less than the price such shareholder originally paid for them, which could result in a significant loss of such shareholder's investment.

*The Company may pursue other business opportunities in order to develop its business and/or products.*

From time to time, the Company may pursue opportunities for further research and development of other products. The Company's success in these activities will depend on its ability to identify suitable technical experts, market needs, and effectively execute any such research and development opportunities. Any research and development would be accompanied by risks as a result of the use of business efforts and funds. In the event that the Company chooses to raise debt capital to finance any such research or development opportunities, its leverage will be increased. There can be no assurance that the Company would be successful in overcoming these risks or any other problems encountered in connection with any research or development opportunities.

The Company may acquire businesses or products, or form strategic alliances, in the future, and the Company may not realize the benefits of such acquisitions.

The Company may acquire additional businesses or products, form strategic alliances or create joint ventures with third parties that the Company believes will complement or augment its existing business. If the Company acquires businesses with promising products or technologies, the Company may not be able to realize the benefit of acquiring such businesses if the Company is unable to successfully integrate them with its existing operations and company culture. The Company may encounter numerous difficulties in developing, manufacturing and marketing any new products resulting from a strategic alliance or acquisition that delay or prevent it from realizing their expected benefits or enhancing the Company's business. The Company cannot assure investors that, following any such acquisition, it will achieve the expected synergies to justify the transaction.

The Company's success depends on its ability to effectively manage its growth.

The Company may be subject to growth-related risks including pressure on its internal systems and controls. The Company's ability to manage its growth effectively will require the Company to continue to implement and improve its operational and financial systems and to expand, train and manage its employee base. Inability to deal with this growth could have a material adverse impact on its business, operations and prospects. The Company may experience growth in the number of its employees and the scope of its operating and financial systems, resulting in increased responsibilities for its personnel, the hiring of additional personnel and, in general, higher levels of operating expenses. In order to manage its current operations and any future growth effectively, the Company will also need to continue to implement and improve its operational, financial and management information systems and to hire, train, motivate, manage and retain its employees. There can be no assurance that the Company will be able to manage such growth effectively, that its management, personnel or systems will be adequate to support its operations or that the Company will be able to achieve the increased levels of revenue commensurate with the increased levels of operating expenses associated with this growth.

If the Company is treated as a passive foreign investment company, United States shareholders may be subject to adverse U.S. federal income tax consequences

Under the U.S. Internal Revenue Code of 1986, as amended (the "Code"), the Company will be classified as a passive foreign investment company ("PFIC") in respect of any taxable year in which either (i) 75% or more of its gross income consists of certain types of "passive income" or (ii) 50% or more of the average quarterly value of its assets is attributable to "passive assets" (assets that produce or are held for the production of passive income). For purposes of these tests, passive income includes dividends, interest, gains from the sale or exchange of investment property and certain rents and royalties. In addition, for purposes of the above calculations, if the Company directly or indirectly owns at least 25% by value of the shares of another corporation, the Company will be treated as if it held its proportionate share of the assets and received directly its proportionate share of the income of such other corporation. PFIC status is a factual determination that needs to be made annually after the close of each taxable year, on the basis of the composition of the Company's income, the relative value of its active and passive assets, and its market capitalization. For this purpose, the Company's PFIC status depends in part on the application of complex rules, which may be subject to differing interpretations, relating to the classification of the Company's income and assets. Based on our interpretation of the law, the Company's recent financial statements, and considering expectations about the Company's income, assets and activities, the Company believes that it was a PFIC for the taxable year ended March 31, 2021 and expects that it will be a PFIC for the current taxable year.

If the Company is a PFIC for any taxable year during which a United States shareholder holds the Common Shares, the Company will continue to be treated as a PFIC with respect to such United States shareholder in all succeeding years during which the United States shareholder owns the Common Shares, regardless of whether the Company continues to meet the PFIC test described above, unless the United States shareholder makes a specified election once the Company ceases to be a PFIC. If the Company is classified as a PFIC for any taxable year during which a United States shareholder holds the Common Shares, the United States shareholder may be subject to adverse tax consequences regardless of whether the Company continues to qualify as a PFIC, including ineligibility for any preferred tax rates on capital gains or on actual or deemed dividends, interest charges on certain taxes treated as deferred, and additional reporting requirements. In certain circumstances, a United States shareholder may alleviate some of the adverse tax consequences attributable to PFIC status by making either a “qualified electing fund,” (“QEF”) election or a mark-to-market election (if the Common Shares constitute “marketable” securities under the Code). If the Company determines that it is a PFIC for this year or any future taxable year, the Company currently expects that it would provide the information necessary for United States shareholders to make a QEF election.

Each United States shareholder should consult its own tax advisors regarding the PFIC rules and the United States federal income tax consequences of the acquisition, ownership and disposition of the Common Shares.

*The Company’s operations could be adversely affected by events outside of its control, such as natural disasters, wars or health epidemics*

The Company may be impacted by business interruptions resulting from pandemics and public health emergencies, including those related to COVID-19 coronavirus, geopolitical actions, including war and terrorism or natural disasters including earthquakes, typhoons, floods and fires. An outbreak of infectious disease, a pandemic or a similar public health threat, such as the recent outbreak of the novel coronavirus known as COVID-19, or a fear of any of the foregoing, could adversely impact the Company by causing operating, manufacturing supply chain, clinical trial and project development delays and disruptions, labour shortages, travel and shipping disruption and shutdowns (including as a result of government regulation and prevention measures). The Company has been impacted by supply chain delays with respect to both the GMP manufacturing and IND enabling studies and it is unknown whether and how the Company may further be affected if such an epidemic persists for an extended period of time. The Company may incur expenses or delays relating to such events outside of its control, which could have a material adverse impact on its business, operating results and financial condition.

*It may be difficult for United States investors to obtain and enforce judgments against the Company because of the Company's Canadian incorporation and presence.*

The Company is a corporation existing under the federal laws of Canada. Most of the Company's directors and officers, and several of the experts, are residents of Canada, and all or a substantial portion of their assets, and a substantial portion of the Company's assets, are located outside the United States. Consequently, it may be difficult for holders of the Company's securities who reside in the United States to effect service of process within the United States upon those directors, officers and experts who are not residents of the United States. It may also be difficult for holders of the Company's securities who reside in the United States to realize in the United States upon judgments of courts of the United States predicated upon the Company's civil liability and the civil liability of the Company's directors, officers and experts under the United States federal securities laws. Investors should not assume that Canadian courts (i) would enforce judgments of United States courts obtained in actions against the Company or such directors, officers or experts predicated upon the civil liability provisions of the United States federal securities laws or the securities or "blue sky" laws of any state or jurisdiction of the United States or (ii) would enforce, in original actions, liabilities against the Company or such directors, officers or experts predicated upon the United States federal securities laws or any securities or "blue sky" laws of any state or jurisdiction of the United States. In addition, the protections afforded by Canadian securities laws may not be available to investors in the United States.

*As a Foreign Private Issuer, the Company is subject to different U.S. securities laws and rules than a domestic U.S. issuer, which may limit the information publicly available to its U.S. shareholders.*

The Company is a foreign private issuer under applicable U.S. federal securities laws and, therefore, is not required to comply with all of the periodic disclosure and current reporting requirements of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"), and related rules and regulations. As a result, the Company does not file the same reports that a U.S. domestic issuer would file with the United States Securities and Exchange Commission (the "SEC"), although it is required to file with or furnish to the SEC the continuous disclosure documents that the Company is required to file in Canada under Canadian securities laws. In addition, the Company's officers, directors and principal shareholders are exempt from the reporting and "short swing" profit recovery provisions of Section 16 of the Exchange Act.

Therefore, the Company's shareholders may not know on as timely a basis when its officers, directors and principal shareholders purchase or sell securities of the Company as the reporting periods under the corresponding Canadian insider reporting requirements are longer. In addition, as a foreign private issuer, the Company is exempt from the proxy rules under the Exchange Act.

*The Company may lose foreign private issuer status in the future, which could result in significant additional costs and expenses.*

The Company may in the future lose foreign private issuer status if a majority of the Common Shares are held in the United States and the Company fails to meet the additional requirements necessary to avoid loss of foreign private issuer status, such as if: (i) a majority of the Company's directors or executive officers are U.S. citizens or residents; (ii) a majority of the Company's assets are located in the United States; or (iii) the Company's business is administered principally in the United States. The regulatory and compliance costs to the Company under U.S. securities laws as a U.S. domestic issuer may be significantly more than the costs incurred as a foreign private issuer.

## DIVIDENDS

There are no restrictions in the Company's articles preventing the Company from paying dividends. The Company has not declared or paid any dividends since incorporation. The directors of the Company anticipate that the Company will retain all future earnings and other cash resources for the future operation and development of its business, and accordingly, do not intend to declare or pay any cash dividends in the foreseeable future. Payment of any future dividends will be at the discretion of the board of the directors after taking into account many factors including the Company's operating results, financial condition and current and anticipated cash assets.

## SHARE CAPITAL

### *Common Shares*

The authorized share capital of the Company consists of an unlimited number of Common Shares of which 53,551,555 Common Shares are issued and outstanding as fully paid and non-assessable as at the date hereof.

Each Common Share carries one vote at all meetings of shareholders, is entitled to receive dividends as and when declared by the directors and is entitled to a pro-rata share of the remaining property and assets of the Company distributable to the holders of the Common Shares upon any liquidation, dissolution or winding-up of the Company.

### *Convertible Securities*

In addition, as at the date hereof, there are issued and outstanding the following convertible securities of the Company, details of which are outlined in the table below:

<b>Security</b>	<b>Number</b>	<b>Exercise or Conversion Price</b>	<b>Expiry Date (dd/mm/yyyy)</b>
Stock options	4,525,084	\$1.00 to \$5.19	24/02/2024 to 10/05/2031
Warrants	1,353,000	\$1.20	21/12/2023
Warrants	1,802,242	\$1.75	17/10/2022
Broker warrants	71,744	\$1.30	17/10/2021
Broker warrants	770,161	\$3.10	17/03/2022

## MARKET FOR SECURITIES

### *Trading Price and Volume*

The Common Shares are listed on the TSX and the Nasdaq Capital Markets under the symbol “MDNA”. The following table shows the price ranges and volumes traded on the TSX and NASDAQ for the periods noted:

Month	TSX		
	High (\$)	Low (\$)	Volume (#)
April 2020	\$3.88	\$3.14	1,341,227
May 2020	\$7.25	\$3.06	4,516,999
June 2020	\$7.25	\$4.75	1,813,710
July 2020	\$6.49	\$4.89	1,140,975
August 2020	\$6.60	\$4.95	999,277
September 2020	\$5.80	\$4.63	702,866
October 2020	\$6.07	\$4.91	846,684
November 2020	\$5.80	\$4.75	639,854
December 2020	\$7.02	\$4.75	2,414,231
January 2021	\$6.15	\$4.90	2,693,477
February 2021	\$5.87	\$4.83	3,227,476
March 2021	\$5.25	\$4.11	1,910,558

Month	Nasdaq		
	High (\$)	Low (\$)	Volume (#)
August 24-31, 2020	\$5.03	\$4.02	325,100
September 2020	\$4.56	\$3.47	947,000
October 2020	\$4.80	\$3.69	2,201,900
November 2020	\$4.43	\$3.62	1,137,500
December 2020	\$6.84	\$3.70	5,230,200
January 2021	\$4.84	\$3.84	5,434,400
February 2021	\$4.62	\$3.82	4,667,300
March 2021	\$4.11	\$3.22	3,788,500

### *Prior Sales*

The following securities of the Company (other than Common Shares) were issued during the fiscal year ended March 31, 2021:

Date of Issue	Security	Number	Exercise Price
April 15, 2020	Broker warrants	118,548	\$3.10
November 3, 2020	Stock options	280,084	\$5.11
February 11, 2021	Stock options	170,000	\$5.19

## BOARD OF DIRECTORS AND MANAGEMENT

The following are the names and municipalities of residence of each of the directors and officers of the Company, the positions and offices held with the Company, their respective principal occupations within the five preceding years and the number and percentage of Common Shares beneficially held by each of them as of the date hereof. Each director will hold office until the next annual meeting of the Company, unless his or her office is earlier vacated in accordance with the CBCA or the by-laws of the Company.

Name, State/ Province and Country of Residence	Positions with the Company and, if Director, Date First Elected	Principal Occupation(s) for Past 5 Years	Number and Percentage of Common Shares Owned <sup>(1)</sup>
<b>Fahar Merchant</b> Toronto, Ontario, Canada	President, Chief Executive Officer and Director October 30, 2011 <sup>(6)</sup>	President and Chief Executive Officer of Medicenna	5,260,000 <sup>(5)</sup> (9.82%)
<b>Albert Beraldo</b> Toronto, Ontario, Canada	Director <sup>(2)(4)</sup> November 22, 2016 <sup>(6)</sup>	President of Idoman Ltd. (July 2008 to present)	225,000 (0.42%)
<b>Karen Dawes</b> Palm Beach Gardens, Florida, United States	Director <sup>(2)(4)</sup> September 24, 2019	President, Knowledgeable Decisions, LLC (2003 to present)	25,000 (0.05%)
<b>Chandrakant Panchal</b> Pierrefonds, Quebec, Canada	Director <sup>(2)(3)</sup> November 22, 2016 <sup>(6)</sup>	Chairman, CEO and CSO of Axcelon Biopolymers Corp. (2001 to present)	1,500 (0.00%)
<b>Jack Geltosky</b> Portland, OR, United States	Director <sup>(3)</sup> September 30, 2020	Managing Director of JEG and Associates, LLC (2011 to present)	Nil
<b>Rosemina Merchant</b> Toronto, Ontario, Canada	Chief Development Officer and Director April 25, 2016 <sup>(6)</sup>	Chief Development Officer of Medicenna (October 30, 2011 to present)	5,250,000 <sup>(5)</sup> (9.80%)
<b>Kevin Moulder</b> Cambridge, UK	Chief Scientific Officer	Chief Operating Officer of PolyProx Therapeutics (November 2018 – February 2021)  Chief Development Officer of Tusk Therapeutics (November 2015 – September 2018)	Nil

Name, State/ Province and Country of Residence	Positions with the Company and, if Director, Date First Elected	Principal Occupation(s) for Past 5 Years	Number and Percentage of Common Shares Owned <sup>(1)</sup>
<b>Mann Muhsin</b> San Diego, California, USA	Chief Medical Officer	Medical Lead at Nektar Therapeutics (April 2020 – May 2021)  SVP Oncology Clinical Development at HUYA Bioscience (April 2019 – April 2020)  Senior Medical Director, Oncology Clinical Development at Halozyme Therapeutics (March 2016 – March 2019)	Nil
<b>Elizabeth Williams</b> Georgetown, Ontario, Canada	Chief Financial Officer, Corporate Secretary	Chief Financial Officer of Medicenna (December 2016 to present)  Vice President Finance & Admin at Aptose Biosciences (June 2004 – December 2016)	6,300 (0.01%)

Notes:

- (1) Based on 53,551,555 Common Shares outstanding as of the date hereof.
- (2) Member of the Company's Audit Committee.
- (3) Member of the Company's Corporate Governance and Nominating Committee.
- (4) Member of the Company's Compensation Committee.
- (5) In addition, an aggregate of 5,500,000 Common Shares (representing 10.27% of the outstanding Common Shares) are held by Aries Biologics Inc. Fahar Merchant and Rosemina Merchant each own 50% of the voting shares, and are a director and officer, of Aries Biologics Inc.
- (6) Represents the date the individual was first appointed as director of MTI. Each such director was appointed as director of the Company effective March 1, 2017 in connection with the completion of the Transaction.

**Biographies of Executive Officers and Directors**

**Fahar Merchant** – Chairman, President and CEO – Dr. Merchant is a biotech veteran with 30 years of experience as a serial entrepreneur and co-founder of Medicenna. Previously he was President and CEO of Protox Therapeutics Inc. where he transitioned a pre-clinical start-up to a Phase 3 ready uro-oncology company in six years (2005-2011). In 1992, he co-founded IntelliGene Expressions, Inc., a biologics cGMP compliant CDMO, and built it to one of the fastest-growing companies in Canada ensuring profitability during his tenure as CEO. In 2000, by strategic in-licensing, he co-founded Avicenna Medica, Inc., a clinical stage oncology company, and sold it a year later to KS Biomedix (LSE) for \$90 million. Fahar was CTO and Director of KS Biomedix until its acquisition by Xenova (NASDAQ and LSE) in 2003. He has raised over \$150 million from public and private sources to fund the development of targeted therapies for oncology and closed corporate transactions valued at over \$250 million. Fahar holds a BSc in Biochemistry and Pharmacology from Aston University, MSc in Biotechnology from Birmingham University, and a Ph.D. in Biochemical Engineering from Western University.

**Albert Beraldo** – Director – Mr. Beraldo, CPA, CA, has over 30 years' experience in varying roles within the pharmaceutical/biotechnology industry. Mr. Beraldo has been the President of Idoman Limited since July 2008, a company dedicated to improving the lives of women through the manufacture and distribution of innovative, minimally invasive medical solutions. Mr. Beraldo was the founder and President and Chief Executive Officer of Alveda Pharmaceuticals Inc., a leading supplier of pharmaceuticals to the Canadian health care market, from 2006 until November 2015. Alveda was acquired by Teligent, Inc. (formerly IGI Laboratories, Inc., Nasdaq), a New Jersey-based specialty generic pharmaceutical company. Mr. Beraldo formerly served as President and CEO of Bioniche Pharma Group Limited until 2006. Mr. Beraldo has served as an Independent Director of Helix Biopharma Corp. (January 2016 to July 2017) and was an Independent Director of Telesta Therapeutics Inc. (July 2011 to February 2014). Mr. Beraldo worked in public accounting with Ernst and Whinney until he joined Vetrepharm Canada Inc. as Financial Controller in 1983. Mr. Beraldo obtained a Bachelor of Commerce degree from the University of Windsor and a Chartered Accountant designation from the Canadian Institute of Chartered Accountants.

**Karen A. Dawes** – Director – With 20+ years of commercial and executive management Ms. Dawes has been a key player in the successful development, launch and marketing of products in the Cardiovascular, CNS, Oncology, Metabolic, Infectious Disease and Women’s and Men’s Health areas, including five blockbuster therapeutics. Karen’s industry experience began with 10 years of commercial and executive management at Pfizer, where she gained increasing responsibility in product management, development, and strategy leading to her position as Vice-President, Marketing, Pratt Division. Karen then moved to biotech pioneer Genetics Institute (GI), where, as Chief Commercial Officer, she built the company’s initial commercial operations including strategic and operational marketing, sales, medical affairs, public relations, and market research. When GI was acquired by Wyeth, Karen was appointed by the new parent company as Senior Vice-President, Global Strategic Marketing. Subsequently, Karen moved to Bayer Corporation as Division Head for the company’s U.S. Pharmaceuticals Division. Ms. Dawes is currently President of Knowledgeable Decisions, a biopharmaceutical consulting firm focusing on corporate and commercial strategy. Ms. Dawes also serves as the chairperson of the board of directors of RepliGen (NASDAQ: RGEN) and is a member of the board of directors of Medicines360. Karen has a combined B.A and M.A from Simmons College and an MBA from Harvard Business School.

**Chandrakant Panchal** – Lead Independent Director – Dr. Panchal is the Founder of Axcelon Biopolymers Corp., a biotechnology company where he is Chairman, CEO and CSO. From 1989 to 1999 he was Co-Founder, President, and CEO of Procyon Biopharma Inc., which he took public on the TSXV in 1998 and later on the TSX in 2000. Thereafter, Dr. Panchal was CSO at Procyon until its merger with Cellpep, Inc (2006). He was then Senior Executive VP of Business Development at the merged entity, Ambrilia Biopharma Inc. During his term at Procyon and Ambrilia, he led several licensing and M&A transactions with pharmaceutical and biotechnology companies relating to cancer and HIV drugs developed by the company. Dr. Panchal currently sits on the board of Avicanna Inc. (as Chairman) (TSX:AVCN). Avicanna Inc. announced on March 29, 2021 that it was unable to file its audited annual financial statements for the year ended December 31, 2020, and accompanying management’s discussion and analysis, annual information form and related certifications on or before March 31, 2021, as required under applicable securities laws and a management cease trade order was granted on April 12, 2021 by its principal regulator, the Ontario Securities Commission. Dr. Panchal obtained a PhD in biochemical engineering from Western University.

**Jack Geltosky** – Director - Dr. Geltosky is currently Managing Director of JEG and Associates, LLC, a business development consulting firm focused on biotech and pharmaceuticals, a position he has held since September 2011. Dr. Jack Geltosky is an experienced pharmaceutical licensing executive with a strong R&D background. He has extensive commercial development and deals portfolio from his role as Vice President External Science, Technology & Licensing at Bristol Myers Squibb (BMS) as well as Vice President, Scientific Licensing, Worldwide Business Development at SmithKline Beecham (now GlaxoSmithKline). Dr. Geltosky also held roles of increasing responsibility within Johnson & Johnson over a 10-year period. He began his career as a research scientist at E.I. DuPont. Dr. Geltosky is currently the Chairman of the Product Development Review Council for Cancer Prevention and Research Institute of Texas (CPRIT) and previously served as Senior Vice President of Business Development, Life Science at Arizona Technology Enterprises. Jack is currently Managing Director of JEG and Associates, LLC, a business development consulting firm focused on biotech and pharmaceuticals. He holds a Ph.D. in biochemistry from the California Institute of Technology.

**Rosemina Merchant** – Director and Chief Development Officer – Ms. Merchant has over 30 years of experience in the development of biopharmaceuticals. Prior to co-founding Medicenna, Ms. Merchant was Senior VP of Development and Regulatory Affairs at Protox Therapeutics, Inc (TSX), and responsible for the development of PRX302 (Topsalysin) a PSA activated protoxin for localized prostate cancer and BPH. She transitioned PRX302, a discovery project to Phase 3 readiness in 6 years. During that time, she executed multiple clinical trials, managed Canadian and the United States regulatory filings, and led all CMC related outsourcing activities in the United States and Europe. In 1992, Nina co-founded, IntelliGene Expressions, Inc., a biologics cGMP compliant CDMO, where she was VP of Manufacturing and Chief Operating Officer. Nina also held a variety of senior-level positions at KS Biomedix, GE LifeSciences, Alberta Innovates, Bioniche, and Sanofi Pasteur. She holds a B.Sc in Pharmacology and Chemistry from Aston University, MSc in Applied Organic Chemistry from Birmingham University, and M.E.Sc. in Biochemical Engineering from Western University.

**Kevin Moulder** – Chief Scientific Officer – Dr. Moulder brings over 30 years of experience in drug discovery and development in the fields of protein design, antibody technology, immuno-oncology, inflammation and autoimmune disease. Following his post-doctoral studies at the NIH, he joined GSK to lead their CD23 program. Thereafter, he served in research and development leadership positions in 9 international biotechnology companies including Biogen where he ran a predictive medicine department. As VP of Research at Domantis, Kevin led the creation of a pipeline of novel single domain antibodies resulting in Domantis' acquisition by GSK. Subsequently, Dr. Moulder served as the CSO of F-Star Therapeutics, where he established the company's bispecific antibody technology and led the translational efforts to identify its first clinical lead. Most recently Kevin held C-level positions at PolyProx Therapeutics Ltd. and Tusk Therapeutics. At Tusk, Kevin directed the development of their anti-CD25 antibody which showed anticancer activity by depleting Tregs while preserving IL-2 activity on effector T cells, which subsequently prompted Tusk's acquisition by Roche. Kevin holds a first class honors degree in biological sciences and a Ph.D in Immunology from the University of London.

**Mann Muhsin** – Chief Medical Officer – Dr. Muhsin is an accomplished industry leader with more than 20 years of experience in medical practice and drug development and has an outstanding track record of innovation in oncology and immuno-oncology trial design. He has considerable talent in building clinical development and science departments and advancing the strategic vision needed to prioritize, build and expand successful oncology clinical programs. Dr. Muhsin started his clinical research career at PICR phase I unit, where he conducted more than 17 clinical trials for international sponsors including AstraZeneca, Hoffmann La Roche, Merck, Novartis, Eli Lilly, Johnson & Johnson, and Bayer in the field of internal medicine prior to leading early clinical development programs at Janssen. Dr. Muhsin has also designed and executed early and late stage oncology trials for companies such as Oncosec, Halozyme Therapeutics, HUYA Bioscience and most recently at Nektar Therapeutics where he led the Phase 3 PIVOT-12 trial (pegylated IL-2, bempedaldesleukin, a pegylated IL-2 in combination with nivolumab) and global product strategy for NKTR-262 (a TLR 7/8 agonist). Furthermore, Mann has extensive experience with interleukins such as IL-2, IL-12, and pegylated IL-2, across multiple tumor types, is a global thought leader in immuno-oncology and the tumor microenvironment, and has authored dozens of publications, book chapters, and presentations globally. Dr. Muhsin received his doctorate of medicine MBChB (MD) and internal medicine training from Baghdad University School of Medicine prior to practicing medicine, civilian and at the US Army Medical Corps Combat Support Hospitals (CSH).

**Elizabeth Williams** – Chief Financial Officer – Ms. Williams, CPA, CA has more than 16 years of experience in biotech, working with publicly listed entities in both Canada and the United States. Ms. Williams has extensive financing experience playing an integral role in raising more than \$150 million in financing by way of public offerings, private placements, rights offerings, at-the-market facilities, warrant exercises, corporate reorganizations and debt (issuance and redemption). Prior to joining Medicenna, Ms. Williams was the Vice President of Finance and Administration at Aptose Biosciences Inc. (TSX and Nasdaq), a biotechnology company (“Aptose”). While at Aptose, Ms. Williams held several positions including acting as the Chief Financial Officer during a lengthy transition period and was responsible for a broad range of activities including financings, financial reporting and regulatory compliance. Prior to joining Aptose, Ms. Williams was an Audit Manager at Ernst & Young LLP with a focus on publicly listed multinational companies. Ms. Williams is a Director and Chair of the Audit Committee of Triumvira Immulogics Inc.. Ms. Williams is a Chartered Professional Accountant and Chartered Accountant and received a Bachelor of Business Administration from Wilfrid Laurier University.

#### ***Shareholdings of Directors and Executive Officers***

As at the date hereof, the directors and executive officers of the Company as a group beneficially own, directly or indirectly, or exercise control or direction over 16,267,800 or approximately 30.4% of the number of issued and outstanding Common Shares.

### **CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS**

#### ***Cease Trade Orders***

Other than as described below, to the knowledge of the Company, no director or executive officer of the Company is, or within the ten years prior to the date hereof has been, a director, chief executive officer, or chief financial officer, of any company (including the Company) that was subject to (a) a cease trade order; (b) an order similar to a cease trade order; or (c) an order that denied the relevant company access to any exemption under securities laws, that was in effect for a period of more than thirty consecutive days, issued while that person was acting in such capacity or issued thereafter but resulted from an event that occurred while that person was acting in such capacity.

Dr. Panchal was a director of Avicanna Inc. when it announced that it was unable to file its audited annual financial statements for the year ended December 31, 2020, and accompanying management’s discussion and analysis, annual information form and related certifications on or before March 31, 2021, as required under applicable securities laws and when a management cease trade order was subsequently granted on April 12, 2021 by its principal regulator, the Ontario Securities Commission.

### ***Bankruptcies***

Other than as described below, to the knowledge of the Company, no director or executive officer or shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company is, or within the ten years prior to the date hereof has been, a director or executive officer of any company (including the Company) that, while that person was acting in such capacity or within a year of that person ceasing to act in such capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets.

Dr. Geltosky was a director of Sophiris Bio Inc. when it decided to shut down its operations in May 2020. In connection with the shutdown, Sophiris Bio Inc. reached a compromise agreement with its senior creditor to pay an amount less than the full amount owed to the creditor.

Dr. Panchal and Mr. Beraldo were both directors of Pure Global Cannabis Inc. when it sought and obtained, on March 19, 2020, an Order from the Ontario Superior Court of Justice (Commercial List) granting relief under the Companies' Creditors Arrangement Act (Canada). On May 1, 2020, Dr. Panchal and Mr. Beraldo both resigned as directors of Pure Global Cannabis Inc. and a receiver and manager was appointed to hold its assets pursuant to the Bankruptcy and Insolvency Act (Canada) by Order of the Ontario Superior Court of Justice (Commercial List).

To the knowledge of the Company, no director or executive officer or shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company has, within the ten years prior to the date hereof, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement, or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold that person's assets.

### ***Penalties and Sanctions***

No director or executive officer of the Company, or a shareholder holding a sufficient number of securities of Medicenna to affect materially the control of the Company has been subject to (a) any penalties or sanctions imposed by a court relating to securities laws or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

All of the above disclosure also applies to any personal holding companies of any of the persons referred to above.

### **CONFLICTS OF INTEREST**

Certain of the Company's officers and directors are also officers and/or directors of other, or may otherwise be involved with or consulted by, companies engaged in the biotechnology industry and research business generally and may be presented from time to time with situations or opportunities which give rise to apparent conflicts of interest which cannot be resolved by arm's-length negotiations but only through exercise by the officers and directors of such judgment as is consistent with their fiduciary duties to the Company which arise under applicable corporate law, especially insofar as taking advantage, directly or indirectly, of information or opportunities acquired in their capacities as directors or officers of the Company. Any such conflict is governed by applicable corporate laws, which require that directors act honestly, in good faith and with a view to the best interests of the Company. It is expected that any transactions with officers and directors will be on terms consistent with industry standards and sound business practice in accordance with the fiduciary duties of those persons to the Company, and, depending upon the magnitude of the transactions and the absence of any disinterested board members, may be submitted to the shareholders for their approval.

In addition, the CBCA requires officers and directors to disclose any personal interest which they may have in any material contract or transaction which is proposed to be entered into with the Company and, in the case of directors, to abstain from voting as a director for the approval of any such contract or transaction, unless otherwise permitted under the CBCA.

#### **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

There are no existing or contemplated material legal proceedings to which Medicenna or a subsidiary of Medicenna is a party or of which any of their respective property is the subject matter and no such proceedings known to Medicenna is contemplated. Medicenna has not had any material penalties or sanctions imposed against it by any legal or regulatory authorities.

#### **INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

Except as otherwise set out herein, there are no material interests, direct or indirect, of any director, executive officer, person who beneficially owns, or controls or directs, directly or indirectly, more than 10% of the outstanding Common Shares, or any known associates or affiliates of such persons, in any transaction within the last three completed financial years or during the current financial year which has materially affected or is reasonably expected to materially affect the Company.

#### **TRANSFER AGENT**

The Company's registrar and transfer agent is TSX Trust Company, located at 301 – 100 Adelaide St. West, Toronto, Ontario, M5H 4H1.

#### **MATERIAL CONTRACTS**

The Company is not party to any material contract that was entered into either (1) in the last completed fiscal year, or (2) before the most recently completed fiscal year but that is still in effect as of the date hereof, except for contracts entered into in the ordinary course of business and as set out below:

1. the warrant indenture dated October 17, 2019 between the Company and TSX Trust Company regarding the provision for issuance of the unit warrants from the October 2019 public offering;
2. the warrant indenture dated December 21, 2018 between the Company and TSX Trust Company regarding the provision for issuance of the unit warrants from the December 2018 public offering;
3. the license agreements with Stanford made effective as of August 21, 2015, and subsequent amendments;
4. the NIH License Agreement and subsequent amendments; and
5. the CPRIT grant agreement made effective as of March 1, 2015, and subsequent extensions.

## INTEREST OF EXPERTS

The Company's registered public accounting firm is PricewaterhouseCoopers LLP who have advised us that they are independent with respect to the Company within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario (registered name of the Institute of Chartered Accountants of Ontario) and the rules and standards of the Public Company Accounting Oversight Board (United States) and the securities laws and regulations administered by the United States Securities and Exchange Commission.

Except as disclosed herein, no person or company whose profession or business gives authority to a report, valuation, statement or opinion made by the person or company and who is named as having prepared or certified the report, valuation, statement or opinion described in or included in this AIF or a filing made under National Instrument 51-102 by the Company, during, or relating to, the Company's most recently completed financial year holds more than 1% beneficial interest, direct or indirect, in any securities or other property of the Company or of an associate or affiliate of the Company and no such person is expected to be elected, appointed or employed as a director, senior officer or employee of the Company or of an associate or affiliate of the Company.

PricewaterhouseCoopers LLP, Chartered Professional Accountants is the auditor of the Company. PricewaterhouseCoopers LLP is independent of the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the Public Company Accounting and Oversight Board. The Company changed its auditor to PricewaterhouseCoopers LLP from Davidson & Company LLP on August 21, 2020. Davidson & Company LLP was independent of the Company within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario and within the meaning of the applicable rules and regulations adopted by the Public Company Accounting Oversight Board (United States) and the SEC until August 21, 2020.

## ADDITIONAL INFORMATION

Additional information about us may be found on SEDAR at [www.sedar.com](http://www.sedar.com) and EDGAR at [www.sec.gov](http://www.sec.gov). Additional information, including directors' and officers' remuneration and indebtedness, principal holders of our securities, options to purchase securities and securities authorized for issuance under equity compensation plans, is contained in our Management Information Circular for our most recent annual meeting of shareholders. Additional information may also be found in our audited financial statements and related management's discussion and analysis for our most recently completed financial year.

**SCHEDULE A**  
**AUDIT COMMITTEE INFORMATION**

**a) Audit Committee Charter**

See **Appendix 1** attached hereto.

**b) Composition of the Audit Committee**

The Audit Committee of the Company is currently comprised of Mr. Alberto Beraldo (Chairman), Dr. Chandrakant Panchal and Ms. Karen Dawes. All members of the Audit Committee are considered to be independent and financially literate within the meaning of National Instrument 52-110 – *Audit Committees* (“NI 52-110”).

**c) Relevant Education and Experience**

The relevant education and experience of each member of the Audit Committee is provided above, under the heading “Board of Directors and Management”. All of the Audit Committee members are independent of management of the Company as required by the TSX and the Nasdaq and each member is financially literate in that he or she has the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company’s financial statements. Each individual has experience managing a company as the President and/or Chief Executive Officer or, in the case of Mr. Beraldo, as both the Chief Executive Officer and Chief Financial Officer and, in those roles, reviewing financial statements and reports. Mr. Albert Beraldo, Chairman of the Audit Committee, is the Financial Expert of the Committee and is a CPA, CA with many years of experience as the Chief Financial Officer of both private and public companies. In addition to their experience as Executive Officers, each member of the Audit Committee has experience serving on public company boards.

**d) Audit Committee Oversight**

At no time since the commencement of the Company’s most recently completed financial period was a recommendation of the Audit Committee to nominate or compensate an external auditor not adopted by the board of directors.

**e) Reliance on Certain Exemptions**

At no time since the commencement of the Company’s most recently completed financial period has the Company relied on the following exemptions under NI 52-110: section 2.4 (*De Minimis Non-Audit Services*), section 3.2 (*Initial Public Offerings*), section 3.4 (*Events Outside Control of Member*), section 3.5 (*Death, Incapacity or Resignation of Audit Committee Member*), or an exemption from NI-52-110 in whole or in part, granted under Part 8 (*Exemptions*) thereof.

f) **Pre-Approval Policies and Procedures**

The Audit Committee has adopted specific policies and procedures for the engagement of non-audit services, as described in the Audit Committee Charter attached hereto as **Appendix 1** to this Schedule A.

g) **External Auditor Service Fees**

<b>YEAR ENDING</b>	<b>AUDIT FEES</b>	<b>AUDIT RELATED FEES</b>	<b>TAX FEES</b>	<b>ALL OTHER FEES</b>	<b>TOTAL FEES</b>
March 31, 2021	<b>\$133,750</b>	<b>\$69,550</b>	<b>\$18,190</b>	<b>NIL</b>	<b>\$221,490</b>
March 31, 2020	<b>\$49,627</b>	<b>\$14,122</b>	<b>\$5,750</b>	<b>NIL</b>	<b>\$69,499</b>
March 31, 2019	<b>\$48,805</b>	<b>\$5,000</b>	<b>\$20,950</b>	<b>NIL</b>	<b>\$74,755</b>

“Audit Fees” refers to the aggregate fees billed by the Company’s external auditors for audit services including interim reviews. “Audit Related Fees” refers to aggregate fees billed for assurance and related services by the Company’s external auditors that are reasonably related to the performance of the audit or review of the Company’s financial statements and not reported under Audit Fees, including the provision of comfort letters and consents, the consultation concerning financial accounting and reporting of specific issues and the review of documents filed with regulatory authorities. “Tax Fees” includes fees for professional services rendered by the Company’s external auditors for tax compliance, tax advice and tax planning. “All Other Fees” includes all fees billed by the Company’s external auditors for services not covered in the other three categories.

**APPENDIX 1**  
**AUDIT COMMITTEE CHARTER**



**1. PURPOSE**

The primary function of the audit committee (the “Committee”) is to assist the Board of Directors (the “Board”) of Medicenna Therapeutics Corp. (the “Company”) in fulfilling its oversight of, and recommend appropriate actions with respect to (i) the integrity of the Company’s financial statements, accounting and financial reporting processes, system of internal controls over financial reporting and audit process, (ii) the Company’s compliance with, and process for monitoring compliance with, legal and regulatory requirements so far as they relate to matters of financial reporting, (iii) the independent auditor’s qualifications, independence and performance and (iv) the design, implementation and performance of the Company’s internal audit function.

The members of the Committee are not full-time employees of the Company and may or may not be accountants or auditors by profession or experts in the fields of accounting or auditing and, in any event, do not serve in such capacity. Consequently, it is not the duty of the Committee to conduct audits or to determine that the Company’s financial statements and disclosures are complete and accurate and are in accordance with generally accepted accounting principles and applicable laws, rules and regulations. These are the responsibilities of management and the external auditors.

**2. COMPOSITION**

(a) At Least Three Members. The Committee shall be comprised of a minimum of three directors as determined by the Board upon the recommendation of the Corporate Governance and Nomination Committee. All of the members of the Committee shall be “independent” as determined by the Board in compliance with applicable securities laws and applicable rules and guidelines of any stock exchange on which the securities of the Company are listed and any other laws applicable to the Company, including National Instrument 52-110 – *Audit Committees*.

All members of the Committee shall also be “financially literate”, meaning the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company’s financial statements. At least one member of the Committee shall be a “financial expert”, as such term is defined by the U.S. Securities and Exchange Commission, and have, as determined by the Board, financial sophistication (including past employment experience in finance or accounting, requisite professional certification in accounting, or any other comparable experience or background which results in the individual’s financial sophistication, including being or having a been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities).

The Board shall designate a Committee member as the Chairperson of the Committee, or if the Board does not do so, the Committee members shall appoint a Committee member as Chairperson by a majority vote of the full Committee membership.

(b) Appointment and Removal. The Board shall appoint Committee members and designate the Committee's "financial expert(s)" at the first meeting of the Board following each Annual General Meeting upon the recommendation of the Corporate Governance and Nomination Committee. Such members shall meet the independence, experience and expertise requirements under applicable securities law and the applicable rules and guidelines of any stock exchange on which the securities of the Company are listed and applicable policies of the Board. Members of the Committee shall serve for one year terms and until their successors are appointed. The Board may fill vacancies on the Committee by a majority vote of the authorized numbers of directors, but may remove Committee members only with the approval of a majority of the other independent directors then serving on the full Board.

### 3. MEETINGS, REPORTS AND RESOURCES OF THE AUDIT COMMITTEE

(a) Meetings. In discharging its responsibilities, the Committee shall meet as often as it determines necessary or advisable, but not less frequently than quarterly. The Committee may also hold special meetings or act by unanimous written consent as the Committee may decide. The meetings may be in person or telephone. The Committee shall keep written minutes of its meetings and shall deliver a copy of such minutes to the Board and to the corporate secretary of the Company for inclusion in the Company's minute books, and reports of Committee meetings will be presented at the next regularly scheduled Board meeting. The Committee may meet in separate executive sessions with other directors, the CEO and other Company employees, agents or representatives invited by the Committee. At least annually, the Committee will also meet separately with the independent auditors and/or the held of internal audit (or, if applicable, internal audit service providers), without management present.

(b) Procedures. The Committee may establish its own procedures, including the formation and delegation of authority to subcommittees, in a manner not inconsistent with this charter, the articles, applicable securities laws, or the applicable rules and guidelines of any stock exchange on which the securities of the Company are listed. The Chairperson or majority of the Committee members may call meetings of the Committee. A majority of the authorized number of Committee members shall constitute a quorum for the transaction of Committee business, and the vote of a majority of the Committee members present at the meeting at which a quorum is present shall be the act of the Committee. The Committee shall review and reassess at least annually the adequacy of this charter and recommend to the Board for approval any proposed changes, including any changes necessary to comply with applicable securities laws and applicable rules and guidelines of any stock exchange on which the securities of the Company are listed and any other laws applicable.

(c) Resources. The Committee shall have the authority, in its sole discretion, to (i) engage independent counsel and other advisors as it determines necessary to carry out its duties, (ii) set and pay the compensation for any advisors employed by the Committee, and (iii) communicate directly with the internal and external auditors. The Company shall provide funding, as determined appropriate by the Committee and in the Committee's sole authority, for payment of compensation to any registered public accounting firm engagement for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the Company; compensation to any advisers employed by the Committee, as it determines necessary to carry out its duties; and ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out the Committee's duties.

#### 4. AUTHORITY AND RESPONSIBILITIES

In furtherance of its purpose, the Committee shall have the following authority and responsibilities:

- (a) be directly responsible for appointing and recommending to the Board and the shareholders: (i) the external auditor for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company; and (ii) the compensation of the external auditor;
- (b) be directly responsible for retaining and overseeing the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company, including the resolution of disagreements between management and the external auditor regarding financial reporting, with the external auditor reporting directly to the Committee;
- (c) pre-approve all non-audit services to be provided to the Company or its subsidiary entities by the Company's external auditor in accordance with the pre-approval process noted below;
- (d) review the accounting principles and practices to be applied and followed by the Company during the fiscal year and any significant changes from those applied and followed during the previous year;
- (e) review the adequacy of the systems of internal accounting and audit policies, practices and controls established by the Company, and discuss with the auditor the results of its reviews and reports;
- (f) review all litigation and claims involving or against the Company which could materially adversely affect its financial position and which the auditor or any officer of the Company may refer to the Committee;
- (g) ensure that the auditor submits on a periodic basis to the Committee, and review and discusses at least annually with the auditor, a formal written statement delineating all relationships between the auditor and the Company, consistent with applicable auditor independence standards, and to review such statement and to actively engage in a dialogue with the auditor with respect to any disclosed or undisclosed relationships or services that may impact on the objectivity and independence of the auditor, and to review the statement and the dialogue with the Board and recommend to the Board appropriate action to ensure the independence of the auditor;
- (h) obtain written confirmation from the independent auditor that it is objective within the meaning of the Rules of Professional Conduct/Code of Ethics adopted by the provincial institute or order of Chartered Accountants to which it belongs and is an independent public accountant within the meaning of the Independence Standards of the Canadian Institute of Chartered Accountants and as required by applicable law or standards of the Public Company Accounting Oversight Board (the "PCAOB"), or any successor body;

- (i) meet with the auditor at least once per quarter without management present to allow a candid discussion regarding any concerns the auditor may have and to resolve any disagreements between the auditor and management regarding the Company's financial reporting;
- (j) review the annual consolidated financial statements of the Company and the notes thereto following the examination thereof by the auditor and prior to their approval by the Board and report to the Board thereon;
- (k) review and approve the quarterly financial statements, notes thereto and quarterly management discussion and analysis (MD&A) and related press releases of the Company prior to their release;
- (l) review the annual MD&A, and other public disclosure documents and related press releases, including any prospectus prior to their approval by the directors.
- (m) be satisfied that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements and must periodically assess the adequacy of those procedures;
- (n) establish procedures for (i) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters; and (ii) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters;
- (o) approve the Whistleblower Policy and review and assess the adequacy of the policy on an annual basis, or more often if deemed appropriate;
- (p) discuss with management and the external auditor any other matters required to be communicated to the Committee by the external auditor under applicable standards of the PCAOB or applicable law or listing standards;
- (q) review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of the Company;
- (r) review, approve and oversee any related-party transactions (as defined in applicable securities laws and stock exchange rules and guidelines);
- (s) review the adequacy of insurance policies maintained by the Company;
- (t) approve the Corporate Disclosure and Trading Policy and review and assess the adequacy of the policy on an annual basis, or more often if deemed appropriate; and
- (u) consider any other matter which in its judgment should be taken into account in reaching its recommendation to the Board concerning the approval of the financial statements.

## 5. PRE-APPROVAL OF NON-AUDIT SERVICES

The Committee satisfies the pre-approval requirement of item 4(c) of its Responsibilities if:

- (a) the aggregate amount of all the non-audit services that were not pre-approved is reasonably expected to constitute no more than five per cent of the total amount of fees paid by the Company and its subsidiary entities to the Company's external auditor during the fiscal year in which the services are provided;
- (b) the Company or the subsidiary entity of the Company, as the case may be, did not recognize the services as non-audit services at the time of the engagement; and
- (c) the services are promptly brought to the attention of the Committee of the Company and approved, prior to the completion of the audit, by the Committee or by one or more of its members to whom authority to grant such approvals has been delegated by the Committee.

The Committee may delegate to one or more members the authority to pre-approve non-audit services in satisfaction of the requirement of item 4.(c) of its Responsibilities. The pre-approval of non-audit services by any member to whom authority has been delegated pursuant hereto must be presented to the Committee at its first scheduled meeting following such pre-approval.

The Committee satisfies the pre-approval requirement of item 4.(c) of its Responsibilities if it adopts specific policies and procedures for the engagement of the non-audit services, if: (i) the pre-approval policies and procedures are detailed as to the particular service; (ii) the Committee is informed of each non-audit service; and (iii) the procedures do not include delegation of the Committee's responsibilities to management.



Consolidated financial statements of

**Medicenna Therapeutics Corp.**

(Expressed in Canadian Dollars)

For the years ended March 31, 2021 and 2020

---



## Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Medicenna Therapeutics Corp.

### **Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated statement of financial position of Medicenna Therapeutics Corp. and its subsidiaries (together, the Company) as of March 31, 2021 and the related consolidated statements of loss and comprehensive loss, changes in shareholders' equity and cash flows for the year then ended, including the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of March 31, 2021 and its financial performance and its cash flows for the year then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

### **Basis for Opinion**

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

**/s/ PricewaterhouseCoopers LLP**

Chartered Professional Accountants, Licensed Public Accountants

Oakville, Canada  
May 27, 2021

We have served as the Company's auditor since 2020.

PricewaterhouseCoopers LLP  
PwC Centre, 354 Davis Road, Suite 600, Oakville, Ontario, Canada L6J 0C5  
T: +1 905 815 6300, F: +1 905 815 6499

"PwC" refers to PricewaterhouseCoopers LLP, an Ontario limited liability partnership.

---

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and Directors of Medicenna Therapeutics Corp.

***Opinion on the Consolidated Financial Statements***

We have audited the accompanying consolidated statement of financial position of Medicenna Therapeutics Corp. (the “Company”), as of March 31, 2020, and the related consolidated statements of operations, cash flows and changes in shareholders’ equity for the year ended March 31, 2020, and the related notes and schedules (collectively referred to as the “financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of March 31, 2020 and the results of its operations and its cash flows for the year ended March 31, 2020 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

***Basis for Opinion***

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatements of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ DAVIDSON & COMPANY LLP

Vancouver, Canada

Chartered Professional Accountants

May 14, 2020



1200 - 609 Granville Street, P.O. Box 10372, Pacific Centre, Vancouver, B.C., Canada V7Y 1G6  
Telephone (604) 687-0947 Davidson-co.com

# Medicenna Therapeutics Corp.

Consolidated Statements of Financial Position

(Expressed in thousands of Canadian Dollars, except for share and per share amounts)

as at

	March 31, 2021	March 31, 2020
	\$	\$
<b>Assets</b>		
Current assets		
Cash and cash equivalents (Note 2d)	30,375	22,698
Marketable securities (Note 2d)	10,010	15,003
Prepays and deposits	1,354	94
Other receivables	410	57
	42,149	37,852
Intangible assets (Note 13)	71	76
Right-of-use assets (Note 7)	32	68
	42,252	37,996
<b>Liabilities</b>		
Current liabilities		
Accounts payable and accrued liabilities (Note 8)	4,073	1,780
Current portion of lease liability (Note 7)	34	35
	4,107	1,815
Lease liability (Note 7)	-	32
	4,107	1,847
<b>Shareholders' Equity</b>		
Common shares (Note 9)	79,587	56,578
Contributed surplus (Notes 10 and 11)	6,680	10,390
Accumulated other comprehensive income	234	248
Deficit	(48,356)	(31,067)
	38,145	36,149
	42,252	37,996

Approved by the Board

/s/ Albert Beraldo \_\_\_\_\_ Director

/s/ Chandra Panchal \_\_\_\_\_ Director

The accompanying notes are an integral part of these Consolidated financial statements.

# Medicenna Therapeutics Corp.

Consolidated Statements of Loss and Comprehensive Loss

(Expressed in thousands of Canadian Dollars, except for share and per share amounts)

	Year ended March 31, 2021	Year ended March 31, 2020
	\$	\$
<b>Operating expenses</b>		
General and administration (Note 16)	6,525	2,375
Research and development (Note 16)	10,870	5,870
<b>Total operating expenses</b>	17,395	8,245
Finance income (Note 2d)	(314)	(7)
Foreign exchange loss	208	39
	(106)	32
<b>Net loss for the year</b>	(17,289)	(8,277)
Cumulative translation adjustment	(14)	91
<b>Comprehensive loss for the year</b>	(17,303)	(8,186)
<b>Basic and diluted loss per share for the year</b>	(0.35)	(0.26)
<b>Weighted average number of common shares outstanding</b> (Note 9)	49,661,776	31,899,640

The accompanying notes are an integral part of these Consolidated financial statements.

# Medicenna Therapeutics Corp.

Consolidated Statements of Cash Flows

(Expressed in thousands of Canadian Dollars)

	Year ended March 31, 2021	Year ended March 31, 2020
	\$	\$
<b>Operating activities</b>		
Net loss for the year	(17,289)	(8,277)
Items not involving cash		
Depreciation	40	8
Stock based compensation	1,006	1,125
Government grant expense recoveries (Note 12)	-	2,463
Unrealized foreign exchange	267	62
Accrued interest	(15)	(3)
Changes in non-cash working capital		
Other receivables and deposits	(1,612)	139
Accounts payable and accrued liabilities	2,292	(932)
	<b>(15,311)</b>	<b>(5,415)</b>
<b>Investing activities</b>		
Acquisition of marketable securities	(10,000)	(15,000)
Disposition of marketable securities	15,013	-
	<b>5,013</b>	<b>(15,000)</b>
<b>Financing activities</b>		
Repayment of lease liabilities	(39)	(3)
Issuance of share capital, net of issuance costs (Note 9)	11,411	38,375
Warrant and option exercises (Notes 10 and 11)	6,884	2,373
	<b>18,256</b>	<b>40,745</b>
Effect of foreign exchange on cash	(281)	(3)
Net increase in cash	7,677	20,327
Cash, beginning of year	22,698	2,371
<b>Cash, end of year</b>	<b>30,375</b>	<b>22,698</b>
Other non-cash transactions		
Broker warrants issued	\$ 69	\$ 561
Warrants issued	\$ -	\$ 705
Share issuance costs accrued through accounts payable and accrued liabilities	\$ -	\$ 257

The accompanying notes are an integral part of these Consolidated financial statements.

# Medicenna Therapeutics Corp.

Consolidated Statements of Changes in Shareholders' Equity

(Expressed in thousands Canadian Dollars, except for share and per share amounts)

	Common shares issued and outstanding		Contributed surplus	Accumulated other comprehensive income	Deficit	Total shareholders' equity
	Number	Amount				
		\$	\$	\$	\$	\$
<b>Balance, March 31, 2019</b>	<b>28,578,137</b>	<b>16,616</b>	<b>8,633</b>	<b>157</b>	<b>(22,790)</b>	<b>2,616</b>
Stock based compensation	-	-	1,125	-	-	1,125
Warrant and option exercises	1,623,675	3,008	(635)	-	-	2,373
Issued on October 2019 financing	5,307,693	5,319	811	-	-	6,130
Issued on March 2020 financing	11,290,323	31,635	456	-	-	32,091
Cumulative translation adjustment	-	-	-	91	-	91
Net loss for the year	-	-	-	-	(8,277)	(8,277)
<b>Balance, March 31, 2020</b>	<b>46,799,828</b>	<b>56,578</b>	<b>10,390</b>	<b>248</b>	<b>(31,067)</b>	<b>36,149</b>
<b>Balance, March 31, 2020</b>	<b>46,799,828</b>	<b>56,578</b>	<b>10,390</b>	<b>248</b>	<b>(31,067)</b>	<b>36,149</b>
Stock based compensation	-	-	1,006	-	-	1,006
Warrant and option exercises	3,655,976	11,667	(4,785)	-	-	6,882
Issued on April 2020 overallocation	1,693,548	4,783	69	-	-	4,852
Issued on ATM Jan 2021 financing	1,398,357	6,559	-	-	-	6,559
Cumulative translation adjustment	-	-	-	(14)	-	(14)
Net loss for the year	-	-	-	-	(17,289)	(17,289)
<b>Balance, March 31, 2021</b>	<b>53,547,709</b>	<b>79,587</b>	<b>6,680</b>	<b>234</b>	<b>(48,356)</b>	<b>38,145</b>

The accompanying notes are an integral part of these Consolidated financial statements.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

---

## 1. Nature of business

The Company's principal business activity is the development and commercialization of IL-2, IL-4 and IL-13 Superkines and Empowered Superkines for the treatment of cancer and other diseases. Medicenna has four wholly owned subsidiaries, Medicenna Therapeutics Inc. ("MTI") (British Columbia), Medicenna Biopharma Inc. ("MBI") (Delaware), Medicenna Biopharma Inc. ("MBI") (British Columbia) and Medicenna Australia PTY Ltd ("MAL") (Australia). Medicenna is traded on both the Toronto Stock Exchange and the Nasdaq Capital Market ("NASDAQ") under the symbol "MDNA". On March 30, 2021, the company set up its wholly owned subsidiary MAL and on April 15, 2021 set up its wholly owned subsidiary MTU.

As at March 31, 2021, the head and registered office is located at 2 Bloor St W, 7th Floor, Toronto, Ontario, Canada.

### COVID-19 Update

In March 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic and the Company continues to evaluate the COVID-19 situation and monitor any impacts or any potential impacts to the business. Medicenna has implemented health and safety measures in accordance with health officials and guidance from local government authorities. Further, the pandemic has had an impact on the Company's third-party vendors resulting in delays in receiving components and supplies which delayed our ability to start certain studies and could result in development delays including the ongoing pre-clinical, manufacturing and planned clinical activities related to MDNA11. The Company asked all our business partners to engage us by telephone or video conference where possible, minimizing business travel and requiring self-isolation for employees travelling outside of Canada. As the COVID-19 health crisis continues, the Company will continue to rely on guidance and recommendations from local health authorities, Health Canada and the Centers for Disease Control and Prevention to update the Company's policies.

## 2. Basis of presentation and significant accounting policies

### a) *Statement of compliance*

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IASB") ("IFRS") and the Interpretations of the International Financial Reporting and Interpretations Committee ("IFRIC").

The Consolidated financial statements were approved by the Company's Board of Directors and authorized for issue on May 27, 2021.

### b) *Principles of Consolidation*

These consolidated financial statements include the accounts of the Company and its wholly owned Subsidiaries MTI, MBI, MAL and MBIBC (British Columbia, Inactive). Subsidiaries are fully consolidated from the date at which control is determined to have occurred and are deconsolidated from the date that the Company no longer controls the entity. The financial statements of the subsidiaries are prepared for the same reporting period as the Company using consistent accounting policies. Intercompany transactions, balances, and gains and losses on transactions between subsidiaries are eliminated.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

---

## 2. Basis of presentation and significant accounting policies cont'd

### c) *Functional and presentation currency*

The functional currency of an entity and its subsidiary is the currency of the primary economic environment in which the entity operates. The functional currency of the parent company is the Canadian dollar and the functional currency of MBI is the US dollar, the functional currency of MTI and MBI BC is the Canadian dollar, the functional currency of MAL is the Australian dollar, and the presentation currency of the Company is the Canadian dollar.

### d) *Cash and cash equivalents and marketable securities*

#### Cash and cash equivalents

Cash equivalents include guaranteed investment certificates (March 31, 2021 - nil, March 31, 2020 - \$20.0 million) with a maturity of 90 days or less and are readily redeemable for cash. The Company has classified its cash and cash equivalents at fair value through profit or loss.

#### Marketable securities

Marketable securities consist of guaranteed investment certificates with a maturity of greater than 90 days and less than one year. The Company has classified its marketable securities at fair value through profit or loss.

### e) *Research and development costs*

Expenditures on research and development activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Investment tax credits related to current expenditures are included in the determination of net income as the expenditures are incurred when there is reasonable assurance they will be realized.

Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Company intends to and has sufficient resources to complete development and to use or sell the asset. These criteria will be deemed by the Company to have been met when revenue is received by the Company and a determination that it has sufficient resources to market and sell its product offerings. Upon a determination that the criteria to capitalize development expenditures have been met, the expenditures capitalized will include the cost of materials, direct labour and overhead costs that are directly attributable to preparing the asset for its intended use. Other development expenditures will be expensed as incurred.

Capitalized development expenditures will be measured at cost less accumulated amortization and accumulated impairment losses. No development costs have been capitalized to date.

### f) *Government assistance*

Government grants, including grants from similar bodies, consisting of investment tax credits are recorded as a reduction of the related expense or cost of the asset acquired. Government grants are recognized when there is reasonable assurance that the Company has met the requirements of the approved grant program and there is reasonable assurance that the grant will be received.

Research grants that compensate the Company for expenses incurred are recognized in profit, or loss in reduction thereof on a systematic basis in the same years in which the expenses are recognized.

Grants that compensate the Company for the cost of an asset are recognized in profit or loss on a systematic basis over the useful life of the asset.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

---

## 2. Basis of presentation and significant accounting policies cont'd

### g) *Intangible assets*

The Company owns certain patents, intellectual property licenses and options to acquire intellectual property. The Company expenses patent costs, including license fees and other maintenance costs, until such time as the Company has certainty over the future recoverability of the intellectual property at which time it capitalizes the costs incurred. The Company capitalizes costs directly related to the acquisition of existing license patents. The Company does not hold any intangible asset with an indefinite life.

Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization method and amortization period of an intangible asset with a finite life is reviewed at least annually. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset is accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in general and administrative expenses.

Amortization is recognized in profit or loss on a straight-line basis over the estimated useful lives of intangible assets from the date they are available for use to August 31, 2035.

### h) *Income taxes*

Current tax and deferred tax are recognized in the Company's profit and loss, except to the extent that it relates to a business combination or items recognized directly in equity or in net loss and comprehensive loss.

Current income taxes are recognized for the estimated taxes payable or receivable on taxable income or loss for the current year and any adjustment to income taxes payable in respect of previous years. Current income taxes are determined using tax rates and tax laws that have been enacted or substantively enacted by the period end date.

Deferred tax assets and liabilities are recognized where the carrying amount of an asset or liability differs from its tax base, except for taxable temporary differences arising on the initial recognition of goodwill and temporary differences arising on the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction affects neither accounting nor taxable profit or loss.

Recognition of deferred tax assets for unused tax losses, tax credits and deductible temporary differences is restricted to those instances where it is probable that future taxable profit will be available against which the deferred tax assets can be utilized. At the end of each reporting period, the Company reassesses unrecognized deferred tax assets. The Company recognizes a previously unrecognized deferred tax asset to the extent that it has been probable that future taxable profit will allow the deferred tax asset to be recovered.

### i) *Basic and diluted loss per common share*

Basic loss per share is computed by dividing the loss available to common shareholders by the weighted average number of common shares outstanding during the year. The computation of diluted earnings per share assumes the conversion, exercise or contingent issuance of securities only when such conversion, exercise or issuance would have a dilutive effect on earnings per share. The dilutive effect of convertible securities is reflected in diluted earnings per share by application of the "if converted" method. The dilutive effect of outstanding options and warrants and their equivalents is reflected in diluted earnings per share. Since the Company has losses, the exercise of outstanding options and warrants have not been included in this calculation as it would be anti-dilutive.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

---

## 2. Basis of presentation and significant accounting policies cont'd

### j) *Equipment*

The Company's fixed assets comprise of computer equipment for use in general and administrative and research activities.

Depreciation is recognized using the straight-line method based on an expected life of the assets

---

Computer equipment	2 years
Right-of-use-assets	Over the lease term

---

### Impairment of long-lived assets:

The Company's long-lived assets are reviewed for indications of impairment at the date of preparing each statement of financial position. If indication of impairment exists, the asset's recoverable amount is estimated.

An impairment loss is recognized when the carrying value of an asset, or its cash-generating unit, exceeds its recoverable amount. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of cash inflows from other assets or groups of assets. For the purpose of impairment testing, the Company determined it has one cash-generating unit. The recoverable amount is the greater of the asset's fair value less cost to sell and value in use.

### k) *Stock-based compensation*

The Company has a stock-based compensation plan (the "Plan") available to officers, directors, employees and consultants with grants under the Plan approved by the Company's Board of Directors. Under the Plan, the exercise price of each option equals the closing trading price of the Company's stock on the day prior to the grant or a higher price as determined by the Board of Directors. Vesting is provided for at the discretion of the Board of Directors and the expiration of options is to be not greater than 10 years from the date of grant. The Company uses the fair value-based method of accounting for employee awards granted under the Plan. The Company calculates the fair value of each stock option grant using the Black Scholes option pricing model at the grant date. The stock-based compensation cost of the options is recognized as stock-based compensation expense over the relevant vesting period of the stock options using an estimate of the number of options that will eventually vest.

Stock options awarded to non-employees are accounted for at the fair value of the goods received or the services rendered. The fair value is measured at the date the Company obtains the goods or the date the counterparty renders the service. If the fair value of the goods or services cannot be reliably measured, the fair value of the options granted will be used.

### l) *Share Capital*

Common shares are classified as equity. Incremental costs directly attributable to the issue of common shares are recognized as a reduction of equity.

The Corporation has adopted a relative fair value method with respect to the measurement of shares and warrants issued as private placement units. The relative fair value method allocates value to each component on a pro-rata basis, based on the fair value of the components calculated independently of one another. The Company measures the fair value of the warrant component of the unit using the Black-Scholes option pricing model. The unit value is then allocated, pro-rata, between the two components, with the fair value attributed to the warrants being recorded to contributed surplus.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

---

## 2. Basis of presentation and significant accounting policies cont'd

### m) *Financial Instruments*

Financial assets and liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument. Financial assets are derecognized when the rights to receive cash flows from the assets have expired or have been transferred and the Company has transferred substantially all risks and rewards of ownership.

Financial assets and liabilities are offset and the net amount is reported in the consolidated statement of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

The Company recognizes financial instruments based on their classification. Depending on the financial instruments' classification, changes in subsequent measurements are recognized in net loss and comprehensive loss.

The Company has implemented the following classifications:

- Cash, cash equivalents and marketable securities are classified at fair value through profit or loss.
- Government grant receivable and amounts receivable are classified as amortized cost. After their initial fair value measurement, they are measured at amortized cost using the effective interest method; and
- Accounts payable and accrued liabilities are classified as other amortized cost. After their initial fair value measurement, they are measured at amortized cost using the effective interest method.

### n) *Impairment of financial assets*

The Company applies the simplified method of the expected credit loss model required under IFRS 9. Under this method, the Company estimates a lifetime expected loss allowance for all receivables. Receivables are written off when there is no reasonable expectation of recovery.

If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows. The present value of the estimated future cash flows is discounted at the financial asset's original effective interest rate.

### o) *Employee benefits*

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognized for the amount expected to be paid in short-term cash bonuses if the Company expects to pay these amounts as approved by the Board of Directors as a result of past services provided by the employee and the obligation can be estimated reliably.

### p) *Provisions*

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are assessed by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount on provisions is recognized in finance costs. A provision for onerous contracts is recognized when the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

---

## 3. New standards and interpretations not yet adopted

In January 2020, the IASB issued amendments to Presentation of financial statements (“IAS 1”) to provide a more general approach to the classification of liabilities under IAS 1 based on the contractual arrangements in place at the reporting date. The amendments to IAS 1 are effective for annual reporting periods beginning on or after January 1, 2023. The company is currently evaluating the potential impacts of adoption.

There are no other standards, interpretations or amendments to existing standards that are not yet effective that are expected to have a material impact on the consolidated financial statements of the Corporation.

## 4. Key sources of estimation uncertainty and judgement

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and 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. Actual results could differ from those estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are accounted for prospectively.

The key sources of estimation uncertainty that have a significant risk of causing material adjustment to the carrying amounts of assets and liabilities are discussed below:

### Valuation of stock-based compensation and warrants

Management measures the costs for stock-based compensation and warrants using market-based option valuation techniques. Assumptions are made and estimates are used in applying the valuation techniques. These include estimating the future volatility of the share price, expected dividend yield, expected risk-free interest rate, future employee turnover rates, future exercise behaviors and corporate performance. Such estimates and assumptions are inherently uncertain. Changes in these assumptions affect the fair value estimates of stock-based compensation and warrants.

## 5. Capital disclosures

The Company’s objectives, when managing capital, are to safeguard cash and cash equivalents as well as maintain financial liquidity and flexibility in order to preserve its ability to meet financial obligations and deploy capital to grow its businesses.

The Company’s financial strategy is designed to maintain a flexible capital structure consistent with the objectives stated above and to respond to business growth opportunities and changes in economic conditions. In order to maintain or adjust its capital structure, the Company may issue shares or issue debt (secured, unsecured, convertible and/or other types of available debt instruments).

There were no changes to the Company’s capital management policy during the year. The Company is not subject to any externally imposed capital requirements.

## 6. Financial risk management

### (a) Fair value

The Company’s financial instruments recognized on the Consolidated statements of financial position consist of cash and cash equivalents, marketable securities, government and other receivables, and accounts payable and accrued liabilities. The fair value of these instruments, approximate their carrying values due to their short-term maturity.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

---

## 6. Financial risk management cont'd

### *Classification of financial instruments*

Financial instruments measured at fair value on the statements of financial position are summarized into the following fair value hierarchy levels:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability.

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The Company classifies its financial assets and liabilities depending on the purpose for which the financial instruments were acquired, their characteristics, and management intent as outlined below:

Cash and cash equivalents and marketable securities are measured using Level 1 inputs and changes in fair value are recognized through profit or loss, with changes in fair value being recorded in net income at each year-end.

Other receivables and government receivables are measured at amortized cost less impairments.

Accounts payable and accrued liabilities, deferred government grants and license fee payable are measured at amortized cost.

The Company has exposure to the following risks from its use of financial instruments: credit, interest rate, currency, and liquidity risk. The Company reviews its risk management framework on a quarterly basis and makes adjustments as necessary.

### *(b) Credit risk*

Credit risk arises from the potential that a counterparty will fail to perform its obligations. The financial instruments that are exposed to concentrations of credit risk consist of cash and cash equivalents and marketable securities.

The Company manages credit risk associated with its cash and cash equivalents and marketable securities by maintaining minimum standards of R1-med or A-high investments.

### *(c) Interest rate risk*

Interest rate risk is the risk that the fair values and future cash flows of the Company will fluctuate because of changes in market interest rates. The Company believes that its exposure to interest rate risk is not significant.

### *(d) Liquidity risk*

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company currently settles all of its financial obligations out of cash and cash equivalents. The ability to do so relies on the Company maintaining sufficient cash in excess of anticipated needs. As at March 31, 2021, the Company's liabilities consist of accounts payable and accrued liabilities that have contracted maturities of less than one year.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 6. Financial risk management cont'd

### (e) Currency risk

Currency risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Company is exposed to currency risk from employee costs as well as the purchase of goods and services primarily in the United States and cash and cash equivalent balances held in foreign currencies. Fluctuations in the US dollar exchange rate could have a significant impact on the Company's results. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the US dollar would result in an increase or decrease in loss and comprehensive loss for the year ended March 31, 2021 of \$938 thousand (March 31, 2020 - \$108 thousand).

Balances in US dollars are as follows:

	March 31, 2021	March 31, 2020
	\$	\$
Cash and cash equivalents	9,593	135
Accounts payable and accrued liabilities	(2,147)	(900)
	7,446	(765)

## 7. Right-of-use asset and lease liability

The Company recognized a right-of-use asset based on the amount equal to the lease liability, adjusted for any related prepaid and accrued lease payments previously recognized. The lease liability was recognized based on the present value of remaining lease payments, discounted using the incremental borrowing rate at the date of initial application. The lease payments include fixed payments less any lease incentives receivable, variable lease payments that depend on an index or rate, and amounts expected to be paid under residual value guarantees. The variable lease payments that do not depend on an index or a rate are recognized as expense in the year as incurred.

The carrying amounts of the Company's right-of-use asset and lease liability and movements during the year ended March 31, 2021 were as follows:

	Right-of-Use Asset	Lease Liability
	\$	\$
<b>Balance, March 31, 2020</b>	<b>68</b>	<b>67</b>
Depreciation	(36)	-
Lease payments	-	(39)
Lease interest	-	6
<b>Balance, March 31, 2021</b>	<b>32</b>	<b>34</b>
<b>Classification:</b>		
Current portion of lease liability	-	34
Long-term portion of lease liability	-	-
	-	34

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 8. Accounts payable and accrued liabilities

	March 31, 2021	March 31, 2020
	\$	\$
Trade payables	2,245	456
Accrued liabilities	1,828	1,324
	4,073	1,780

## 9. Share capital

### Authorized

Unlimited common shares

### Equity Issuances

On March 17, 2020, the Company completed a public offering raising total gross proceeds of \$35 million. The Company issued 11,290,323 common shares at \$3.10 per share and issued a 15% over-allotment option to the underwriters. The Company paid commission to the agents totaling \$2.5 million, share issuance costs of \$0.5 million and issued 790,323 warrants to the agents exercisable into one common share of the Company at an exercise price of \$3.10 for a period of 24 months. The fair value of the warrants issued was determined to be \$0.5 million.

On April 15, 2020, the Company announced the full exercise of the over-allotment option, issuing an additional 1,693,548 common shares at \$3.10 per share for additional proceeds of \$5.3 million. The Company paid commission to the agents totaling \$368 thousand, share issuance costs of \$32 thousand and issued 118,723 warrants to the agents exercisable into one common share of the Company at an exercise price of \$3.10 expiring on March 17, 2022. The fair value of the warrants issued was determined to be \$69 thousand.

On December 30, 2020, the Company entered into a sales agreement with SVB Leerink acting as sales agent, pursuant to which the Company may, from time to time sell, through at-the-market ("ATM") on the NASDAQ such number of common shares as would have an aggregate offering price of up to US\$25.0 million (the ATM Offering). The Company plans to use the net proceeds of the ATM offering for general corporate purposes including, but not limited to working capital expenditures, research and development expenditures, and clinical trial expenditures. As of March 31, 2021, the Company has issued 1,398,357 common shares raising total gross proceeds of \$7.1 million to date. Costs associated with setting up the ATM are approximately \$0.5 million. The Company recorded the total costs associated with the offering as a reduction in share capital, net of gross proceeds.

### Calculation of loss per share

Loss per common share is calculated using the weighted average number of common shares outstanding. For the year ended March 31, 2021 and 2020, the calculation was as follows:

	2021	2020
Common shares issued and outstanding, beginning of year	46,799,828	28,578,137
Shares issued in March/April 2020 financing	1,623,950	431,870
Shares issued in October 2019 financing	-	2,407,314
ATM issuances	182,226	-
Effect of warrants and options exercised	1,055,772	482,319
<b>Weighted average common shares issued and outstanding, end of year</b>	<b>49,661,776</b>	<b>31,899,640</b>
<b>Common shares issued and outstanding, end of year</b>	<b>53,547,709</b>	<b>46,799,828</b>

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 9. Share capital cont'd

The effect of any potential exercise of the Company's stock options and warrants outstanding during the year has been excluded from the calculation of diluted loss per common share as it would be anti-dilutive.

## 10. Warrants

### Warrant continuity:

	Number of Warrants	Weighted average exercise price
<b>Balance outstanding at March 31, 2019</b>	<b>5,145,083</b>	<b>\$ 1.65</b>
Common share purchase warrants issued in the October 2019 financing	2,653,846	1.75
Broker warrants issued in the financing October 2019 financing	350,134	1.30
Broker warrants issued in the March 2020 financing	790,323	3.10
Warrants exercised during the year	(1,623,675)	1.46
<b>Warrants outstanding at March 31, 2020</b>	<b>7,315,711</b>	<b>\$ 1.86</b>
Broker warrants issued in over-allotment	118,548	3.10
Warrants exercised during the year	(3,415,266)	1.96
<b>Warrants outstanding at March 31, 2021</b>	<b>4,018,993</b>	<b>1.82</b>

The following warrants were exercised during the year ended March 31, 2021:

Number of Warrants	Exercise Price	Proceeds	Expiry Date
		\$	\$
57,500	1.20	69,000	December 21, 2020
115,000	1.20	138,000	December 21, 2023
139,759	1.30	181,687	October 17, 2021
152,214	1.75	266,375	October 17, 2022
2,812,083	2.00	5,624,166	January 1, 2021
138,710	3.10	430,001	March 17, 2022
<b>3,415,266</b>		<b>6,709,229</b>	

At March 31, 2021, warrants were outstanding and exercisable, enabling holders to acquire common shares as follows:

Number of Warrants	Exercise Price	Expiry Date
		\$
18,000	2.00	April 5, 2021
71,744	1.30	October 17, 2021
770,161	3.10	March 17, 2022
1,806,088	1.75	October 17, 2022
1,353,000	1.20	December 21, 2023
<b>4,018,993</b>		

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 11. Stock options

### Year ended March 31, 2021

During the year ended March 31, 2021, the Company granted 450,084 stock options at an average exercise price of \$5.14 per share. 212,464 of the options were granted to the Company's officers and employees and vest 1/3 after one year, 1/3 after two years and 1/3 after three years, and have a ten-year life; 62,620 stock options granted to the Company's Board of Directors vest 50% immediately and 50% after one year and have a five-year life; 75,000 stock options granted to a consultant vest monthly over 48 months and have a 10-year life; and 100,000 stock options granted to a consultant vest monthly over 16 months and have a 5-year life.

### Year ended March 31, 2020

During the year ended March 31, 2020 the Company granted 1,030,000 stock options exercisable at \$1.30 per share. Of these options, 300,000 vest 50% upon issuance and 50% after one year and have a five-year life. 730,000 options vest 50% after one year, 25% after 2 years and 25% after 3 years and have a ten-year life.

200,000 options were also issued, exercisable at \$1.38 per share. 50,000 of the options granted vest 50% after one year, 25% after two years and 25% after three years, 150,000 of the options vest 50% on September 1, 2019 and 50% on December 1, 2019 and have a ten-year life.

Stock option transactions for the years ended March 31, 2021 are set forth below:

	Number of options	Weighted average exercise price
<b>Balance outstanding at March 31, 2018</b>	<b>2,175,000</b>	<b>\$ 2.11</b>
Forfeited	(275,000)	2.40
Granted	1,375,000	\$ 1.00
<b>Balance outstanding at March 31, 2019</b>	<b>3,275,000</b>	<b>\$ 1.67</b>
Granted	1,230,000	\$ 1.38
Forfeited	(375,000)	1.09
<b>Balance outstanding at March 31, 2020</b>	<b>4,130,000</b>	<b>1.56</b>
Granted	450,084	5.14
Exercised	(240,710)	1.29
Forfeited	(184,290)	1.67
<b>Balance outstanding at March 31, 2021</b>	<b>4,155,084</b>	<b>\$ 1.96</b>

The following table summarizes information about stock options outstanding at March 31, 2021:

Exercise Prices	Options Outstanding			Options Exercisable	
	Options	Weighted average remaining contractual life	Weighted average exercise price	Options	Weighted average exercise price
<b>\$</b>		<b>Years</b>	<b>\$</b>		<b>\$</b>
1.00 - 1.99	2,055,000	7.49	1.17	1,477,500	1.15
2.00 - 2.99	1,650,000	5.95	2.08	1,650,000	2.08
3.00 - 5.19	450,084	2.71	5.14	31,310	5.11
	<b>4,155,084</b>	<b>6.36</b>	<b>1.96</b>	<b>3,158,810</b>	<b>1.69</b>

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 11. Stock options cont'd

The following assumptions were used in the Black-Scholes option-pricing model to determine the fair value of stock options granted during the year:

	March 31, 2021		March 31, 2020			
Exercise price	\$5.11	-	\$5.19	\$1.30	-	\$1.38
Grant date share price	\$5.11	-	\$5.19	\$1.30	-	\$1.38
Risk free interest rate		1.0%			1.5%	
Expected life of options (years)		5		2.5	-	5
Expected volatility		103%		100	-	114%
Expected dividend yield		-			-	
Forfeiture rate						
Weighted average fair value of options granted during the period		\$4.01			\$0.94	

## 12. Government assistance

### *CPRIT assistance*

In February 2015, the Company received notice that it had been awarded a grant by the Cancer Prevention Research Institute of Texas ("CPRIT") whereby the Company is eligible to receive up to US\$14.1 million on eligible expenditures over a three-year period related to the development of the Company's phase 2b clinical program for MDNA55. In October 2017, the Company was granted a one-year extension to the grant allowing expenses to be claimed over a four-year period ending February 28, 2019. On February 4, 2019, the Company was approved for a further six-month extension ending August 31, 2019; on July 25, 2019, an additional six-month extension was granted to February 28, 2020 and on January 6, 2020, an additional six-month extension was granted to August 28, 2020 and as of March 31, 2021 the grant with CPRIT is substantially complete.

Of the US\$14.1 million grant approved by CPRIT, Medicenna has received US\$12.7 million from CPRIT as at March 31, 2021. The Company is eligible to receive the remaining US\$1.4 million upon the achievement of certain criteria as determined by CPRIT, from time to time. There can be no assurances that the balance of such grants will be received from CPRIT.

Ongoing program funding from CPRIT is subject to a number of conditions including the satisfactory achievement of milestones that must be met to release additional CPRIT funding, proof the Company has raised 50% matching funds and maintaining substantial functions of the Company related to the project grant in Texas as well as using Texas-based subcontractors and collaborators wherever possible. There can be no assurances that the Company will continue to meet the necessary CPRIT criteria, satisfactorily achieve milestones, or that CPRIT will continue to advance additional funds to the Company.

If the Company is found to have used any grant proceeds for purposes other than intended, is in violation of the terms of the grant, or relocates its MDNA55 related operations outside of the state of Texas, then the Company is required to repay any grant proceeds received.

Under the terms of the grant, the Company is also required to pay a royalty to CPRIT, comprised of 3-5% of revenues on net sales of MDNA55 until aggregate royalty payments equal 400% of the grant funds received at which time the ongoing royalty will be 0.5%. At this time the royalty is not probable and therefore no liability has been recorded.

During the year ended March 31, 2021, the Company did not receive any funds from CPRIT (2020 - \$3.5 million).

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 13. Commitments

### *Intellectual property*

On August 21, 2015, the Company exercised its right to enter into two license agreements (the “Stanford License Agreements”) with the Board of Trustees of the Leland Stanford Junior University (“Stanford”). In connection with this licensing agreement, the Company issued 649,999 common shares with a value of \$0.1 million to Stanford and affiliated inventors. The value of these shares has been recorded as an intangible asset that is being amortized over the life of the underlying patents. As at March 31, 2021, the Company’s intangible assets have a remaining capitalized net book value of \$71 thousand (March 31, 2020 - \$76 thousand).

The development milestones under the Stanford License Agreements were updated during the year ended March 31, 2020 to reflect the current stage of development of the Company’s programs.

The Company has entered into various license agreements with respect to accessing patented technology. In order to maintain these agreements, the Company is obligated to pay certain costs based on timing or certain milestones within the agreements, the timing of which is uncertain. These costs include ongoing license fees, patent prosecution and maintenance costs, royalty and other milestone payments. As at March 31, 2021, the Company is obligated to pay the following:

- Patent licensing costs due within 12 months totaling \$165 thousand.
- Patent licensing costs, including the above, due within the next five years totaling \$1.6 million.
- Given the current development plans and expected timelines of the Company it is assumed that project milestones of US\$0.3 million will be due in the next five years.
- Project milestone payments, assuming continued success in the development programs, of uncertain timing totaling US\$2.0 million and an additional US\$2.0 million in sales milestones.
- A liquidity payment of \$0.3 million is due to the National Institute of Health (“NIH”), which represents the remaining payments resulting from the Company’s liquidity event in March 2017.

<b>Contractual obligations</b>	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>3-5 years</b>	<b>Total</b>
Patent licensing costs	\$ 165	\$ 826	\$ 584	\$ 1,575
Lease payments	35	-	-	35
Liquidity event payment	328	-	-	328

As at March 31, 2021, the Company had obligations to make future payments, representing significant research and development and manufacturing contracts and other commitments that are known and committed in the amount of approximately \$9.3 million, of which \$2 million has been paid or accrued as at March 31, 2021. Most of these agreements are cancellable by the Company with notice. These commitments include agreements for manufacturing and preclinical studies.

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 14. Related party disclosures

### (a) Key management personnel

Key management personnel, which consists of the Company's officers (President and Chief Executive Officer, Chief Financial Officer, and Chief Development Officer) and directors, earned the following compensation for the following years:

	2021	2020
	\$	\$
Salaries and wages	1,501	892
Board fees	230	142
Stock option expense	797	873
	2,528	1,907

### (b) Amounts payable to related parties

As at March 31, 2021, the Company had trade and other payables in the normal course of business, owing to directors and officers of \$0.2 million, (2020 - \$0.2 million) related to board fees and accrued vacation.

## 15. Income taxes

### a) Provision for Income Tax

A reconciliation of income taxes at statutory rates with the reported taxes is as follows:

	2021	2020
	\$	\$
Loss before income taxes	(17,289)	(8,277)
Tax rate	27.0%	27.0%
Expected tax recovery	(4,668)	(2,235)
Change in statutory rates and foreign exchange rates	(288)	35
Permanent differences	272	309
Share issuance costs	(153)	(993)
Change in unrecognized deductible temporary difference	4,837	2,884
Total income tax expense (recovery)	-	-

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 15. Income taxes cont'd

### b) Deferred Income Tax

The significant components of the Company's deferred tax assets that have not been included on the consolidated statement of financial position are as follows:

	2021	2020
	\$	\$
Non-capital losses carry-forward	10,971	6,287
Property and equipment	50	50
Share issuance costs	1,093	940
	12,114	7,277
Unrecognized deferred tax asset	(12,114)	(7,277)
Net deferred tax assets	-	-

The significant components of the Company's temporary differences, unused tax credits and unused tax losses that have not been included in the consolidated statements of financial position are as follows:

Type	Amount	Expiry
Non-capital losses carry-forward	\$ 41,422,000	2035 - 2041
Property and equipment	186,000	N/A
Share issuance costs	4,047,000	2039 - 2042

## 16. Components of Expenses

	2021	2020
	\$	\$
<b>General and Administration Expenses</b>		
Depreciation expense	40	8
Stock based compensation	614	639
Facilities and operations	304	253
Public company expenses	4,677	1,004
Salaries and benefits	890	596
CPRIT grant claimed in eligible expenses (Note 12)	-	(125)
	6,525	2,375

# Medicenna Therapeutics Corp.

Notes to the Consolidated financial statements

For the Years Ended March 31, 2021 and 2020

(Tabular amounts expressed in thousands of Canadian Dollars, except for share and per share amounts)

## 16. Components of Expenses cont'd

	2021	2020
	\$	\$
<b>Research and Development Expenses</b>		
Chemistry, manufacturing, and controls	2,356	343
Regulatory	801	433
Discovery and pre-clinical	2,896	1,899
Clinical	1,225	1,528
Salaries and benefits	1,413	1,095
Licensing, patent, legal fees and royalties	1,620	811
Stock based compensation	391	486
CPRIT grant claimed in eligible expenses (Note 12)	-	(951)
Other research and development expenses	168	226
	<b>10,870</b>	<b>5,870</b>



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

*For the Year Ended  
March 31, 2021*

**DATE OF REPORT: May 27, 2021**

---

## MANAGEMENT'S DISCUSSION AND ANALYSIS

The following management's discussion and analysis ("MD&A") has been prepared as of May 27, 2021 and should be read in conjunction with the consolidated audited financial statements of Medicenna Therapeutics Corp. ("Medicenna", the "Company", "we", "our", "us" and similar expressions). The audited consolidated financial statements and related notes of Medicenna were prepared in accordance with International Financial Reporting Standards ("IFRS") and all dollar amounts are expressed in Canadian dollars unless otherwise noted.

All references in this MD&A to "the Company", "Medicenna", "we", "us", or "our" and similar expressions refer to Medicenna Therapeutics Corp. and the subsidiaries through which it conducts its business, unless otherwise indicated.

## FORWARD-LOOKING STATEMENTS

This MD&A contains forward-looking statements within the meaning of applicable securities laws. These statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. All statements contained herein that are not clearly historical in nature are forward-looking, and the words such as "plan", "expect", "is expected", "budget", "scheduled", "estimate", "forecast", "contemplate", "intend", "anticipate", or "believe" or variations (including negative variations) of such words and phrases, or statements that certain actions, events or results "may", "could", "would", "might", "shall" or "will" be taken, occur or be achieved and similar expressions are generally intended to identify forward-looking statements. Forward-looking statements in this MD&A include, but are not limited to, statements with respect to the Company's:

- requirements for, and the ability to obtain, future funding on favourable terms or at all;
- business strategy;
- the potential impact of the COVID-19 pandemic on our business;
- projected financial position and estimated cash burn rate, and the sufficiency of the Company's financial resources to support its activities;
- expected future loss and accumulated deficit levels;
- expectations about the timing of achieving milestones and the cost of the Company's development programs;
- observations and expectations regarding the safety and effectiveness of MDNA55, MDNA11, and other product candidates and the potential benefits to patients;
- impacts of the Phase 1/2 trial of MDNA11, including its design, approval by regulatory agencies, costs, timeline, ability to start enrolment at therapeutic doses, completion of the study, data arising from the study including biomarker results, immunogenicity, safety, tumor response, survival data and ability to secure collaborations with pharma companies for supply of immunotherapies in combination portion of the clinical trial;
- impacts of the Phase 3 trial of MDNA55, including its design, approval by regulatory agencies, reduced number of participants, costs, timeline, survival data and partnership opportunities for MDNA55;
- expectations regarding the progress, and the successful and timely completion, of the various stages of the regulatory approval process;
- ability to initiate, progress, and successful and timely completion, of various preclinical and manufacturing activities associated with future clinical trials;
- expectations about the Company's products' safety and efficacy;
- expectations regarding the Company's ability to arrange for the manufacturing of the Company's products and technologies;
- expectations regarding the filing and approval of various submissions by regulatory agencies regarding the conduct of new clinical trials;

- ability to secure strategic partnerships with larger pharmaceutical and biotechnology companies;
- strategy to acquire and develop new products and technologies and to enhance the safety and efficacy of existing products and technologies;
- plans to market, sell and distribute the Company's products and technologies;
- expectations regarding the acceptance of the Company's products and technologies by the market;
- ability to retain and access appropriate staff, management, and expert advisers;
- expectations with respect to existing and future corporate alliances and licensing transactions with third parties, and the receipt and timing of any payments to be made by the Company or to the Company in respect of such arrangements; and
- strategy with respect to the protection of the Company's intellectual property.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.

The forward-looking information in this MD&A does not include a full assessment or reflection of the unprecedented impacts of the COVID-19 pandemic and the ongoing and developing indirect global and regional economic impacts. The Company is currently experiencing uncertainty related to the on-going COVID-19 situation. It is anticipated that the spread of COVID-19 and global measures to contain it and its variants, have had and continue to have an impact on the Company, however it is challenging to quantify the potential future magnitude of such impact at this time. The Company is regularly assessing the situation and remains in contact with its partners, clinical sites and investigators, contract research organizations ("CROs"), contract development and manufacturing organizations ("CDMOs") and suppliers to assess any impacts and risks. The Company believes that ongoing COVID-19 restrictions could impact CROs and associated IND-enabling studies of MDNA11, CDMOs and manufacturing timelines for MDNA11, as well as the planned clinical development timelines of the MDNA11 Phase 1/2a clinical trial as patient recruitment for clinical trials is currently being impacted. Medicenna has experienced delays in receiving components and supplies due to worldwide supply chain disruptions. The regulatory submissions to initiate the clinical study is planned for mid-calendar 2021 and it is not possible to predict the potential impact of patient recruitment however we are hopeful that as vaccination rates increase worldwide COVID-19 may not have a significant impact on patient recruitment.

All forward-looking statements reflect the Company's beliefs and assumptions based on information available at the time the assumption was made. In making the forward-looking statements included in this MD&A, the Company has made various material assumptions, including but not limited to (i) securing adequate and timely supply of MDNA11 for clinical trials (ii) obtaining positive results from pre-clinical studies and clinical trials; (iii) obtaining regulatory approvals; (iv) general business and economic conditions; (v) the availability of financing on reasonable terms; (vi) the Company's ability to attract and retain skilled staff; (vii) market competition; (viii) the products and technology offered by the Company's competitors; (ix) the Company's ability to protect patents and proprietary rights; and (x) the effect of COVID-19 on the Company's business and operations. By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, known and unknown, that contribute to the possibility that the predictions, forecasts, projections or other forward-looking statements will not occur. Factors which could cause future outcomes to differ materially from those set forth in the forward-looking statements include, but are not limited to:

- the effect of continuing operating losses on the Company's ability to obtain, on satisfactory terms, or at all, the capital required to maintain the Company as a going concern;
- the ability to obtain sufficient and suitable financing to support operations, preclinical development, manufacturing, clinical trials, and commercialization of products;
- the risks associated with the development of novel compounds at early stages of development in the Company's intellectual property portfolio;
- the risks of reliance on third parties for the planning, conduct and monitoring of clinical trials and for the manufacture of drug products;

- the risks of reliance on third parties for timely completion of ongoing clinical trial activities, conduct of statistical analysis, imaging analysis, preparation of study reports and regulatory submissions;
- the risks associated with the development of the Company's product candidates including the demonstration of efficacy and safety;
- the risks related to clinical trials including potential delays, cost overruns and the failure to demonstrate efficacy and safety;
- the risks of delays and inability to complete clinical trials due to difficulties in securing Institutional Review Board (IRB) or ethics committee approval and enrolling subjects;
- the risks associated with the Company's inability to successfully develop companion diagnostics for the Company's development candidates;
- the risks associated with the Company's inability to successfully access drug delivery technology or materials and components required for drug delivery;
- the risks associated with reliance on third parties for proper storage, packaging and shipment of active ingredients or other components required for preclinical or clinical trials;
- the risks associated with product loss or degradation or failure of manufacturing batches and not meeting specifications for use in preclinical or clinical trials;
- delays or negative outcomes from the regulatory approval process;
- the Company's ability to successfully compete in the Company's targeted markets;
- the Company's ability to attract and retain key personnel, collaborators and advisors;
- the risks relating to the increase in operating costs from expanding existing programs, acquisition of additional development programs and increased staff;
- risk of negative results of clinical trials or adverse safety events by the Company or others related to the Company's product candidates;
- the potential for product liability claims;
- the Company's ability to achieve the Company's forecasted milestones and timelines on schedule;
- the financial risks related to the fluctuation of foreign currency rates and expenses denominated in foreign currencies;
- the Company's ability to adequately protect proprietary information and technology from competitors;
- risks related to changes in patent laws and their interpretations;
- the Company's ability to source and maintain licenses from third-party owners;
- the risk of patent-related litigation and the ability to protect trade secrets;
- the Company's internal computer systems, or those used by its contractors or consultants, may fail or suffer security breaches.

Although the forward-looking statements contained in this MD&A are based upon what the Company's management believes to be reasonable assumptions, the Company cannot assure readers that actual results will be consistent with these forward-looking statements.

Any forward-looking statements represent the Company's estimates only as of the date of this MD&A and should not be relied upon as representing the Company's estimates as of any subsequent date. The Company undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events, except as may be required by securities laws.

## **COMPANY OVERVIEW**

The Company's principal business activity is the development and commercialization of Superkines and Empowered Superkines for the treatment of cancer. Medicenna has five wholly owned subsidiaries, Medicenna Therapeutics Inc. (British Columbia), Medicenna Biopharma Inc. (Delaware), Medicenna Biopharma Inc. (British Columbia), Medicenna Australia PTY Ltd (Australia) ("MAL") and Medicenna Therapeutics UK Limited ("MTU"). On August 2, 2017 Medicenna graduated to the main board of the Toronto Stock Exchange. On November 13, 2017, Medicenna continued under the *Canada Business Corporations Act*. On August 24, 2020, Medicenna began trading on the Nasdaq Capital Market ("NASDAQ") under the symbol "MDNA". On March 30, 2021, the Company set up its wholly owned subsidiary MAL and on April 15, 2021 the Company set up its wholly owned subsidiary MTU.

Medicenna is an immunotherapy company developing novel, highly selective versions of interleukin-2 (“IL-2”), interleukin-4 (“IL-4”) and interleukin-13 (“IL-13”) tunable cytokines, called “Superkines”. These Superkines can be developed either on their own as short or long-acting therapeutics or fused with cell killing proteins in order to generate Empowered Superkines that precisely deliver potent toxins to cancer cells without harming adjacent healthy cells. Superkines can also be fused with a large variety of proteins, antibodies and even other Superkines in order to incorporate two synergistic therapeutic activities into one molecule, creating novel Bi-Functional SuperKine ImmunoTherapies referred by Medicenna as BiSKITs™. Medicenna’s mission is to become the leader in the development and commercialization of Superkines, Empowered Superkines and BiSKITs for the treatment of a broad range of cancers and other diseases. The Company seeks to achieve its goals by drawing on its expertise, and that of world-class collaborators and advisors, in order to develop a unique set of therapeutic Superkines. Compared to naturally occurring cytokines – that bind to multiple receptors on many cell types – superkines are engineered with unique specificity toward specific receptor subtypes and defined target cell subsets in order to precisely activate or inhibit relevant signalling pathways or immune cells in order to improve therapeutic efficacy and safety.

Medicenna has completed a Phase 2b clinical trial of MDNA55, Medicenna’s Empowered Superkine, for the treatment of recurrent glioblastoma (“rGBM”), the most common and uniformly fatal form of brain cancer. MDNA55 is a fusion of a circularly permuted version of IL-4, fused to a potent fragment of the bacterial toxin, Pseudomonas exotoxin (PE), and is designed to preferentially target tumor cells that over-express the interleukin 4 receptor (“IL-4R”). MDNA55 has been studied in 5 clinical trials in 132 patients, including 112 patients with rGBM, in which it has shown indications of superior efficacy when compared to the current standard of care (SOC). MDNA55 has secured Orphan Drug Status from the United States Food and Drug Administration (“FDA”) and the European Medicines Agency (“EMA”) as well as Fast Track Designation from the FDA for the treatment of rGBM and other types of high grade glioma. On September 29, 2020, Medicenna had an End of Phase 2 (“EOP2”) meeting with the FDA and provided an update on October 15, 2020 announcing that the FDA agreed for Medicenna to conduct an innovative open-label hybrid Phase 3 trial that allows use of a substantial number of patients (two-thirds) from a matched external control arm to support regulatory approval of MDNA55 for rGBM. This hybrid trial design will reduce the overall number of subjects needed to enroll in the study to achieve the primary endpoint, and notably reduce the number of subjects that would be randomized to SOC treatment under a conventional 1:1 randomization. We are currently pursuing a strategic partnership to assist with additional clinical development of MDNA55.

Complementing MDNA55, the Company has built a deep pipeline of promising preclinical Superkine candidates such as IL-2 agonists (MDNA109), IL-2 antagonists (MDNA209), dual IL-4/IL-13 antagonists (MDNA413) and IL-13 Superkine (MDNA132) all in-licensed from Leland Stanford Junior University (“Stanford”). The most advanced of these programs is the MDNA109 platform (MDNA11 and MDNA19), of which MDNA11 is the only genetically engineered IL-2 Superkine designed to specifically target CD122 (IL-2R $\beta$ ) with high affinity without CD25 dependency. Both MDNA11 and MDNA19, which unlike native IL-2 (Proleukin), have superior pharmacokinetic properties, lack CD25 binding in order to improve safety, potently stimulate effector T cells, reverse natural killer (“NK”) cell anergy and act with exceptional synergy when combined with checkpoint inhibitors.

MDNA19 and MDNA11 originate from the same base molecule engineered from the MDNA109 platform. This base molecule, MDNA109, has a very short half-life which would require frequent daily dosing and therefore would not be convenient for cancer patients. To address this issue, Medicenna fused both Fc (MDNA19) and albumin (MDNA11) to MDNA109 with the effect of increasing the size of the molecule and its half-life. After completing pilot non-human primate studies with both MDNA19 and MDNA11, it became apparent that MDNA11 was the more promising molecule and has therefore been selected as the lead IL-2 candidate to advance into clinical development over MDNA19. Medicenna is thus working towards submitting an application to regulatory agencies in mid-calendar 2021 in order to start a Phase 1/2a clinical study for MDNA11. Due to similarities in cancer patients that can be treated by MDNA11 and MDNA19, Medicenna is not planning to advance clinical development of MDNA19, which was previously identified as the Company’s lead IL-2 candidate. Nevertheless, MDNA19 remains relevant for Medicenna as it is derived from the same platform as MDNA11 and may be used as part of our BiSKITs™ platform.

Our **BiSKITs™** platform allows us to develop designer Superkines by fusing them to other proteins, antibodies or naked IL-2, IL-4 and IL-13 Superkines in order to combine two distinct and yet synergistic mechanisms of action into one molecule: a **BiSKIT™**. Medicenna is working towards selecting a lead BiSKIT™ candidate to begin IND enabling studies before the end of calendar 2021.

## ACHIEVEMENTS & HIGHLIGHTS

The following are the achievements and highlights for the year ending March 31, 2021 through to the date hereof:

- On April 15, 2020, Medicenna announced the closing of the full over-allotment option to purchase an additional 1,693,548 common shares of Medicenna at a price of \$3.10 per share, in connection with its public offering of common shares initially closed on March 17, 2020 (the “2020 Public Offering”). The total gross proceeds arising from this financing was \$40.25 million.
- On May 29, 2020, Medicenna announced presentation of data from its Phase 2b trial of MDNA55 at the virtual 2020 Annual Meeting of the American Society of Clinical Oncology (“ASCO”). The oral poster discussion focused on additional data supporting the clinical efficacy of MDNA55 in patients with rGBM. These data indicated that MDNA55 has the potential to benefit all rGBM patients treated at the high dose (3 180 mg) irrespective of IL4R expression. Results of this and earlier clinical trials reflect a favorable safety profile with the high dose (maximum tolerated dose (“MTD”) = 240 mg). Based on these findings Medicenna has determined that a Proposed Population for future clinical development shall comprise of IL4R High (irrespective of dose) as well as IL4R Low patients receiving the high dose as these patients were shown to benefit the most from a single treatment of MDNA55. Median survival and OS-12 in this population (n = 32) was 15.8 months and 62% vs 7.0 months and 18%, respectively, when compared to the eligibility matched Synthetic Control Arm (“SCA”).
- On May 29, 2020, Medicenna announced presentation of data on MDNA11, one of its candidates from the IL-2 Superkine program, at the virtual 2020 ASCO Annual Meeting. The poster presentation focused on encouraging data in non-human primates (“NHP”) for MDNA11, a long-acting IL-2 variant engineered to have enhanced affinity to CD122 with no binding to CD25. We believe this engineering allows MDNA11 to specifically expand cancer fighting naïve CD8 T cells as well as NK cells with minimal stimulation of T regulatory cells (“Tregs”) and eosinophils (associated with vascular leak syndrome). As such, the use of MDNA11 circumvents both immune-suppression and toxicity normally observed with Proleukin. In addition, we believe MDNA11 has several advantages over other long-acting IL-2 variants, as it permits enhanced accumulation in the tumor vicinity and can be recycled in vivo due to its albumin content, thus exhibiting prolonged circulation in the blood stream and thereby reducing the frequency of treatment.
- On July 29, 2020 we received approval from Depository Trust Company (“DTC”), making Medicenna’s shares DTC eligible and allowing non-Canadian investors to easily trade the Company’s shares through the broker of their choice.
- On August 24, 2020, Medicenna began trading on the NASDAQ under the symbol “MDNA”.
- On September 30, 2020, Dr. Jack Geltosky, an experienced pharmaceutical licensing executive with a strong research and development background, was elected to Medicenna’s Board of Directors.
- On October 15, 2020, we announced positive outcomes following the EOP2 meeting with the FDA. The FDA agreed that we could conduct an innovative open-label hybrid Phase 3 registration trial that allows use of a substantial number of patients (two-thirds) from a matched external control arm to support regulatory approval of MDNA55 for rGBM. The FDA also expressed their willingness to consider interim analysis of the trial if certain criteria are met. Unlike conventional randomized control trials, the hybrid trial design will reduce the overall number of subjects needed to enroll in the study to achieve the primary endpoint, as well as reduce the cost and timelines associated with completing the trial.
- On October 26, 2020, we announced a poster presentation at the 32<sup>nd</sup> ENA Symposium on Molecular Targets and Cancer Therapeutics. The preclinical data, which featured results with MDNA11 as well as data related to a long acting bispecific IL-2/IL-13 Superkine that is designed to simultaneously activate cancer killing immune cells while reversing anti-inflammatory TME. The results sustained the potent therapeutic efficacy of MDNA11 as a monotherapy agent in multiple tumor models. Medicenna’s novel bispecific IL-2/IL-13 Superkines demonstrated the potential of the platform to address a critical unmet need by effectively targeting immunologically “cold” tumors that are often resistant to immunotherapeutic agents.

- On October 26, 2020, we also announced a Late Breaking Abstract poster presentation at the 32<sup>nd</sup> ENA Symposium on Molecular Targets and Cancer Therapeutics. Amongst an all-comer population, a single treatment with MDNA55 resulted in at least 100% increase in both 12-month progression free survival (“PFS-12”) (27% versus 2 to 10%) and 2-year survival (“OS-24”) (20% vs 5 to10%) when compared to what is achieved with approved therapies. In a subset of all-comer patients treated with transient low dose bevacizumab, to reduce steroid use, median survival (“mOS”) was 21.8 months and OS-24 was 44%.
- On November 4, 2020 Medicenna held a positive Scientific Advice Meeting for MDNA11 (similar to a pre-IND meeting) with the United Kingdom (UK) Medicines and Healthcare products Regulatory Agency (MHRA). It confirmed that our plans for CMC, pre-clinical and Phase 1/2a clinical trial were appropriate for submission of an Investigational Medical Product Dossier (“IMP”) in 2021 in order to commence first in human studies with MDNA11 in the UK.
- On December 9, we presented at an oral session at the 2<sup>nd</sup> Annual Glioblastoma Drug Development Summit. The presentation included updated data from the MDNA55 Phase 2b clinical trial, as well as an overview of the planned MDNA55 Phase 3 registration trial.
- On December 11, 2020, we hosted a key opinion leader (“KOL”) call on MDNA55 featuring presentations by KOLs who provided an overview on the current treatment landscape for rGBM, highlighted the results from the MDNA55 Phase 2b clinical trial and addressed the advantages of the hybrid Phase 3 design agreed by the FDA.
- On December 30, 2020, we announced that we entered into a sales agreement (the “ATM Agreement”) with SVB Leerink LLC (“SVB Leerink”) acting as sales agent, pursuant to which the Company may, from time to time sell, through the at-the-market (“ATM”) offering, such number of common shares as would have an aggregate offering price of up to US\$25.0 million (the “ATM Facility”). We plan to use the net proceeds of the ATM offering for general corporate purposes including, but not limited to working capital expenditures, research and development expenditures, and clinical trial expenditures. During the fourth quarter of fiscal 2021, a total of 1,398,357 common shares were sold under the ATM Facility for total gross proceeds of US\$5.8 million (\$7.1 million). As at March 31, 2021, US\$19.2 million (\$24 million) remained available under the ATM Facility.
- On March 25, 2021, Medicenna presented preclinical data from the Company’s Superkine platform programs at the virtual Cytokine-Based Cancer Immunotherapies Summit. The presentation included data showing that treatment with MDNA11 alone or in combination with anti-PD-1 therapy led to tumor growth inhibition and complete responses in a murine MC38 tumor model as well as preclinical data demonstrating the ability of MDNA413, an IL-13 super-antagonist, to suppress myeloid derived suppressor cells (MDSC) and M2a polarization of tumor associated macrophages, which are known to accumulate in the tumor micro environment (“TME”) and promote cancer growth.
- Subsequent to the year end, on April 12, 2021, we announced new preclinical data demonstrating the potentially potent immune modulatory effects of MDNA19-MDNA413, an IL-2/IL-13 dual specific cytokine derived from the Company’s BiSKITs™ platform. The data were featured in an electronic poster presentation at the 2021 American Association for Cancer Research (AACR) Annual Meeting. Data presented in the poster suggest that this molecule simultaneously activates a pro-inflammatory anti-tumor response, due to its highly selective binding and signaling via the intermediate affinity IL-2 receptor (CD122/CD132), while inhibiting pro-tumoral immune pathways by blocking IL4/IL13 signaling via the Type 2 IL-4 receptor (IL-4R/IL-13R1). We believe that MDNA19-MDNA413’s ability to mediate both IL-2 and IL-4/IL-13 signaling has the potential to address a significant unmet medical need for effective therapies against immunologically cold tumors which are often resistant to checkpoint inhibitors and other immunotherapeutic agents due to their immunosuppressive TME.
- Subsequent to the year end, on April 21, 2021, we announced the appointment of Kevin Moulder, PhD, as the Company’s Chief Scientific Officer (CSO). Dr. Moulder brings over 30 years of experience in drug discovery and development in the fields of protein design, antibody technology, immunology, inflammation and autoimmune disease. Kevin holds a first class honors degree in biological sciences and a Ph.D in Immunology from the University of London.

Subsequent to year end, on May 12, 2021, we announced the appointment of Mann Muhsin, MD, as the Company's Chief Medical Officer (CMO). Dr. Muhsin is an accomplished industry leader with more than 20 years of experience in medical practice and drug development and has a track record of innovation in oncology and immuno-oncology trial design. Dr. Muhsin received his doctorate of medicine MBChB (MD) and internal medicine training from Baghdad University School of Medicine prior to practicing civilian medicine, and at the US Army Medical Corps Combat Support Hospitals (CSH).

## **COVID-19 UPDATE**

In March 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic and the Company continues to evaluate the COVID-19 situation and monitor any impacts or any potential impacts to the business. Medicenna has implemented health and safety measures in accordance with health officials and guidance from local government authorities. Further, the pandemic has an impact on the Company's third-party vendors which could result in the interruption of operations and result in development delays including the ongoing pre-clinical, manufacturing and future clinical activities related to MDNA11. Medicenna has experienced delays in receiving components and supplies due to worldwide supply chain disruptions. The application to regulatory agencies for initiation of the clinical study is planned for mid-calendar 2021. It is not possible to predict the potential impact of patient recruitment in the ensuing months, however, we are hopeful that as vaccination rates increase worldwide COVID-19 will have a reduced impact on patient recruitment. The Company asked all our business partners to engage us by telephone or video conference where possible, minimizing business travel and requiring self-isolation for employees travelling outside of Canada. As the COVID-19 health crisis further develops, the Company will continue to rely on guidance and recommendations from local health authorities, Health Canada and the Centers for Disease Control and Prevention to update the Company's policies.

## **FINANCING UPDATE**

### ***Year ended March 31, 2021***

On April 15, 2020, the Company closed the full over-allotment option to purchase an additional 1,693,548 common shares of Medicenna at a price of \$3.10 per share in connection with its public offering of common shares initially closed on March 17, 2020 (the "2020 Public Offering"). As a result of the exercise of this over-allotment option, Medicenna received additional gross proceeds of \$5.3 million, for total gross proceeds of \$40.25 million, which will be used to fund further development of MDNA11, including preclinical activities, manufacturing and Phase 1/2a clinical trials, as well as for general corporate purposes and working capital.

On December 30, 2020, the Company entered into the ATM agreement with SVB Leerink acting as sales agent, pursuant to which the Company may, from time to time sell, through ATM offerings, on the NASDAQ such number of common shares as would have an aggregate offering price of up to US\$25.0 million. The ATM Facility will remain in place until the earlier of the maximum number of shares being sold, August 28, 2022 or the ATM Agreement being terminated. Costs associated with setting up the ATM Facility were approximately \$0.5 million. Total costs associated with the offering are recorded as a reduction in share capital when common shares are issued, net of gross proceeds received in the same period. During the fourth quarter of fiscal 2021, a total of 1,398,357 shares were sold under the ATM Facility for total gross proceeds of \$7.1 million (US\$5.8 million). As at the date of this report, there is approximately \$24 million (US\$19.2 million) available on the ATM Facility.

During the year ended March 31, 2021, 3,415,266 warrants were exercised for proceeds of \$6.7 million, the details of which are described below:

Number of Warrants	Exercise Price	Proceeds	Expiry Date
	\$	\$	
57,500	1.20	69,000	December 21, 2020
115,000	1.20	138,000	December 21, 2023
139,759	1.30	181,687	October 17, 2021
152,214	1.75	266,375	October 17, 2022
2,812,083	2.00	5,624,166	January 1 & April 5, 2021
138,710	3.10	430,001	March 17, 2022
<b>3,415,266</b>		<b>6,709,229</b>	

#### **Year ended March 31, 2020**

On October 17, 2019, Medicenna completed a public offering raising total gross proceeds of \$6,900,000. The Company issued 5,307,693 units at \$1.30, consisting of one common share and one-half common share purchase warrant. Each whole warrant is exercisable at \$1.75 until October 17, 2022. The Company paid commission to the agents totaling \$455,175 and issued 350,134 warrants to the agents exercisable into one common share of the Company at an exercise price of \$1.30 for a period of twenty-four months.

On March 17, 2020, Medicenna completed the 2020 Public Offering of 11,290,323 shares for gross proceeds of \$35,000,001. In the context of the 2020 Public Offering, Medicenna issued 790,323 broker warrants as partial consideration for the services provided by the agents in connection with the 2020 Public Offering. Each broker warrant is exercisable for one common share at a price of \$3.10 per common share until March 17, 2022. The total costs associated with the 2020 Public Offering were \$3,365,487, including an amount of \$456,016 which represents the estimated fair value of the broker warrants.

During the year ended March 31, 2020, 1,623,675 warrants were exercised for proceeds of \$2,372,822.

#### **RESEARCH & DEVELOPMENT UPDATE**

##### **MDNA55**

MDNA55 has been studied in 5 clinical trials in 132 patients, including 112 patients with rGBM, in which it has shown indications of superior efficacy when compared to the current standard of care (“SOC”). The Company has secured Orphan Drug Status from the FDA and the EMA as well as Fast Track Designation from the FDA.

MDNA55 is delivered locally to the site of the tumor using convection enhanced delivery (“CED”) technology, a drug delivery technique for localized administration of MDNA55 into brain tumors. Medicenna has obtained an exclusive license from the National Institutes of Health (“NIH”) to patents covering CED.

##### **Phase 2b Study Outline for Glioblastoma at First or Second Recurrence or Progression**

The Phase 2b trial with MDNA55 using enhanced CED delivery was a multi-center, open-label, single-arm study in up to 52 patients (at least 46 intent-to-treat (“ITT”) patients evaluable for survival and 35 patients evaluable for response), with first or second recurrence or progression of GBM after surgery or radiotherapy ± adjuvant therapy or other experimental therapies.

The primary endpoint of the study was mOS comparing an expected null survival rate of 8.0 months (based on historical control) with an alternative pursue rate of 11.5 months (1-sided alpha = 0.10 and 80% power for approximately 46 ITT or per protocol subjects). IL4R expression levels in tumor biopsies and their potential impact on survival outcomes following treatment with MDNA55, were retrospectively evaluated.

## ***Phase 2b Study Update***

In April 2017, we treated the first rGBM patient in the Phase 2b clinical trial of MDNA55 and enrolled patients at eight clinical sites across the United States and 1 site in Europe with enrolment in the study (46 ITT patients) completed in April 2019 of which 44 patients met all the protocol eligibility requirements (per protocol population).

On September 28, 2017, we announced that based on encouraging drug distribution and safety data observed we implemented an amended protocol allowing higher doses and volumes of MDNA55 as well as an increase in study size to up to 52 subjects. This protocol amendment was based on a planned safety analysis following a unanimous recommendation from MDNA55's Safety Review Committee.

It was reported on May 2, 2018 that half the patients in the study had been recruited and the data to date demonstrated solid safety results and early signals of efficacy based on the findings of the Safety Review and Clinical Advisory Committees. Following the Safety Review, Medicenna amended the protocol at the recommendation of clinical advisors to further improve the chances for demonstrating increased therapeutic benefit for patients. The amendment allowed the implementation of optimal methodologies including more personalized dosing based on the tumor load, incorporation of advanced imaging modalities to measure treatment responses more reliably, use of sub-therapeutic dose of Avastin® in patients that could not tolerate steroid use to control edema and inflammation and allowing investigators to administer a second dose of MDNA55 where appropriate.

Review of some patients who had been withdrawn from the study, believing that their disease had progressed, found that the apparent increases in tumor volumes, seen on brain scans, were, in fact, due to tissue necrosis, inflammation and edema. This is a known effect of immunotherapeutic agents such as MDNA55, called pseudo-progression, which poses a challenge to patient retention, management and data interpretation. When evaluating images from such patients, using multi-modal imaging, Medicenna found evidence of biological activity of MDNA55 suggesting that these patients were benefiting from the treatment, and in multiple cases following withdrawal from the study, surgical resection showed significant tumor necrosis. This amendment allowed a biopsy and/or advanced multi-modal imaging to more accurately discriminate between necrosis/inflammation and true disease progression. These tools would encourage subjects to remain in the study, where appropriate, giving time for the pseudo-progression to resolve and increase the likelihood of clinical responses.

Following the amended protocol as announced on May 2, 2018 and after receiving the necessary regulatory and site approvals patient enrolment was resumed at higher doses provided that the pre-established MTD of 240 mg was not to be exceeded.

The protocol amendments announced September 28, 2017 and May 2, 2018 resulted in increased timelines for completion of the MDNA55 Phase 2b clinical trial due to an increase in the original number of patients as well as a slowdown of patient recruitment while the necessary regulatory reviews and approvals were completed.

On April 30, 2019, Medicenna announced that enrolment in the study was complete with 46 evaluable patients (ITT population) of which 44 patients were subsequently identified as meeting protocol eligibility requirements without major deviations (per protocol population).

On May 29, 2020, Medicenna announced presentation of data from its Phase 2b trial of MDNA55 in patients with rGBM, at the 2020 ASCO Annual Meeting. The oral poster discussion led by Dr. Ian F. Parney, MD, PhD (Mayo Clinic), and a presentation by Dr. John Sampson, MD, PhD (Robert H. and Gloria Wilkins Distinguished Professor of Surgery, Duke University School of Medicine), focused on additional data demonstrating clinical superiority of MDNA55 in patients with rGBM.

Highlights from the ASCO presentation included:

- Comparison of MDNA55 with an eligibility-matched External Control Arm (“ECA” or also known as Synthetic Control Arm, SCA) using propensity-score weighting (Li et al.), an unbiased approach to select patients that match the baseline characteristics of MDNA55 treated patients based on 11 key baseline prognostic factors, demonstrated an improvement in mOS of 72%. When stratified by IL4R status, IL4R High subjects in the MDNA55 arm demonstrated improved mOS by 116% (Table 1).

**Table 1.**

Propensity-Weighted Groups	N	mOS (months)	Improvement in mOS	HR
MDNA55 All-comers	43	12.4	72%	0.63
ECA All-comers	40.8	7.2		
MDNA55 IL4R High	17	13.2	116%	0.52
ECA IL4R High	16.8	6.1		

Irrespective of IL4R expression, subjects showed a tumor control rate (“TCR”) (tumor shrinkage or stabilization) of 76% based on modified RANO criteria; these subjects demonstrated mPFS of 4.6 months, PFS at six months (“PFS-6”) of 40%, PFS-12 of 33%, mOS of 15.0 months and OS-12 of 57%.

Additional updated results (not presented at ASCO) include the following:

Patients with Low IL4R expression (H-Score  $\leq$  60) had a similar TCR as patients with High IL4R expression (H-Score  $>$  60); TCR of 75% vs. 76%, respectively. However, the majority of the IL4R Low patients (11 of 16) received high doses of MDNA55 (180 – 240 mg; median 180 mg) whereas only 9 of 21 IL4R High patients received the high dose of MDNA55.

The IL4R Low group receiving high dose also showed improved survival (mOS Not Reached, OS-12 of 53%) when compared to the low dose group (mOS = 8 months, OS-12 = 13%).

The Proposed Population (n=32), comprised of all IL4R High (irrespective of dose) as well as IL4R Low patients receiving the high dose, were shown to benefit the most from a single treatment of MDNA55. Median survival and OS-12 in this population was 15.8 months and 62% vs 7.0 months and 18%, respectively, when compared to the eligibility matched ECA. (Table 2).

**Table 2.**

Eligibility-Matched	N	mOS	Improvement in mOS	HR	OS-12
Proposed Population	32	15.8	126%	0.45	62%
ECA	40	7.0			18%
Propensity-Weighted					
Proposed Population	32	15.7	118%	0.52	NA
ECA	33.9	7.2			NA

TCR in the Proposed Population was 81% based on radiologic assessment by mRANO criteria.

These data indicate that MDNA55 has the potential to benefit all rGBM patients treated at the high dose (180 – 240 mg; median 180 mg) irrespective of IL4R expression. The high dose has already shown an acceptable safety profile in this and earlier clinical trials (MTD = 240 mg).

On October 26, 2020, Dr. John Sampson, MD, PhD (Robert H. and Gloria Wilkins Distinguished Professor of Surgery, Duke University School of Medicine) updated clinical data from the Phase 2b trial of MDNA55 in rGBM as a Late Breaking Abstract poster at the 32nd ENA Symposium on Molecular Targets and Cancer Therapeutics. Highlights from the poster included updated results following a longer follow-up duration and new data based on transient low-dose use of bevacizumab:

- Data from all trial participants show that a single MDNA55 treatment led to a mOS of 11.9 months (expected 6-9 months) which is comparable to earlier reported mOS of 11.6 months, an OS-24 of 20% (expected 0-10%), and a PFS-12 of 27% (expected 2-10%).
- In Medicenna's proposed patient population, mOS was 14.0 months (comparable to mOS of 15 months reported earlier), OS-24 was 20%, and PFS-12 was 24%. The proposed patient population included all MDNA55-treated trial participants with high IL4R expression and participants with low IL4R expression that received a high dose of MDNA55 treatment.
- Unmethylated *MGMT* promoter affects more than 50% of GBM patients and is associated with treatment resistance and poorer survival outcomes. However, *MGMT* status did not negatively affect MDNA55 treatment. In the proposed population (N=17), mOS was 14.9 months with an OS-24 of 22%.
- Following MDNA55 treatment, transient (median of 3 cycles) low dose (5 mg/Kg q2w or 7.5 mg/Kg q3w) administration of Avastin<sup>®</sup>, used for symptom control and steroid sparing in patients receiving high concentrations of MDNA55, further improved patient survival. Amongst all comers (N=9) and the proposed population (N=8), mOS was 21.8 months and 18.6 months and OS-24 was of 44% and 38%, respectively.

On September 29, 2020, Medicenna had an EOP2 meeting with the FDA to discuss future development and commercialization of MDNA55 for rGBM. On October 15, 2020, we announced positive outcomes following the EOP2 meeting with the FDA. The FDA agreed that we could conduct an innovative open-label hybrid Phase 3 trial that allows use of a substantial number of patients (two-thirds) from a matched external control arm to support regulatory approval of MDNA55 for rGBM. The FDA also expressed their willingness to consider interim analysis of the trial if certain criteria are met. Unlike conventional randomized control trials, the hybrid trial design will reduce the overall number of subjects needed in the study to achieve the primary endpoint as well as reduce the cost and timelines associated with completing the trial.

The proposed Phase 3 clinical trial design includes a concurrent 3:1 randomized cohort (3 subjects receiving MDNA55 for every 1 subject receiving SOC) and an additional matched external control arm. The primary endpoint of overall survival (OS) will be determined by a 1:1 analysis of the MDNA55 arm versus the pooled control arm, which will consist of external controls and subjects randomized to SOC. This hybrid trial design will also reduce the overall number of subjects needed to enroll in the study to achieve the primary endpoint, and notably reduce the number of subjects that would be randomized to SOC treatment under a conventional 1:1 randomization. By reducing the need to enroll control subjects, an ECA can increase efficiency, reduce delays, lower trial costs, and speed lifesaving therapies to market. The Company demonstrated promising results for MDNA55 in a Phase 2b clinical trial when compared to a retrospective and a well-balanced ECA. Medicenna is pursuing strategic partnerships to assist with additional clinical development of MDNA55, as well as preparing the program for commercialization and its subsequent launch in various countries where approval has been granted. In addition to development and regulatory approval of MDNA55, see "Risk and Uncertainties" below.

## **Superkine Platform**

### ***IL-2 Superkines***

IL-2 was one of the first effective immunotherapies developed to treat cancer due to its proficiency at expanding T cells, the central players in cell-mediated immunity. Originally discovered as a growth factor for T cells, IL-2 can also drive the generation of activated immune cells, immune memory cells, and immune tolerance.

In contrast, IL-2 induced overstimulation of immune cells can lead to an imbalance in the ratio of effector and regulatory T cells, resulting in autoimmune diseases. Part of the reason for this is due to the nature of the IL-2 receptor. The IL-2 receptor is composed of three different subunits, IL-2R $\alpha$  (also known as CD25), IL-2R $\beta$  (CD122) and IL-2R $\gamma$  (CD132). The arrangement of these different proteins determines the response to IL-2 signaling.

The IL-2 $\beta$  and IL-2 $\gamma$  components together make a receptor capable of binding IL-2, but only moderately so. When all three components are together, including IL-2R $\alpha$ , the receptor binds IL-2 with a much higher affinity. This complete receptor is usually found on regulatory T cells, which dampens an ongoing immune response. The lower affinity receptor, composed of just the IL-2 $\beta$  and IL-2 $\gamma$  components, is more often found on “naive” immune cells, which are awaiting instructions before seeking out cancer cells.

Altering IL-2's propensity for binding these receptors could encourage greater immune cell activation and/or block the function of regulatory cells. Medicenna's MDNA109 (MDNA11) and MDNA209 platforms take advantage of this dynamic by binding to specific receptors and either activating (MDNA109) or blocking them (MDNA209). The majority of development has been focused on the MDNA109 platform candidates where promising results have been demonstrated in various animal tumour models, as described below.

Like the MDNA109 platform, MDNA209 therapeutics bind with exceptional affinity to IL-2R $\beta$ , but are unable to bind to the common IL-2 $\gamma$  receptor which in turn blocks signaling and activation of NK cells and effector CD8 T cells. MDNA209 platform offers a variety of candidates that are either partial agonists, partial antagonists or complete antagonists, enabling us to dampen the signaling properties of an over-active immune system to an amplitude that elicits desired therapeutic function without causing undesired toxicity. We believe MDNA209 variants can therefore be used to treat a host of autoimmune diseases such as multiple sclerosis and preliminary studies (Mitra et al., 2015) have shown that MDNA209 variants can also mitigate graft versus host disease (GvHD) following transplantation. Limited work on MDNA209 has been initiated but development timelines have not been established at this time.

### **MDNA11**

MDNA109 (a precursor to MDNA19 and MDNA11) is an enhanced version of IL-2 that binds up to 200 times more effectively to IL-2R $\beta$ , thus greatly increasing its ability to activate and proliferate the immune cells needed to fight cancer. Because it preferentially binds IL-2R $\beta$  and not the receptor containing IL-2R $\alpha$ , MDNA109 preferentially drives effector T cell responses over regulatory T cells. Additionally, MDNA109 reverses NK cell anergy and acts with exceptional synergy when combined with checkpoint inhibitors.

One of the development challenges with MDNA109 was its short half-life, similar to native IL-2, which would require frequent dosing. In order to extend the half-life of MDNA109, Medicenna fused inactive protein scaffolds to MDNA109 including Fc-fusions (Fc) and Albumin fusions (Alb) and, on August 2, 2018, we announced preliminary preclinical data on long acting variants of MDNA109, showing that these fusions have better pharmacokinetic properties enabling less frequent dosing without sacrificing its efficacy or safety.

Further modifications were made to MDNA109 in its extended half-life forms to enhance pharmacodynamics and further enhance selectivity in order to reduce binding to CD25 which is associated with the toxic side effect profile of Proleukin. These modifications have provided us with two candidates in development, MDNA19 and MDNA11, Medicenna plans to advance MDNA11 into Phase 1 clinical development, subject to discussions with FDA.

On March 25, 2020, Medicenna announced preclinical data including non-human primate (NHP) data from its IL-2 Superkine program during a conference call and webcast.

The presentation highlighted data from the long-acting variant MDNA19, engineered to have enhanced binding to CD122 without binding to CD25 and included:

- Kinetic studies in NHP showed a dose-dependent upregulation of Ki67 in CD8 T-cells lasting for almost two weeks post-MDNA19 administration, with no apparent side effects.
- When administered to NHP, MDNA19 increases the absolute number of circulating CD8 T-cells in the absence of Treg and eosinophil stimulation (the latter being a major source of IL-5 production which is responsible for triggering vascular leak syndrome and associated toxicity).

On May 29, 2020, Medicenna announced the virtual presentation of data on MDNA11 one of its lead candidates from the IL-2 Superkine program, at the 2020 ASCO Annual Meeting. The poster presentation by Dr. Moutih Rafei, PhD (Associate Professor of Pharmacology and Physiology at the Université de Montréal), focused on new data arising from studies with MDNA11. The poster presentation focused on encouraging data in NHP for MDNA11, a long-acting IL-2 variant engineered to have enhanced affinity to CD122 without binding to CD25. This engineering allows MDNA11 to specifically expand cancer fighting naïve CD8 T cells as well as NK cells with minimal stimulation of Tregs and eosinophils (associated with vascular leak syndrome). As such, the use of MDNA11 circumvents both immune-suppression and toxicity normally observed with Proleukin. In addition, we believe MDNA11 has several advantages over other long-acting IL-2 variants as it permits enhanced accumulation in the tumor vicinity and can be recycled in vivo thus exhibiting prolonged circulation in the blood stream thereby reducing the frequency of treatment. The presentation also demonstrated that MDNA11 had better in-vitro and in-vivo characteristics than MDNA19 and has therefore been selected as the lead candidate to move into clinical development.

On October 26, 2020, we announced a poster presentation at the 32<sup>nd</sup> ENA Symposium on Molecular Targets and Cancer Therapeutics. The presentation of preclinical results featured data on MDNA11 as well as data related to long acting bispecific IL-2/IL-13 Superkine that is designed to simultaneously activate cancer killing immune cells while reversing anti-inflammatory TME. These results support the potent therapeutic efficacy of MDNA11 monotherapy in multiple tumor models. Highlights from the poster and corresponding abstract include:

- Data show that compared to native IL-2, MDNA11 exhibits enhanced potency towards anti-tumor CD8<sup>+</sup> T and natural killer (NK) cells, and diminished activity toward pro-tumor T<sub>reg</sub> cells.
- MDNA11 inhibited B16F10 melanoma tumor growth and improved survival as a monotherapy and in combination with a tumor-antigen targeting antibody by inducing a durable increase in tumor infiltrating lymphocytes.
- Treatment with MDNA11 alone or in combination with an immune checkpoint inhibitor resulted in long-term tumor regression and a strong memory response in a preclinical colon cancer model.
- Repeat dosing of non-human primates with MDNA11 did not trigger cytokine release syndrome, anti-drug antibody response nor eosinophilia (associated with vascular leak syndrome).

On November 4, 2020 Medicenna held a positive Scientific Advice Meeting for MDNA11 (similar to a pre-IND meeting) with the UK MHRA. MHRA confirmed that our plans for CMC, pre-clinical and Phase 1/2a clinical trial design would be appropriate for submission of an IMPD in mid-calendar 2021 in order to commence first in human studies with MDNA11 in the UK.

On March 25, 2021, Medicenna presented preclinical data from the Company's Superkine platform programs at the virtual Cytokine-Based Cancer Immunotherapies Summit. The presentation included data showing that treatment with MDNA11 alone or in combination with anti-PD-1 therapy led to tumor growth inhibition and complete responses in a murine MC38 tumor model.

Medicenna is currently in the process of advancing MDNA11 into a Phase 1/2a clinical trial in Australia and the United Kingdom followed by expansion to the United States. We continue to make good progress towards the initiation of the trial, as we wrap-up our IND-enabling studies. We are on track to submit a Clinical Trial Notification to the Australian Human Research Ethics Committee by the end of June. Additionally, we have chosen CROs for the trial and site selection is already underway in Australia. Initiation of the trial is expected in the third quarter of calendar 2021. The clinical trial encompasses a dose-escalation MDNA11 monotherapy phase, which will then be followed by a dose expansion phase. The dose expansion phase will evaluate both MDNA11 monotherapy as well as MDNA11 in combination with a checkpoint inhibitor.

## **BiSKITs™ (Bi-functional SuperKine ImmunoTherapies) Platform**

Our **BiSKITs™** platform allows us to develop designer Superkines by fusing them to other proteins, antibodies or naked IL-2, IL-4 and IL-13 Superkines in order to combine two distinct and yet synergistic mechanisms of action into one molecule: a **BiSKIT™**. Medicenna is working towards selecting a lead **BiSKIT™** candidate to begin IND enabling studies before the end of calendar 2021.

Medicenna's IL-4 and IL-13 Superkines are engineered versions of wild type cytokines which possess enhanced affinity and selectivity for either the Type 1 or Type 2 IL4 receptors or dedicated IL13 receptors such as IL13Ra2. This selectivity is achieved through mutations of the IL-4 or IL-13 proteins to enhance affinity for binding to specific IL4R or IL13R subunits. Additional mutations have also been engineered to modulate their bioactivity, resulting in Superkines with enhanced signaling (super-agonists) or the ability to block signaling (super-antagonists).

One promising IL-13 Superkine antagonist is MDNA413. Compared to wild type IL-13, MDNA413 has been engineered to have 2,000-fold higher selectivity for the Type 2 IL4R and which potently blocks IL-4 and IL-13 signaling (Moraga et al., 2015). Blocking of Type 2 IL4R by MDNA413 may be relevant not only for targeting solid tumors that overexpress this receptor, but also the Th2 biased tumour microenvironment, which shields the cancer from the immune system. As part of our **BiSKITs™** platform, MDNA413 has been fused with MDNA19 (a long acting Fc-IL2 Superkine) and was the basis of data presented at AACR as described below.

On October 26, 2020, we announced a poster presentation at the 32<sup>nd</sup> ENA Symposium on Molecular Targets and Cancer Therapeutics. The presentation of preclinical results featured data on MDNA11 as well as data related to long acting bispecific IL-2/IL-13 Superkine that is designed to simultaneously activate cancer killing immune cells while reversing anti-inflammatory TME. Our bispecific IL-2/IL-13 Superkines are novel and demonstrate the potential of the **BiSKITs™** platform to address a critical unmet need by effectively targeting immunologically "cold" tumors that are often resistant to immunotherapeutic agents. Data included in the poster and corresponding abstract showed that Medicenna's bispecific IL-2/IL13 Superkine induced anti-tumor Th1 immune responses and inhibited pro-tumor IL-4/IL-13 signaling.

Subsequent to the year end, on April 12, 2021, we announced new preclinical data supporting the potent immune modulatory effects of MDNA19-MDNA413, an IL-2/IL-13 dual specific cytokine derived from the Company's **BiSKITs™** platform. The data were featured in an electronic poster presentation at the 2021 American Association for Cancer Research (AACR) Annual Meeting. Data presented in the poster indicate that this molecule simultaneously activates a pro-inflammatory anti-tumor response, due to its highly selective binding and signaling via the intermediate affinity IL-2 receptor (CD122/CD132), while inhibiting pro-tumoral immune pathways by blocking IL4/IL13 signaling via the Type 2 IL-4 receptor (IL-4R/IL-13R1). MDNA19-MDNA413's ability to mediate both IL-2 and IL-4/IL-13 signaling has the potential to address a significant unmet medical need for effective therapies against immunologically cold tumors which are often resistant to checkpoint inhibitors and other immunotherapeutic agents due to their immunosuppressive TME.

Medicenna is currently screening and optimizing a variety of IL-2/IL-4/IL-13 superkines as part of our **BiSKITs™** platform and intends to announce a lead candidate in the second half of calendar 2021.

Another promising IL-13 Superkine is MDNA132. Unlike MDNA413, MDNA132 is an IL-13 ligand that has been engineered to increase affinity for IL13Ra2 overexpressed on certain solid tumors while exhibiting sharply decreased affinity for IL13Ra1. Medicenna believes MDNA132 has superior targeting compared to other IL-13 variants in development, and is an attractively differentiated targeting domain cell-based immunotherapies such as the CAR-T platform. Development timelines for MDNA132 have yet to be established. MDNA132 is also being evaluated as a potential fusion protein in our BiSKITs™ platform.

## SELECTED FINANCIAL INFORMATION

All tabular amounts below are presented in thousands of Canadian dollars, except for per share amounts.

	2021	2020	2019
	\$	\$	\$
General and administration	6,525	2,375	1,709
Research and development	10,870	5,870	3,018
Net loss	(17,289)	(8,277)	(4,708)
Basic and diluted loss per share	(0.35)	(0.26)	(0.18)
Total assets	42,252	37,996	5,187
Total liabilities	4,107	1,847	2,571

We have not earned revenue in any of the previous fiscal years, other than income from interest earned on our cash and cash equivalents and marketable securities.

For the year ended March 31, 2021, we reported a net loss of \$17.4 million (\$0.35 loss per share), compared to a net loss of \$8.3 million (\$0.26 loss per share), for the year ended March 31, 2020. The increase in net loss for the year ended March 31, 2021 compared with the year ended March 31, 2020 was primarily a result of increased research and development expenditures related to the MDNA11 program as well as costs associated with the NASDAQ listing, in particular directors and officers insurance premiums as well as no reimbursement under the grant from the Cancer Research and Prevention Institute of Texas (“CPRIT”) in the current year.

Cash utilized in operating activities for the year ended March 31, 2021 was \$15.3 million, compared to cash utilized in operating activities for the year ended March 31, 2020 of \$5.4 million. The increase in cash utilized in the current year is primarily the result of increased research and development expenses, an increase in directors and officers liability insurance and other expenses due to the NASDAQ listing and no reimbursement under the CPRIT grant in the current year.

## RESULTS OF OPERATIONS FOR THE YEAR ENDING MARCH 31, 2021

### Research and Development (“R&D”) Expenses

	Year ended March 31, 2021	Year ended March 31, 2020
	\$	\$
Chemistry, manufacturing and controls	2,356	343
Regulatory	801	433
Discovery and pre-clinical	2,896	1,898
Clinical	1,225	1,528
Salaries and benefits	1,413	1,095
Licensing, patent legal fees and royalties	1,620	811
Stock based compensation	391	487
CPRIT grant claimed on eligible expenses	-	(951)
Other research and development expenses	168	226
	<b>10,870</b>	<b>5,870</b>

R&D expenses of \$10.9 million were incurred during the year ended March 31, 2021, compared with \$5.9 million incurred in the year ended March 31, 2020.

The increase in R&D expenses in the current year is primarily attributable to:

- Higher chemistry, manufacturing and controls (CMC) costs associated with GMP manufacturing of MDNA11 for the planned Phase 1/2a clinical trial.
- Increased discovery and pre-clinical expenses associated with GLP compliant MDNA11 IND enabling studies as well as discovery work on the BiSKITs™ platform.
- Increased regulatory costs associated with preparation for the EOP2 meeting for MDNA55 as well as the Scientific Advice Meeting for MDNA11 with the MHRA and preparation for the initiation of a Phase 1/2a clinical trial.
- Higher salary and benefits costs associated with increased headcount necessary to support ongoing activities.
- Increased licensing and patent legal fees related to outsourced business development activities, market research activities and the timing of patent prosecution.
- No reimbursement of expenses with respect to the CPRIT grant in the year ended March 31, 2021, compared with \$1.0 million in the year ended March 31, 2020.

The above increases were partially offset by lower clinical trial costs due to completion and close out of the Phase 2b rGBM clinical study.

#### General and Administrative (“G&A”) Expenses

	<b>Year ended March 31, 2021</b>	Year ended March 31, 2020
	\$	\$
Depreciation expense	<b>40</b>	<b>8</b>
Stock based compensation	<b>614</b>	<b>639</b>
Facilities and operations	<b>304</b>	<b>253</b>
Public company expenses	<b>4,677</b>	<b>1,004</b>
Salaries and benefits	<b>890</b>	<b>596</b>
CPRIT grant claimed on eligible expenses	-	<b>(125)</b>
	<b>6,525</b>	<b>2,375</b>

G&A expenses of \$6.5 million were incurred during the year ended March 31, 2021, compared with \$2.4 million during the year ended March 31, 2020.

The increase in G&A expenditures year over year is primarily attributed to increased directors and officers liability insurance premiums due to our NASDAQ listing as well as higher board fees, legal fees and listing expenses in the current year due to activities associated with our NASDAQ listing, filing a shelf prospectus in both Canada and the United States, qualifying our common shares with the Depository Trust Company (DTC) and other corporate initiatives. Salaries and benefits have also increased in the current year due to increased headcount and bonus payments.

## SUMMARY OF QUARTERLY FINANCIAL RESULTS

	Mar. 31 2021	Dec. 31 2020	Sept. 30 2020	June 30 2020	Mar. 31 2020	Dec. 31 2019	Sept. 30 2019	June 30 2019
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue	-	-	-	-	-	-	-	-
General and administration	2,009	2,093	1,691	732	529	742	643	462
Research and development	3,701	3,180	2,176	1,813	2,135	1,659	1,246	828
Net loss	(5,813)	(5,338)	(3,786)	(2,352)	(2,689)	(2,389)	(1,904)	(1,295)
Basic and diluted loss per share	(0.11)	(0.11)	(0.08)	(0.05)	(0.07)	(0.07)	(0.07)	(0.05)
Total assets	42,252	36,323	37,640	40,920	37,996	7,316	2,244	3,674
Total liabilities	4,107	2,216	1,656	1,547	1,847	1,993	2,050	1,898

R&D expenses fluctuate quarter over quarter based on the amount of expenditures eligible for CPRIT reimbursement in the period as well as the progression of IND-enabling studies for MDNA11 during the period. Beginning with the quarter ended December 31, 2019, there were no CPRIT expenses eligible for offset vs. the comparable quarters in the prior year where there were eligible expenses resulting in lower expenditures in the prior year. The increased expenditures from the quarter ended September 30, 2020 onwards, is related to activities associated with the MDNA11 program as well as the MDNA55 EOP2 meeting with the US FDA. It is anticipated that R&D expenses will remain higher than prior year quarters due to the planned initiation of the Phase 1/2a clinical trial for MDNA11.

G&A expenses began to increase in the quarter ended September 30, 2020, due to costs associated with completing the NASDAQ listing, associated shelf prospectus filings in Canada and the United States and increased directors and officers insurance premiums. The increased insurance premiums began in July 2021 and as such G&A expenses have increased further in the quarters ended December 31, 2020 and March 31, 2021 for a full 3 months of amortization rather than 2 months amortization in the quarter ended September 30, 2020.

### RESULTS OF OPERATIONS FOR THE THREE MONTHS ENDING MARCH 31, 2021

#### Research and Development Expenses

	Three months ended March 31, 2021	Three months ended March 31, 2020
	\$	\$
Chemistry, manufacturing and controls	798	164
Regulatory	202	169
Discovery and pre-clinical	1,322	632
Clinical	226	274
Salaries and benefits	431	278
Licensing, patent legal fees and royalties	540	413
Stock based compensation	108	169
Other research and development expenses	74	36
	<b>3,701</b>	<b>2,135</b>

R&D expenses of \$3.7 million were incurred during the three months ended March 31, 2021, compared with \$2.1 million incurred in the three months ended March 31, 2020.

The increase in R&D expenses in the three months ended March 31, 2021 is primarily attributable to:

- Higher CMC costs associated with GMP manufacturing of MDNA11 for the planned Phase 1/2a clinical trial.
- Increased discovery and pre-clinical expenses associated with GLP compliant MDNA11 IND enabling studies as well as discovery work on the BiSKITs™ platform.
- Higher salary, bonus and benefits costs associated with increased headcount necessary to support ongoing activities.
- Increased licensing and patent legal fees related to outsourced business development activities, market research activities and the timing of patent prosecution.

### General and Administrative Expenses

	<b>Three months ended March 31, 2021</b>	Three months ended March 31, 2020
	\$	\$
Depreciation expense	10	4
Stock based compensation	150	123
Facilities and operations	79	65
Public company expenses	1,263	82
Salaries and benefits	294	149
Corporate communications	213	106
	<b>2,009</b>	<b>529</b>

G&A expenses of \$2.0 million were incurred during the three months ended March 31, 2021, compared with \$0.5 million during the three months ended March 31, 2020.

The increase in G&A expenditures in the current period is primarily attributed to increased directors and officers liability insurance premiums due to our NASDAQ listing as well as higher board fees, legal fees and listing expenses in the current year period due to activities associated with our NASDAQ listing. Salaries and benefits have also increased due to increased headcount, as well as increased executive bonus costs.

### LIQUIDITY AND CAPITAL RESOURCES

Since inception, the Company has devoted its resources to funding R&D programs, including securing intellectual property rights and licenses, conducting discovery research, manufacturing drug supplies, initiating preclinical and clinical studies, submitting regulatory dossiers and providing administrative support to R&D activities, which has resulted in an accumulated deficit of \$48.1 million as of March 31, 2021. With current revenues only consisting of interest earned on excess cash, cash equivalents and marketable securities, losses are expected to continue while the Company's R&D programs are advanced.

We currently do not earn any revenues from our drug candidates and are therefore considered to be in the development stage. As required, the Company will continue to finance its operations through the sale of equity or pursue non-dilutive funding sources available to the Company in the future. The continuation of our research and development activities for MDNA55, MDNA11 and the BiSKITs™ platform and the commercialization of MDNA55 is dependent upon our ability to successfully finance and complete our research and development programs through a combination of equity financing and revenues from strategic partners. We have no current sources of revenues from strategic partners.

Management has forecasted that the Company's current level of cash will be sufficient to execute its current planned expenditures for more than the next 12 months without further financing, including proceeds from the ATM Facility, being obtained.

## **CASH POSITION**

At March 31, 2021, we had a cash, cash equivalents and marketable securities balance of \$40.4 million, compared to \$37.7 million at March 31, 2020. We invest cash in excess of current operational requirements in highly rated and liquid instruments. Working capital at March 31, 2021 was \$38.3 million (March 31, 2020 - \$36.0 million).

On December 30, 2020, we announced that we entered into the ATM agreement with SVB Leerink acting as sales agent for our ATM offering of up to US\$25.0 million. We plan to use the net proceeds of the ATM offering for general corporate purposes including, but not limited to working capital expenditures, research and development expenditures, and clinical trial expenditures. During the fourth quarter of fiscal 2021, a total of 1,398,357 common shares have been sold under the ATM Facility for total gross proceeds of \$7.1 million (US\$5.8 million). As at March 31, 2021, \$24.0 million (US\$19.2 million) remained available under the ATM Facility.

We also have up to US\$1.4 million remaining available for reimbursement under the CPRIT grant.

We do not expect to generate positive cash flow from operations for the foreseeable future due to additional R&D expenses, including expenses related to drug discovery, preclinical testing, clinical trials, chemistry, manufacturing and controls and operating expenses associated with supporting these activities. It is expected that negative cash flow from operations will continue until such time, if ever, that we receive regulatory approval to commercialize any of our products under development and/or royalty or milestone revenue from any such products should they exceed our expenses.

## **CONTRACTUAL OBLIGATIONS**

### ***CPRIT Assistance***

In February 2015, the Company received notice that it had been awarded a grant by CPRIT whereby the Company is eligible to receive up to US\$14.1 million on eligible expenditures over a three year period related to the development of the Company's Phase 2b clinical program for MDNA55. In October 2017, the Company was granted a one-year extension to the grant allowing expenses to be claimed over a four-year period ending February 28, 2019. On February 4, 2019 the Company was approved for a further six-month extension ending August 31, 2019, on July 25, 2019 an additional six-month extension was granted to February 28, 2020 and on January 6, 2020 an additional six-month extension was granted to August 28, 2020. The grant expired on August 28, 2020 and as of March 31, 2021 the grant with CPRIT is substantially complete.

Of the US\$14.1 million grant approved by CPRIT, Medicenna has received US\$12.7 million from CPRIT. The Company is eligible to receive the remaining US\$1.4 million upon the achievement of certain criteria as determined by CPRIT, from time to time. There can be no assurances that the balance of such grants will be received from CPRIT.

Ongoing program funding from CPRIT is subject to a number of conditions including the satisfactory achievement of milestones that must be met to release additional CPRIT funding, proof the Company has raised 50% matching funds and maintaining substantial functions of the Company related to the project grant in Texas as well as using Texas-based subcontractor and collaborators wherever possible. There can be no assurances that the Company will continue to meet the necessary CPRIT criteria, satisfactorily achieve milestones, or that CPRIT will continue to advance additional funds to the Company.

If the Company is found to have used any grant proceeds for purposes other than intended, is in violation of the terms of the grant, or relocates its MDNA55 related operations outside of the state of Texas, then the Company is required to repay any grant proceeds received.

Under the terms of the grant, the Company is also required to pay a royalty to CPRIT, comprised of 3-5% of revenues on net sales of MDNA55 until aggregate royalty payments equal 400% of the grant funds received at which time the ongoing royalty will be 0.5%.

During the year ended March 31, 2021, the Company did not receive any funds from CPRIT (March 31, 2020: \$3.5 million).

### **Intellectual Property**

On August 21, 2015, the Company exercised its right to enter into two license agreements with Stanford (the “Stanford License Agreements”). In connection with these licensing agreements, the Company issued 649,999 common shares with a value of \$0.1 million to Stanford and affiliated inventors. The value of these shares has been recorded as an intangible asset that is being amortized over the life of the underlying patents. As at March 31, 2021, the Company’s intangible assets have a remaining capitalized net book value of \$0.07 million.

The development milestones under the Stanford License Agreements were updated during the year ended March 31, 2020 to reflect the current stage of development of the Company’s programs.

The Company has entered into various license agreements with respect to accessing patented technology. In order to maintain these agreements, the Company is obligated to pay certain costs based on timing or certain milestones within the agreements, the timing of which is uncertain. These costs include ongoing license fees, patent prosecution and maintenance costs, royalty and other milestone payments. As at March 31, 2021, the Company is obligated to pay the following:

- Patent licensing costs due within 12 months totaling \$165 thousand.
- Patent licensing costs, including the above, due within the next five years totaling \$1.6 million.
- Given the current development plans and expected timelines of the Company it is assumed that project milestones of US\$0.3 million will be due in the next five years.
- Project milestone payments, assuming continued success in the development programs, of uncertain timing totaling US\$2.0 million and an additional US\$2 million in sales milestones.
- A liquidity payment of \$328 thousand, is due to the NIH which represents the remaining payments resulting from the Company’s liquidity event in March 2017.

As part of these license agreements, the Company has committed to make certain royalty payments based on net sales to the NIH and Stanford.

### **Future commitments**

As of March 31, 2021, we have the following obligations to make future payments, representing contracts and other commitments that are known and committed:

<b>Contractual obligations</b>	<b>Payments Due by Period</b>			
	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>3-5 years</b>	<b>Total</b>
Patent licensing costs, minimum annual royalties per license agreements	\$ 165	\$ 826	\$ 584	\$ 1,575
Lease payments	\$ 35	\$ -	\$ -	\$ 35
Liquidity event payment	\$ 328	\$ -	\$ -	\$ 328

The Company cannot reasonably estimate future royalties which may be due upon the regulatory approval of MDNA55 or MDNA11.

As at the date of this report, we had obligations to make future payments, representing significant research and development and manufacturing contracts and other commitments that are known and committed in the amount of approximately \$9.3 million, of which \$2 million has been paid or accrued at March 31, 2021. Most of these agreements are cancellable by the Company with notice. These commitments include agreements for manufacturing and preclinical studies.

#### OFF-BALANCE SHEET ARRANGEMENTS

The Company has no material undisclosed off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on our results of operations, financial condition, revenues or expenses, liquidity, capital expenditures or capital resources that is material to investors.

#### TRANSACTIONS WITH RELATED PARTIES

Key management personnel, which consists of the Company's officers (Dr. Fahar Merchant, President and Chief Executive Officer, Ms. Elizabeth Williams, Chief Financial Officer, and Ms. Rosemina Merchant, Chief Development Officer) and directors, received the following compensation for the following periods:

	Year ended		Three months ended	
	March 31,		March 31,	
	2021	2020	2021	2020
	\$	\$	\$	\$
Salaries and wages	1,501	892	495	223
Board fees	230	142	59	35
Stock option expense	797	873	162	280
	2,528	1,907	716	538

As at March 31, 2021, the Company had trade and other payables in the normal course of business, owing to directors and officers of \$0.2 million (2020: \$0.2 million) related to accrued bonuses, board fees and accrued vacation.

#### CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The significant accounting policies of the Company are described in note 2 of the Annual Financial Statements, and available on SEDAR ([www.sedar.com](http://www.sedar.com)).

Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The determination of estimates requires the exercise of judgement based on various assumptions and other factors such as historical experience and current and expected economic conditions. Actual results could differ from those estimates. Critical judgements in applying the Company's accounting policies are detailed in the Annual Financial Statements, filed on SEDAR ([www.sedar.com](http://www.sedar.com)).

#### FINANCIAL INSTRUMENTS

##### (a) Fair value

We recognize financial instruments on the consolidated statements of financial position, which consist of cash, cash equivalents, marketable securities, government grant receivable, other receivables, accounts payable and accrued liabilities, and license fee payable. The fair value of these instruments, approximate their carry values due to their short-term maturity.

## *Classification of financial instruments*

Financial instruments measured at fair value on the statement of financial position are summarized into the following fair value hierarchy levels:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

We classify our financial assets and liabilities depending on the purpose for which the financial instruments were acquired, their characteristics, and management intent as outlined below:

Cash, cash equivalents and marketable securities are measured using Level 1 inputs and changes in fair value are recognized through profit or loss, with changes in fair value being recorded in net earnings at each period end.

Other receivables and government grant receivable are measured at amortized cost less impairments.

Accounts payable, accrued liabilities, deferred government grants and license fee payable are measured at amortized cost.

We have exposure to the following risks from our use of financial instruments: credit, interest rate, currency and liquidity risk. We review our risk management framework on a quarterly basis and makes adjustments as necessary.

### **(b) Financial risk management**

We have exposure to credit risk, liquidity risk and market risk. Our Board of Directors has the overall responsibility for the oversight of these risks and reviews our policies on an ongoing basis to ensure that these risks are appropriately managed.

#### *i. Credit risk*

Credit risk arises from the potential that a counterparty will fail to perform its obligations. The financial instruments that are exposed to concentrations of credit risk consist of cash and cash equivalents and marketable securities.

We attempt to mitigate the risk associated with cash and cash equivalents by dealing only with major Canadian financial institutions with good credit ratings.

#### *ii. Interest rate risk*

Interest rate risk is the risk that the fair values and future cash flows of the Company will fluctuate because of changes in market interest rates. We believe our exposure to interest rate risk is not significant.

#### *iii. Liquidity risk*

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. We currently settle all of our financial obligations out of cash. The ability to do so relies on maintaining sufficient cash in excess of anticipated needs. As at September 30, 2020, the Company's liabilities consist of trade and other payables that have contracted maturities of less than one year.

iv. *Currency risk*

Currency risk is the risk that future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Company is exposed to currency risk from employee costs as well as the purchase of goods and services primarily in the United States and the cash balances held in foreign currencies. Fluctuations in the US dollar exchange rate could have a significant impact on the Company's results. Assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the US dollar would result in a \$0.5 million (December 31, 2019 - \$0.1 million) increase or decrease in loss and comprehensive loss for the three months ended December 31, 2020.

Balances in thousands of US dollars are as follows:

	March 31, 2021	March 31, 2020
	US\$	US\$
Cash and cash equivalents	9,593	135
Accounts payable and accrued liabilities	(2,147)	(900)
	7,446	(765)

**(c) Managing Capital**

The Company's objectives, when managing capital, are to safeguard cash, cash equivalents and marketable securities as well as maintain financial liquidity and flexibility in order to preserve its ability to meet financial obligations and deploy capital to grow its businesses.

The Company's financial strategy is designed to maintain a flexible capital structure consistent with the objectives stated above and to respond to business growth opportunities and changes in economic conditions. In order to maintain or adjust its capital structure, the Company may issue shares or issue debt (secured, unsecured, convertible and/or other types of available debt instruments).

There were no changes to the Company's capital management policy during the year. The Company is not subject to any externally imposed capital requirements.

**2020 PUBLIC OFFERING AND USE OF PROCEEDS**

The following table provides an update on the anticipated use of proceeds raised in the 2020 Public Offering along with amounts actually expended. Following completion of the 2020 Public Offering, Medicenna selected MDNA11 as its lead IL-2 candidate over MDNA19 to progress to the clinic and, as such, proceeds from the 2020 Public Offering, which were initially allocated to the development of MDNA19, have been re-directed to the development of MDNA11 in the same proportions. As of March 31, 2021, the following expenditures have been incurred (in thousands of Canadian dollars):

Item	Amount to Spend	Spent to Date	Adjustments	Remaining to Spend
Preclinical development	\$ 3,300	\$ 3,064	-	\$ 236
Manufacturing of clinical batch	\$ 4,400	\$ 1,985	-	\$ 2,415
Clinical development	\$ 13,150	\$ 536	-	\$ 12,614
General corporate and working capital purposes	\$ 11,350	\$ 5,871	-	\$ 5,479
<b>Total</b>	<b>\$ 32,200</b>	<b>\$ 11,456</b>	<b>\$ -</b>	<b>\$ 20,744</b>

## ATM FACILITY

On December 30, 2020, the Company entered into the ATM agreement with SVB Leerink acting as sales agent, pursuant to which the Company may, from time to time sell, through ATM offerings, on the NASDAQ such number of common shares as would have an aggregate offering price of up to US\$25.0 million. During the year ended March 31, 2021, a total of 1,398,357 shares were sold under the ATM Facility for total gross proceeds of US\$5.8 million (\$7.1 million). As at the date of this report, there is approximately US\$19.2 million (\$24 million) available on the ATM Facility.

## RISKS AND UNCERTAINTIES

*An investment in the Company's common shares (the "Common Shares") involves a high degree of risk and should be considered speculative. An investment in the Common Shares should only be undertaken by those persons who can afford the total loss of their investment. Investors should carefully consider the risks and uncertainties set forth below, as well as other information described elsewhere in this MD&A. The risks and uncertainties below are not the only ones the Company faces. Additional risks and uncertainties not presently known to Medicenna or that Medicenna believes to be immaterial may also adversely affect Medicenna's business. If any of the following risks occur, Medicenna's business, financial condition and results of operations could be seriously harmed and you could lose all or part of your investment. Further, if Medicenna fails to meet the expectations of the public market in any given period, the market price of the Common Shares could decline. Medicenna operates in a highly competitive environment that involves significant risks and uncertainties, some of which are outside of Medicenna's control.*

### **Risks Related to the Company's Business and the Company's Industry**

*The Company has no sources of product revenue and will not be able to maintain operations and research and development without sufficient funding.*

The Company has no sources of product revenue and cannot predict when or if it will generate product revenue. The Company's ability to generate product revenue and ultimately become profitable depends upon its ability, alone or with partners, to successfully develop the product candidates, obtain regulatory approval, and commercialize products, including any of the current product candidates, or other product candidates that may be developed, in-licensed or acquired in the future. The Company does not anticipate generating revenue from the sale of products for the foreseeable future. The Company expects research and development expenses to increase in connection with ongoing activities, particularly as MDNA55 is advanced through clinical trials and the MDNA109 platform (MDNA19 or MDNA11) is advanced towards the clinic.

The Company will require significant additional capital resources to expand its business, in particular the further development of its proposed products. Advancing its product candidates or acquisition and development of any new products or product candidates will require considerable resources and additional access to capital markets. In addition, the Company's future cash requirements may vary materially from those now expected.

The Company can potentially seek additional funding through corporate collaborations and licensing arrangements, through public or private equity or debt financing, or through other transactions. However, if clinical trial results are neutral or unfavourable, or if capital market conditions in general, or with respect to life sciences companies such as Medicenna, are unfavourable, the Company's ability to obtain significant additional funding on acceptable terms, if at all, will be negatively affected. Additional financing that it may pursue may involve the sale of the Common Shares or financial instruments that are exchangeable for, or convertible into, the Common Shares, which could result in significant dilution to its shareholders. If sufficient capital is not available, the Company may be required to delay the implementation of its business strategy, which could have a material adverse effect on its business, financial condition, prospects or results of operations.

The Company is highly dependent upon certain key personnel and their loss could adversely affect its ability to achieve its business objective.

The loss of Dr. Fahar Merchant, the President and Chief Executive Officer, Rosemina Merchant, the Chief Development Officer, or other key members of the scientific and operating staff could harm the Company. Employment agreements exist with Dr. Merchant and Ms. Merchant, although such employment agreements do not guarantee their retention. The Company also depends on scientific and clinical collaborators and advisors, all of whom have outside commitments that may limit their availability. In addition, the Company believes that future success will depend in large part upon its ability to attract and retain highly skilled scientific, managerial, medical, clinical and regulatory personnel. Agreements have been entered into with scientific and clinical collaborators and advisors, key opinion leaders and academic partners in the ordinary course of business as well as with physicians and institutions who recruited patients into the MDNA55 clinical trial and will recruit patients into future clinical trials. Notwithstanding these arrangements, there is significant competition for these types of personnel from other companies, research and academic institutions, government entities and other organizations. The loss of the services of any of the executive officers or other key personnel could potentially harm the Company's business, operating results or financial condition.

If the Company breaches any of the agreements under which it licenses rights to product candidates or technology from third parties, it can lose license rights that are important to its business. The Company's current license agreements may not provide an adequate remedy for breach by the licensor.

The Company is developing MDNA55, the MDNA109 platform (MDNA19 and MDNA11) and other earlier stage preclinical and discovery drug candidates pursuant to license agreements with NIH and Stanford (collectively, the "Licensors"). The Company is subject to a number of risks associated with its collaboration with the Licensors, including the risk that the Licensors may terminate the license agreement upon the occurrence of certain specified events. The license agreement requires, among other things, that the Company makes certain payments and use reasonable commercial efforts to meet certain clinical and regulatory milestones. If the Company fails to comply with any of these obligations or otherwise breach this or similar agreements, the Licensors or any future licensors may have the right to terminate the license in whole. The Company can also suffer the consequences of non-compliance or breaches by Licensors in connection with the license agreements. Such non-compliance or breaches by such third parties can in turn result in breaches or defaults under the Company's agreements with other collaboration partners, and the Company can be found liable for damages or lose certain rights, including rights to develop and/or commercialize a product or product candidate. Loss of the Company's rights to the licensed intellectual property or any similar license granted to it in the future, or the exclusivity rights provided therein, can harm the Company's financial condition and operating results.

Clinical drug development involves a lengthy and expensive process with an uncertain outcome, results of earlier studies and trials may not be predictive of future trial results, and the Company's product candidates may not have favourable results in later trials or in the commercial setting.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials may not be predictive of the results of later-stage clinical trials. In the case of MDNA55, the promising results seen in the Phase 2b clinical study may not be replicated in a randomized, controlled Phase 3 clinical study. Success in preclinical or animal studies and early clinical trials does not ensure that later large-scale efficacy trials will be successful nor does it predict final results. This is applicable to the MDNA109 platform (MDNA19 and MDNA11) as the promising preclinical data may not be replicated in a clinical setting. Favourable results in early trials may not be repeated in later trials. There is no assurance the FDA, the EMA or other similar government bodies will view the results as the Company does or that any future trials of its proposed products for other indications will achieve positive results. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials.

The Company will be required to demonstrate through larger-scale clinical trials that any potential future product is safe and effective for use in a diverse population before it can seek regulatory approvals for commercial sale of its product. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical and post-approval trials. If MDNA55 and other product candidates fail to demonstrate sufficient safety and efficacy in future clinical trials, the Company's operations and financial condition will be adversely impacted.

*If the Company's competitors develop and market products that are more effective than the Company's existing product candidates or any products it may develop, or if they obtain marketing approval before it does, the Company's products may be rendered obsolete or uncompetitive.*

Technological competition from pharmaceutical companies, biotechnology companies and universities is intense and is expected to increase. Many of the Company's competitors and potential competitors have substantially greater product development capabilities and financial, scientific, marketing and human resources than the Company does. Our future success depends in part on our ability to maintain a competitive position, including our ability to further progress MDNA55 and the MDNA109 platform (MDNA19 and MDNA11) through the necessary preclinical and clinical trials towards regulatory approval for sale and commercialization. Other companies may succeed in commercializing products earlier than we are able to commercialize our products or they may succeed in developing products that are more effective than our products. While the Company will seek to expand its technological capabilities in order to remain competitive, there can be no assurance that developments by others will not render its products non-competitive or that the Company or its licensors will be able to keep pace with technological developments. Competitors have developed technologies that could be the basis for competitive products. Some of those products may have an entirely different approach or means of accomplishing the desired therapeutic effect than the Company's products and may be more effective or less costly than its products. In addition, other forms of medical treatment may offer competition to the products. The success of the Company's competitors and their products and technologies relative to its technological capabilities and competitiveness could have a material adverse effect on the future preclinical and clinical trials of its products, including its ability to obtain the necessary regulatory approvals for the conduct of such trials.

*The Company is subject to the restrictions and conditions of the CPRIT agreement. Failure to comply with the CPRIT agreement may adversely affect the Company's financial condition and results of operations.*

The Company has obtained a grant from CPRIT to fund a portion of its operations to date. The CPRIT grant is subject to the Company's compliance with the scope of work outlined in the CPRIT agreement and demonstration of its progress towards achievement of the milestones set forth in the CPRIT agreement. If the Company fails to comply with the terms of the CPRIT agreement, it may not receive the remaining US\$1.4 million tranche of the CPRIT grant or it may be required to reimburse some or the entire CPRIT grant. Further, the CPRIT grant may only be applied to a limited number of allowable expenses. Failure to obtain the remaining tranche of the CPRIT grant or being required to reimburse all or a portion of the CPRIT grant may cause a halt or delay in ongoing operations, which may adversely affect the Company's financial condition and operating results.

*The Company relies and will continue to rely on third parties to plan, conduct and monitor preclinical studies and clinical trials, and their failure to perform as required could cause substantial harm to the Company's business.*

The Company relies and will continue to rely on third parties to conduct a significant portion of clinical development and planned preclinical activities. Preclinical activities include *in vivo* studies providing access to specific disease models, pharmacology and toxicology studies, and assay development. Clinical development activities include trial design, regulatory submissions, clinical patient recruitment, clinical trial monitoring, clinical data management and analysis, safety monitoring and project management. If there is any dispute or disruption in the Company's relationship with third parties, or if the third party is unable to provide quality services in a timely manner and at a reasonable cost, any active development programs could face delays. Further, if any of these third parties fails to perform as expected or if their work fails to meet regulatory requirements, testing could be delayed, cancelled or rendered ineffective.

The Company relies on contract manufacturers over whom the Company has limited control. If the Company is subject to quality, cost or delivery issues with the preclinical and clinical grade materials supplied by contract manufacturers, business operations could suffer significant harm.

The Company has limited manufacturing experience and relies on contract development and manufacturing organizations (“CDMOs”), to manufacture MDNA55 for clinical trials and the MDNA109 platform (MDNA19 and MDNA11) for preclinical development. The Company relies on CDMOs for manufacturing, filling, packaging, storing and shipping of drug product in compliance with cGMP, regulations applicable to its products. The FDA ensures the quality of drug products by carefully monitoring drug manufacturers’ compliance with cGMP regulations. The cGMP regulations for drugs contain minimum requirements for the methods, facilities and controls used in manufacturing, processing and packing of a drug product.

There can be no assurances that the CDMOs selected will be able to meet future timetables and requirements. If the Company is unable to arrange for alternative third-party manufacturing sources on commercially reasonable terms or in a timely manner, it may delay the development of the product candidates. Further, contract manufacturers must operate in compliance with cGMP and failure to do so could result in, among other things, the disruption of product supplies. The Company’s dependence upon third parties for the manufacture of its products may adversely affect profit margins and ability to develop and deliver products on a timely and competitive basis.

The Company’s future success is dependent primarily on the regulatory approval of a single product.

The Company does not have any products that have gained regulatory approval. Currently, its only clinical product candidate is MDNA55. As a result, the Company’s near-term prospects, including its ability to finance its operations and generate revenue, are substantially dependent on its ability to obtain regulatory approval for, and, if approved, to successfully commercialize MDNA55 in a timely manner. The Company cannot commercialize MDNA55 or other future product candidates in the United States without first obtaining regulatory approval for the product from the FDA; similarly, it cannot commercialize MDNA55 or other future product candidates outside of the United States without obtaining regulatory approval from comparable foreign regulatory authorities. Although MDNA55 has received Orphan Drug (FDA, EMA) and Fast Track (FDA) designations, there can be no assurance regulatory approval will be granted. Before obtaining regulatory approvals for the commercial sale of MDNA55 or other future product candidates for a target indication, the Company must demonstrate with substantial evidence gathered in preclinical and clinical studies to the satisfaction of the relevant regulatory authorities, that the product candidate is safe and effective for use for that target indication and that the manufacturing facilities, processes and controls are adequate. Many of these factors are beyond the Company’s control. If the Company, or its potential commercialization collaborators, are unable to successfully commercialize MDNA55, the Company may not be able to earn sufficient revenues to continue its business.

The Company may not achieve its publicly announced milestones according to schedule, or at all.

From time to time, the Company may announce the timing of certain events expected to occur, such as the anticipated timing of results from clinical trials. These statements are forward-looking and are based on the best estimates of management at the time relating to the occurrence of such events. However, the actual timing of such events may differ from what has been publicly disclosed. The timing of events such as initiation or completion of a clinical trial, filing of an application to obtain regulatory approval, or announcement of additional clinical trials for a product candidate may ultimately vary from what is publicly disclosed. These variations in timing may occur as a result of different events, including the ability to recruit patients in a clinical trial in a timely manner, the nature of results obtained during a clinical trial or during a research phase, problems with a CDMO or a contract research organization (“CRO”), or any other event having the effect of delaying the publicly announced timeline. The Company undertakes no obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as otherwise required by law. Any variation in the timing of previously announced milestones could have a material adverse effect on the business plan, financial condition or operating results and the trading price of the Common Shares.

MDNA55 is in the mid stages of clinical development and the MDNA109 platform (MDNA19 and MDNA11) in preclinical development and, as a result, the Company will be unable to predict whether it will be able to profitably commercialize its product candidates.

The Company has not received regulatory approval for the sale of MDNA55 in any market. Accordingly, the Company has not generated any revenues from product sales. A substantial commitment of resources to conduct clinical trials and for additional product development will be required to commercialize all of our product candidates. There can be no assurance that MDNA55, the MDNA109 platform (MDNA19 and MDNA11) or any of our other product candidates will meet applicable regulatory standards, be capable of being produced in commercial quantities at reasonable cost or be successfully marketed, or that the investment made by the Company in the commercialization of the products will be recovered through sales, license fees or related royalties.

The Company is subject to extensive government regulation that will increase the cost and uncertainty associated with gaining final regulatory approval of its product candidates.

Securing final regulatory approval for the manufacture and sale of human therapeutic products in the United States, Canada and other markets is a long and costly process that is controlled by that particular country's national regulatory agency. Approval in the United States, Canada or Europe does not assure approval by other national regulatory agencies, although often test results from one country may be used in applications for regulatory approval in another country. Other national regulatory agencies have similar regulatory approval processes, but each is different.

Prior to obtaining final regulatory approval to market a drug product, every national regulatory agency has a variety of statutes and regulations which govern the principal development activities. These laws require controlled research and testing of products, government review and approval of a submission containing preclinical and clinical data establishing the safety and efficacy of the product for each use sought, approval of manufacturing facilities including adherence to cGMP during production and storage and control of marketing activities, including advertising and labelling. There can be no assurance that MDNA55 or the MDNA109 platform (MDNA19 and MDNA11) will be successfully commercialized in any given country. There can be no assurance that the Company's licensed products will prove to be safe and effective in clinical trials under the standards of the regulations in the various jurisdictions or receive applicable regulatory approvals from applicable regulatory bodies.

Negative results from clinical trials or studies of third parties and adverse safety events involving the targets of the Company's products may have an adverse impact on future commercialization efforts.

From time to time, studies or clinical trials on various aspects of biopharmaceutical products are conducted by academic researchers, competitors or others. The results of these studies or trials, when published, may have a significant effect on the market for the biopharmaceutical product that is the subject of the study. The publication of negative results of studies or clinical trials or adverse safety events related to the Company's product candidates, or the therapeutic areas in which the Company's product candidates compete, could adversely affect the share price and ability to finance future development of the Company's product candidates, and the business and financial results could be materially and adversely affected.

The Company faces the risk of product liability claims, which could exceed its insurance coverage and produce recalls, each of which could deplete cash resources.

The Company is exposed to the risk of product liability claims alleging that use of its product candidate MDNA55, and in the future, the MDNA109 platform (MDNA19 and MDNA11), caused an injury or harm. These claims can arise at any point in the development, testing, manufacture, marketing or sale of product candidates and may be made directly by patients involved in clinical trials of product candidates, by consumers or healthcare providers or by individuals, organizations or companies selling the products. Product liability claims can be expensive to defend, even if the product or product candidate did not actually cause the alleged injury or harm.

Insurance covering product liability claims becomes increasingly expensive as a product candidate moves through the development pipeline to commercialization. Currently the Company maintains clinical trial liability insurance coverage of \$5 million. However, there can be no assurance that such insurance coverage is or will continue to be adequate or available at a cost acceptable to the Company or at all. The Company may choose or find it necessary under its collaborative agreements to increase the insurance coverage in the future but may not be able to secure greater or broader product liability insurance coverage on acceptable terms or at reasonable costs when needed. Any liability for damages resulting from a product liability claim could exceed the amount of the coverage, require payment of a substantial monetary award from the Company's cash resources and have a material adverse effect on the business, financial condition and results of operations. Moreover, a product recall, if required, could generate substantial negative publicity about the products and business, inhibit or prevent commercialization of other products and product candidates or negatively impact existing or future collaborations.

Changes in government regulations, although beyond the Company's control, could have an adverse effect on the Company's business.

The Company depends upon the validity of its licenses and access to the data for the timely completion of clinical research. Any changes in the drug development regulatory environment or shifts in political attitudes of a government are beyond the Company's control and may adversely affect its business. The Company's business may also be affected in varying degrees by such factors as government regulations with respect to intellectual property, regulation or export controls. Such changes remain beyond the Company's control and the effect of any such changes cannot be predicted. These factors could have a material adverse effect on the Company's ability to further develop its licensed products.

The Company's significant shareholders may have material influence over its governance and operations.

Dr. Fahar Merchant and Ms. Rosemina Merchant (collectively, the "Merchants"), hold a significant interest in the Company's outstanding Common Shares on a fully diluted basis. For as long as the Merchants maintain a significant interest in the Company, they may be in a position to affect the Company's governance and operations. In addition, the Merchants may have significant influence over the passage of any resolution of the Company's shareholders (such as those that would be required to amend the constating documents or take certain other corporate actions) and may, for all practical purposes, be able to ensure the passage of any such resolution by voting for it or prevent the passage of any such resolution by voting against it. The effect of this influence may be to limit the price that investors are willing to pay for the Common Shares. In addition, the potential that the Merchants may sell their Common Shares in the public market (commonly referred to as "market overhang"), as well as any actual sales of such Common Shares in the public market, could adversely affect the market price of the Common Shares.

If the Company is unable to enroll subjects in clinical trials, it will be unable to complete these trials on a timely basis.

It is anticipated that the COVID-19 pandemic crisis may continue to impact ongoing trial activities across the industry due to the pressure placed on the healthcare system as well as governmental and institutional restrictions. The Company is not currently enrolling patients in a clinical study and does not plan to enroll additional patients until mid-2021. As the roll-out of vaccines in Canada, the United States, the United Kingdom and Australia progresses it is anticipated that the COVID-19 pandemic will become more manageable and will not have a significant impact on our ability to recruit patients to our clinical trials. On an ongoing basis our clinical team will need to work closely with each clinical site and a CRO to ensure that patient safety and the integrity of data is maintained despite any pandemic related impacts. It is noted that some clinical sites have paused or slowed enrollment in clinical trials, while other sites, less impacted, are continuing activities as planned.

Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors including the size and nature of the patient population, the proximity of subjects to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, ability to obtain and maintain patient consents, risk that enrolled subjects will drop out before completion, competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications the Company is investigating. Furthermore, the Company relies on CROs and clinical trial sites to ensure the proper and timely conduct of its clinical trials, and while it has agreements governing their committed activities, the Company has limited influence over their actual performance.

If the Company experiences delays in the completion or termination of any clinical trial of its proposed products or any future product candidates, the commercial prospects of its product candidates will be harmed and its ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing clinical trials will increase costs, slow down product candidate development and approval process and can shorten any periods during which the Company may have the exclusive right to commercialize its product candidates or allow its competitors to bring products to market before it does. Delays can further jeopardize the Company's ability to commence product sales, which will impair its ability to generate revenues and may harm the business, results of operations, financial condition and cash flows and future prospects. In addition, many of the factors that can cause a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of its proposed products or its future product candidates.

*The Company's discovery and development processes involve use of hazardous and radioactive materials which may result in potential environmental exposure.*

The Company's discovery and development processes involve the controlled use of hazardous and radioactive materials. The Company is subject to federal, provincial, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. Although the Company believes that the current safety procedures for handling and disposing of such materials comply with the standards prescribed by such laws and regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, the Company could be held liable for any damages that result and any such liability could exceed the Company's resources. The Company is not specifically insured with respect to this liability. Although the Company believes that the Company is in compliance in all material respects with applicable environmental laws and regulations and currently does not expect to make material capital expenditures for environmental control facilities in the near term, there can be no assurance that the Company will not be required to incur significant costs to comply with environmental laws and regulations in the future, or that the operations, business or assets will not be materially adversely affected by current or future environmental laws or regulations.

*If the Company is unable to successfully develop companion diagnostics for its therapeutic product candidates, or experience significant delays in doing so, the Company may not achieve marketing approval or realize the full commercial potential of its therapeutic product candidates.*

The Company plans to develop companion diagnostics for its therapeutic product candidates. It is expected that, at least in some cases, regulatory authorities may require the development and regulatory approval of a companion diagnostic as a condition to approving a therapeutic product candidate. The Company has limited experience and capabilities in developing or commercializing diagnostics and plans to rely in large part on third parties to perform these functions. The Company does not currently have any agreement in place with any third party to develop or commercialize companion diagnostics for any of its therapeutic product candidates.

Companion diagnostics are subject to regulation by the FDA, Health Canada and comparable foreign regulatory authorities as medical devices and may require separate regulatory approval or clearance prior to commercialization. If the Company, or any third parties that the Company engages to assist, are unable to successfully develop companion diagnostics for the Company's therapeutic product candidates, or experience delays in doing so, the Company's business may be substantially harmed.

Significant disruption in availability of key components for ongoing clinical studies could considerably delay completion of potential clinical trials, product testing and regulatory approval of potential product candidates.

The Company relies on third parties to supply ingredients and excipients for the manufacture and formulation of its drugs, compatible infusion systems for drug delivery, catheters required to deliver the drug to the brain as well as imaging software to accurately place catheters in the tumor ("Components"). Each of the suppliers of these Components in turn need to comply with regulatory requirements. Any significant disruption in supplier relationships could harm the Company's business, including the potential impact of COVID-19 which continues to cause supply chain instability. Any significant delay in the supply of a Component, for a potential ongoing clinical study could considerably delay initiation or completion of potential clinical trials, drug manufacturing, drug testing and regulatory approval of potential product candidates. If the Company or its suppliers are unable to purchase these Components after regulatory approval has been obtained for the product candidates, or the suppliers decide not to manufacture these Components or provide support for any of the Components, clinical trials or the commercial launch of that product candidate would be delayed or there would be a shortage in supply, which would impair the ability to generate revenues from the sale of the product candidates. It may take several years to establish an alternative source of supply for such Components and to have any such new source approved by the FDA and other regulatory agencies.

Even if any product candidates we develop receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors, and others in the medical community necessary for commercial success.

The commercial success of any of our product candidates will depend upon its degree of market acceptance by physicians, patients, third party payors, and others in the medical community. Even if any product candidates we may develop receive marketing approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors, and others in the medical community. The degree of market acceptance of any product candidates we may develop, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy and safety of such product candidates as demonstrated in pivotal clinical trials and published in peer-reviewed journals;
- the potential and perceived advantages compared to alternative treatments;
- the ability to offer our products for sale at competitive prices;
- the ability to offer appropriate patient access programs, such as co-pay assistance;
- the extent to which physicians recommend our products to their patients;
- convenience and ease of dosing and administration compared to alternative treatments;
- the clinical indications for which the product candidate is approved by the FDA, EMA or other comparable foreign regulatory agencies;

- product labeling or product insert requirements of the FDA, EMA or other comparable foreign regulatory authorities, including any limitations, contraindications or warnings contained in a product's approved labeling;
- restrictions on how the product is distributed;
- the timing of market introduction of competitive products;
- publicity concerning our products or competing products and treatments;
- the effectiveness of marketing and distribution efforts by us and other licensees and distributors;
- sufficient governmental and third party coverage or reimbursement; and
- the prevalence and severity of any side effects.

If any product candidates we develop do not achieve an adequate level of acceptance by physicians, healthcare payors, patients and the medical community, we will not be able to generate significant revenue, and we may not become or remain profitable. The failure of any of our product candidates to find market acceptance would harm our business prospects.

### ***Risks Related to Intellectual Property and Litigation***

#### ***The Company's success depends upon its ability to protect its intellectual property and its proprietary technology.***

The Company's success depends, in part, on its ability and its licensors' ability to obtain patents, maintain trade secrets protection and operate without infringing on the proprietary rights of third parties or having third parties circumvent its rights. Certain licensors and the institutions that they represent, and in certain cases, have filed and are actively pursuing certain applications for Canadian and foreign patents. The patent position of pharmaceutical and biotechnology firms is uncertain and involves complex legal and financial questions for which, in some cases, certain important legal principles remain unresolved. There can be no assurance that the patent applications made in respect of the owned or licensed products will result in the issuance of patents, that the term of a patent will be extendable after it expires in due course, that the licensors or the institutions that they represent will develop additional proprietary products that are patentable, that any patent issued to the licensors or the Company will provide it with any competitive advantages, that patents of others will not impede its ability to do business or that third parties will not be able to circumvent or successfully challenge the patents obtained in respect of the licensed products. The cost of obtaining and maintaining patents is high and may affect the Company's financial condition. Furthermore, there can be no assurance that others will not independently develop competitor products which duplicate any of the owned/licensed products under pending patent protection or, if patents are issued to such owned/licensed products, will not design around such patents. There can be no assurance that the Company's processes or products or those of its licensors do not or will not infringe upon the patents of third parties or that the scope of its patents or those of its licensors will successfully prevent third parties from developing similar and competitive products.

Much of the Company's know-how and technology may not be patentable, though it may constitute trade secrets. There can be no assurance, however, that the Company will be able to meaningfully protect its trade secrets. To help protect its intellectual property rights and proprietary technology, the Company requires employees, consultants, advisors and collaborators to enter into confidentiality agreements. There can be no assurance that these agreements will provide meaningful protection for its intellectual property rights or other proprietary information in the event of any unauthorized use or disclosure.

The Company's potential involvement in intellectual property litigation could negatively affect its business.

The Company's future success and competitive position depends in part upon its ability to maintain the its intellectual property portfolio. There can be no assurance that any patents will be issued on any existing or future patent applications. Even if such patents are issued, there can be no assurance that any patents issued or licensed to the Company will not be successfully challenged. The Company's ability to establish and maintain a competitive position may require in part successfully prosecuting claims against others who it believes are infringing its rights and successfully defending claims brought by others who believe that the Company is infringing their rights. In addition, enforcement of its patents in foreign jurisdictions will depend on the legal procedures in those jurisdictions. Even if the company is successful in intellectual property litigation, the Company's involvement in such litigation could have a material adverse effect on its ability to out-license any products that are the subject of such litigation. In addition, its involvement in intellectual property litigation could result in significant expense, which could materially adversely affect the use or licensing of related intellectual property and divert the efforts of its valuable technical and management personnel from their principal responsibilities, whether or not such litigation is resolved in its favour.

The Company's reliance on third parties requires it to share its trade secrets, which increases the possibility that a competitor will discover them.

Because the Company relies on third parties to develop its products, it must share trade secrets with them. The Company seeks to protect its proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with its collaborators, advisors, employees and consultants prior to beginning research or disclosing proprietary information. These agreements typically restrict the ability of the Company's collaborators, advisors, employees and consultants to publish data potentially relating to the Company's trade secrets. The Company's academic collaborators typically have rights to publish data, provided that the Company is notified in advance and may delay publication for a specified time in order to secure its intellectual property rights arising from the collaboration. In other cases, publication rights are controlled exclusively by the Company, although in some cases it may share these rights with other parties. The Company also conducts joint research and development programs which may require it to share trade secrets under the terms of research and development collaboration or similar agreements. Despite the Company's efforts to protect its trade secrets, its competitors may discover its trade secrets, either through breach of these agreements, independent development or publication of information including its trade secrets in cases where the Company does not have proprietary or otherwise protected rights at the time of publication. A competitor's discovery of the Company's trade secrets may impair its competitive position and could have a material adverse effect on its business and financial condition.

Product liability claims are an inherent risk of the Company's business, and if the Company's clinical trial and product liability insurance prove inadequate, product liability claims may harm its business.

Human therapeutic products involve an inherent risk of product liability claims and associated adverse publicity. There can be no assurance that the Company will be able to obtain or maintain product liability insurance on acceptable terms or with adequate coverage against potential liabilities. Such insurance is expensive, difficult to obtain and may not be available in the future on acceptable terms, or at all. An inability to obtain sufficient insurance coverage on reasonable terms or to otherwise protect against potential product liability claims could have a material adverse effect on the Company's business by preventing or inhibiting the commercialization of its products, licensed and owned, if a product is withdrawn or a product liability claim is brought against the Company.

Generally, a litigation risk exists for any company that may compromise its ability to conduct the Company's business.

All industries are subject to legal claims, with and without merit. Defense and settlement costs can be substantial, even with respect to claims that have no merit. Due to the inherent uncertainty of the litigation process, the resolution of any particular legal proceeding could have a material adverse effect on the Company's business, prospects, financial condition and results of operations.

## **Other Risks**

### *Our Common Share price has been volatile in recent years and may continue to be volatile.*

The market prices for securities of biotechnology companies, including ours, have historically been volatile. In the year ended March 31, 2021, our Common Shares traded on the TSX at a high of \$7.25 and a low of \$2.15 per share and on the NASDAQ at a high of US\$6.84 and a low of US\$3.34 per share. A number of factors could influence the volatility in the trading price of our Common Shares, including changes in the economy or in the financial markets, industry related developments, the results of product development and commercialization, changes in government regulations, and developments concerning proprietary rights, litigation and cash flow. Our quarterly losses may vary because of the timing of costs for clinical trials, manufacturing and preclinical studies. Also, the reporting of clinical data or the lack thereof, adverse safety events involving our products and public rumors about such events could cause our share price to decline or experience periods of volatility. Each of these factors could lead to increased volatility in the market price of our Common Shares. In addition, changes in the market prices of the securities of our competitors may also lead to fluctuations in the trading price of our Common Shares.

### *Future sales or issuances of equity securities or the conversion of securities into Common Shares could decrease the value of the Common Shares, dilute investors' voting power, and reduce earnings per share.*

The Company may sell additional equity securities in future offerings, including through the sale of securities convertible into equity securities, to finance operations, acquisitions or projects, and issue additional Common Shares if outstanding securities are converted into Common Shares, which may result in dilution.

The Company's board of directors will have the authority to authorize certain offers and sales of additional securities without the vote of, or prior notice to, shareholders. Based on the need for additional capital to fund expected expenditures and growth, it is likely that the Company will issue additional securities to provide such capital.

Sales of substantial amounts of securities, or the availability of such securities for sale, as well as the issuance of substantial amounts of Common Shares upon conversion or exchange of outstanding convertible or exchangeable securities, could adversely affect the prevailing market prices for securities and dilute investors' earnings per share. A decline in the future market prices of the Company's securities could impair its ability to raise additional capital through the sale of securities should it desire to do so.

In the past, following periods of volatility in the market price of a company's securities, shareholders have instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm the Company's profitability and reputation.

The market price for the Common Shares may also be affected by the Company's ability to meet or exceed expectations of analysts or investors. Any failure to meet these expectations, even if minor, may have a material adverse effect on the market price of the Common Shares.

### *The Company is subject to foreign exchange risk relating to the relative value of the United States dollar.*

A material portion of the Company's expenses are denominated in United States dollars. As a result, the Company is subject to foreign exchange risks relating to the relative value of the Canadian dollar as compared to the United States dollar. A decline in the Canadian dollar would result in an increase in the actual amount of its expenses and adversely impact financial performance.

### *The Company's disclosure controls and procedures may not prevent or detect all errors or acts of fraud.*

The Company's disclosure controls and procedures are designed to reasonably assure that information required to be disclosed by the Company in reports it files or submits under applicable securities laws is accumulated and communicated to management, recorded, processed, summarized and reported within the time periods specified under applicable securities laws. The Company believes that any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in the Company's control system, misstatements or insufficient disclosures due to error or fraud may occur and not be detected.

Any failure to maintain an effective system of internal controls may result in material misstatements of the Company's consolidated financial statements or cause the Company to fail to meet the reporting obligations or fail to prevent fraud; and in that case, shareholders could lose confidence in the Company's financial reporting, which would harm the business and could negatively impact the price of the Common Shares.

Effective internal controls are necessary to provide reliable financial reports and prevent fraud. If there is a failure to maintain an effective system of internal controls, the Company might not be able to report financial results accurately or prevent fraud; and in that case, shareholders could lose confidence in the Company's financial reporting, which would harm the business and could negatively impact the price of the Common Shares. While the Company believes that it will have sufficient personnel and review procedures to maintain an effective system of internal controls, no assurance can be provided that potential material weaknesses in internal control could arise. Even if it is concluded that the internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with IFRS, as issued by the International Accounting Standards Board (IASB), because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm results of operations or cause a failure to meet future reporting obligations.

Our internal computer systems, or those used by our contractors or consultants, may fail or suffer security breaches.

Despite the implementation of security measures, our internal computer systems, and those of our third parties on which we rely, are vulnerable to damage from cyber-attacks, computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures. The risk of a security breach or disruption, particularly through cyber-attacks, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions have increased. If such an event were to occur and cause interruptions in our operations or those of our third parties, it could result in a material disruption of our product development programs and our business operations. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. In some cases, data cannot be reproduced. Likewise, we rely on third parties for the manufacture of our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security breach results in a loss of or damage to our data, or inappropriate disclosure of confidential or proprietary information, we could incur significant liability and damage to our reputation and the further development and commercialization of our future product candidates could be delayed. Our insurance coverage may not be adequate to cover all the costs related to such breaches or attacks.

In addition, the unauthorized dissemination of sensitive personal information could expose us or other third parties to regulatory fines or penalties, litigation and potential liability, or otherwise harm our business.

Failure to comply with the U.S. Foreign Corrupt Practices Act (“FCPA”), the Canadian Corruption of Foreign Public Officials Act (“CFPOA”), and other global anti-corruption and anti-bribery laws could subject the Company to penalties and other adverse consequences.

The FCPA and the CFPOA, as well as any other applicable domestic or foreign anti-corruption or anti-bribery laws to which the Company is or may become subject generally prohibit corporations and individuals from engaging in certain activities to obtain or retain business or to influence a person working in an official capacity and requires companies to maintain accurate books and records and internal controls, including at foreign-controlled subsidiaries.

Compliance with these anti-corruption laws and anti-bribery laws may be expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, these laws present particular challenges in the pharmaceutical industry, because, in many countries, hospitals are operated by the government, and physicians and other hospital employees are considered to be foreign officials. Certain payments by other companies to hospitals in connection with clinical trials and other work have been deemed to be improper payments to governmental officials and have led to FCPA enforcement actions.

The Company’s internal control policies and procedures may not protect it from reckless or negligent acts committed by the Company’s employees, future distributors, licensees or agents. The Company can make no assurance that they will not engage in prohibited conduct, and the Company may be held liable for their acts under applicable anti-corruption and anti-bribery laws. Noncompliance with these laws could subject the Company to investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension or debarment from contracting with certain persons, the loss of export privileges, whistleblower complaints, reputational harm, adverse media coverage, and other collateral consequences. Any investigations, actions or sanctions or other previously mentioned harm could have a material negative effect on the Company’s business, operating results and financial condition.

If we fail to comply with healthcare laws, we could face substantial penalties and our business, operations and financial conditions could be adversely affected.

Healthcare providers, physicians and payors play a primary role in the recommendation and prescription of any product candidates for which we may obtain marketing approval. Our future arrangements with payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any product candidates for which we may obtain marketing approval. Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third party payors, federal and state healthcare laws and regulations pertaining to fraud and abuse and patients’ rights are and will be applicable to our business. Restrictions under applicable federal, state and foreign healthcare laws and regulations may affect our ability to operate and expose us to areas of risk, including:

- federal civil and criminal false claims laws and civil monetary penalty laws, including the False Claims Act, which impose criminal and civil penalties, including through civil “qui tam” or “whistleblower” actions, against individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid, or other third party payors that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government. A person or entity does not need to have actual knowledge of these statutes or specific intent to violate them in order to have committed a violation;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization;
- the federal Physician Payments Sunshine Act, created under the ACA, and its implementing regulations, which require manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program to report annually to the U.S. Department of Health and Human Services under the Open Payments Program, information related to payments or other transfers of value made to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members, as well as other state and foreign laws regulating marketing activities;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and
- analogous state and foreign laws and regulations, such as state and foreign anti-kickback, false claims, consumer protection and unfair competition laws which may apply to pharmaceutical business practices, including, but not limited to, research, distribution, sales and marketing arrangements as well as submitting claims involving healthcare items or services reimbursed by any third party payer, including commercial insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government that otherwise restricts payments that may be made to healthcare providers and other potential referral sources; state laws that require drug manufacturers to file reports with states regarding pricing and marketing information, such as the tracking and reporting of gifts, compensations and other remuneration and items of value provided to healthcare professionals and entities; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could, despite our efforts to comply, be subject to challenge under one or more of such laws. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

*Any future profits will likely be used for the continued growth of the business and products and will not be used to pay dividends on the issued and outstanding shares.*

The Company will not pay dividends on the issued and outstanding Common Shares in the foreseeable future. If the Company generates any future earnings, such cash resources will be retained to finance further growth and current operations. The board of directors will determine if and when dividends should be declared and paid in the future based on the Company's financial position and other factors relevant at the particular time. Until the Company pays dividends, which it may never do, a shareholder will not be able to receive a return on his or her investment in the Common Shares unless such Common Shares are sold. In such event, a shareholder may only be able to sell his, her or its Common Shares at a price less than the price such shareholder originally paid for them, which could result in a significant loss of such shareholder's investment.

The Company may pursue other business opportunities in order to develop its business and/or products.

From time to time, the Company may pursue opportunities for further research and development of other products. The Company's success in these activities will depend on its ability to identify suitable technical experts, market needs, and effectively execute any such research and development opportunities. Any research and development would be accompanied by risks as a result of the use of business efforts and funds. In the event that the Company chooses to raise debt capital to finance any such research or development opportunities, its leverage will be increased. There can be no assurance that the Company would be successful in overcoming these risks or any other problems encountered in connection with any research or development opportunities.

The Company may acquire businesses or products, or form strategic alliances, in the future, and the Company may not realize the benefits of such acquisitions.

The Company may acquire additional businesses or products, form strategic alliances or create joint ventures with third parties that the Company believes will complement or augment its existing business. If the Company acquires businesses with promising products or technologies, the Company may not be able to realize the benefit of acquiring such businesses if the Company is unable to successfully integrate them with its existing operations and company culture. The Company may encounter numerous difficulties in developing, manufacturing and marketing any new products resulting from a strategic alliance or acquisition that delay or prevent it from realizing their expected benefits or enhancing the Company's business. The Company cannot assure investors that, following any such acquisition, it will achieve the expected synergies to justify the transaction.

The Company's success depends on its ability to effectively manage its growth.

The Company may be subject to growth-related risks including pressure on its internal systems and controls. The Company's ability to manage its growth effectively will require the Company to continue to implement and improve its operational and financial systems and to expand, train and manage its employee base. Inability to deal with this growth could have a material adverse impact on its business, operations and prospects. The Company may experience growth in the number of its employees and the scope of its operating and financial systems, resulting in increased responsibilities for its personnel, the hiring of additional personnel and, in general, higher levels of operating expenses. In order to manage its current operations and any future growth effectively, the Company will also need to continue to implement and improve its operational, financial and management information systems and to hire, train, motivate, manage and retain its employees. There can be no assurance that the Company will be able to manage such growth effectively, that its management, personnel or systems will be adequate to support its operations or that the Company will be able to achieve the increased levels of revenue commensurate with the increased levels of operating expenses associated with this growth.

If the Company is treated as a passive foreign investment company, United States shareholders may be subject to adverse U.S. federal income tax consequences

Under the U.S. Internal Revenue Code of 1986, as amended (the "Code"), the Company will be classified as a passive foreign investment company ("PFIC") in respect of any taxable year in which either (i) 75% or more of its gross income consists of certain types of "passive income" or (ii) 50% or more of the average quarterly value of its assets is attributable to "passive assets" (assets that produce or are held for the production of passive income). For purposes of these tests, passive income includes dividends, interest, gains from the sale or exchange of investment property and certain rents and royalties. In addition, for purposes of the above calculations, if the Company directly or indirectly owns at least 25% by value of the shares of another corporation, the Company will be treated as if it held its proportionate share of the assets and received directly its proportionate share of the income of such other corporation. PFIC status is a factual determination that needs to be made annually after the close of each taxable year, on the basis of the composition of the Company's income, the relative value of its active and passive assets, and its market capitalization. For this purpose, the Company's PFIC status depends in part on the application of complex rules, which may be subject to differing interpretations, relating to the classification of the Company's income and assets. Based on our interpretation of the law, the Company's recent financial statements, and considering expectations about the Company's income, assets and activities, the Company believes that it was a PFIC for the taxable year ended March 31, 2021 and expects that it will be a PFIC for the current taxable year.

If the Company is a PFIC for any taxable year during which a United States shareholder holds the Common Shares, the Company will continue to be treated as a PFIC with respect to such United States shareholder in all succeeding years during which the United States shareholder owns the Common Shares, regardless of whether the Company continues to meet the PFIC test described above, unless the United States shareholder makes a specified election once the Company ceases to be a PFIC. If the Company is classified as a PFIC for any taxable year during which a United States shareholder holds the Common Shares, the United States shareholder may be subject to adverse tax consequences regardless of whether the Company continues to qualify as a PFIC, including ineligibility for any preferred tax rates on capital gains or on actual or deemed dividends, interest charges on certain taxes treated as deferred, and additional reporting requirements. In certain circumstances, a United States shareholder may alleviate some of the adverse tax consequences attributable to PFIC status by making either a “qualified electing fund,” (“QEF”) election or a mark-to-market election (if the Common Shares constitute “marketable” securities under the Code). If the Company determines that it is a PFIC for this year or any future taxable year, the Company currently expects that it would provide the information necessary for United States shareholders to make a QEF election.

Each United States shareholder should consult its own tax advisors regarding the PFIC rules and the United States federal income tax consequences of the acquisition, ownership and disposition of the Common Shares.

*The Company’s operations could be adversely affected by events outside of its control, such as natural disasters, wars or health epidemics*

The Company may be impacted by business interruptions resulting from pandemics and public health emergencies, including those related to COVID-19 coronavirus, geopolitical actions, including war and terrorism or natural disasters including earthquakes, typhoons, floods and fires. An outbreak of infectious disease, a pandemic or a similar public health threat, such as the recent outbreak of the novel coronavirus known as COVID-19, or a fear of any of the foregoing, could adversely impact the Company by causing operating, manufacturing supply chain, clinical trial and project development delays and disruptions, labour shortages, travel and shipping disruption and shutdowns (including as a result of government regulation and prevention measures). The Company has been impacted by supply chain delays with respect to both the GMP manufacturing and IND enabling studies and it is unknown whether and how the Company may further be affected if such an epidemic persists for an extended period of time. The Company may incur expenses or delays relating to such events outside of its control, which could have a material adverse impact on its business, operating results and financial condition.

*It may be difficult for United States investors to obtain and enforce judgments against the Company because of the Company’s Canadian incorporation and presence.*

The Company is a corporation existing under the federal laws of Canada. Most of the Company’s directors and officers, and several of the experts, are residents of Canada, and all or a substantial portion of their assets, and a substantial portion of the Company’s assets, are located outside the United States. Consequently, it may be difficult for holders of the Company’s securities who reside in the United States to effect service of process within the United States upon those directors, officers and experts who are not residents of the United States. It may also be difficult for holders of the Company’s securities who reside in the United States to realize in the United States upon judgments of courts of the United States predicated upon the Company’s civil liability and the civil liability of the Company’s directors, officers and experts under the United States federal securities laws. Investors should not assume that Canadian courts (i) would enforce judgments of United States courts obtained in actions against the Company or such directors, officers or experts predicated upon the civil liability provisions of the United States federal securities laws or the securities or “blue sky” laws of any state or jurisdiction of the United States or (ii) would enforce, in original actions, liabilities against the Company or such directors, officers or experts predicated upon the United States federal securities laws or any securities or “blue sky” laws of any state or jurisdiction of the United States. In addition, the protections afforded by Canadian securities laws may not be available to investors in the United States.

As a Foreign Private Issuer, the Company is subject to different U.S. securities laws and rules than a domestic U.S. issuer, which may limit the information publicly available to its U.S. shareholders.

The Company is a foreign private issuer under applicable U.S. federal securities laws and, therefore, is not required to comply with all of the periodic disclosure and current reporting requirements of the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”), and related rules and regulations. As a result, the Company does not file the same reports that a U.S. domestic issuer would file with the United States Securities and Exchange Commission (the “SEC”), although it is required to file with or furnish to the SEC the continuous disclosure documents that the Company is required to file in Canada under Canadian securities laws. In addition, the Company’s officers, directors and principal shareholders are exempt from the reporting and “short swing” profit recovery provisions of Section 16 of the Exchange Act. Therefore, the Company’s shareholders may not know on as timely a basis when its officers, directors and principal shareholders purchase or sell securities of the Company as the reporting periods under the corresponding Canadian insider reporting requirements are longer. In addition, as a foreign private issuer, the Company is exempt from the proxy rules under the Exchange Act.

The Company may lose foreign private issuer status in the future, which could result in significant additional costs and expenses.

The Company may in the future lose foreign private issuer status if a majority of the Common Shares are held in the United States and the Company fails to meet the additional requirements necessary to avoid loss of foreign private issuer status, such as if: (i) a majority of the Company’s directors or executive officers are U.S. citizens or residents; (ii) a majority of the Company’s assets are located in the United States; or (iii) the Company’s business is administered principally in the United States. The regulatory and compliance costs to the Company under U.S. securities laws as a U.S. domestic issuer may be significantly more than the costs incurred as a foreign private issuer.

## **DISCLOSURE CONTROLS AND INTERNAL CONTROL OVER FINANCIAL REPORTING**

The Company has implemented a system of internal controls that it believes adequately protects the assets of the Company and is appropriate for the nature of its business and the size of its operations. The internal control system was designed to provide reasonable assurance that all transactions are accurately recorded, that transactions are recorded as necessary to permit preparation of financial statements in accordance with IFRS, and that our assets are safeguarded.

These internal controls include disclosure controls and procedures designed to ensure that information required to be disclosed by the Company is accumulated and communicated as appropriate to allow timely decisions regarding required disclosure.

Internal control over financial reporting means a process designed by or under the supervision of the Chief Executive Officer and the Chief Financial Officer, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS as issued by the IASB.

The internal controls are not expected to prevent and detect all misstatements due to error or fraud. There were no changes in our internal control over financial reporting that occurred during the year ended March 31, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

As of March 31, 2021, the Company's management has assessed the effectiveness of our internal control over financial reporting and disclosure controls and procedures using the Committee of Sponsoring Organizations of the Treadway Commission's 2013 framework. Based on their evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that these controls and procedures are effective.

## OTHER MD&A REQUIREMENTS

### Outstanding Share Data

As at the date of this report, the Company has the following securities outstanding:

	<b>Number</b>
Common shares	53,551,555
Warrants	3,997,147
Stock options	4,525,084
<b>Total</b>	<b>62,073,786</b>

For a detailed summary of the outstanding securities convertible into, exercisable or exchangeable for voting or equity securities of Medicenna as at March 31, 2021, refer to notes 9, 10, and 11 in the audited 2021 Annual Financial Statements of the Company.

Additional information relating to the Company, including the Company's annual information form in respect of fiscal year 2021, is available under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com) and EDGAR at [www.sec.gov](http://www.sec.gov).

**CERTIFICATION  
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Dr. Fahar Merchant, certify that:

1. I have reviewed this annual report on Form 40-F of Medicenna Therapeutics Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the issuer as of, and for, the periods presented in this report;
4. The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the issuer and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting.
5. The issuer's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: May 28, 2021

/s/ Fahar Merchant

Name: Dr. Fahar Merchant

Title: Chief Executive Officer

(principal executive officer)

**CERTIFICATION  
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Elizabeth Williams, certify that:

1. I have reviewed this annual report on Form 40-F of Medicenna Therapeutics Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the issuer as of, and for, the periods presented in this report;
4. The issuer's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the issuer and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting.
5. The issuer's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: May 28, 2021

/s/ Elizabeth Williams

Elizabeth Williams

Chief Financial Officer

(principal financial officer)

**CERTIFICATION**  
**PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The undersigned, as the Chief Executive Officer of Medicenna Therapeutics Corp. certifies that, to the best of his knowledge and belief, the annual report on Form 40-F for the fiscal year ended March 31, 2021, which accompanies this certification, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and the information contained in the annual report on Form 40-F for the fiscal year ended March 31, 2021 fairly presents, in all material respects, the financial condition and results of operations of Medicenna Therapeutics Corp. at the dates and for the periods indicated. The foregoing certification is made pursuant to § 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. § 1350) and shall not be relied upon for any other purpose. The undersigned expressly disclaims any obligation to update the foregoing certification except as required by law.

Date: May 28, 2021

/s/ Fahar Merchant  
Dr. Fahar Merchant  
Chief Executive Officer  
(principal executive officer)

**CERTIFICATION  
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The undersigned, as the Chief Financial Officer of Medicenna Therapeutics Corp. certifies that, to the best of her knowledge and belief, the annual report on Form 40-F for the fiscal year ended March 31, 2021, which accompanies this certification, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and the information contained in the annual report on Form 40-F for the fiscal year ended March 31, 2021 fairly presents, in all material respects, the financial condition and results of operations of Medicenna Therapeutics Corp. at the dates and for the periods indicated. The foregoing certification is made pursuant to § 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. § 1350) and shall not be relied upon for any other purpose. The undersigned expressly disclaims any obligation to update the foregoing certification except as required by law.

Date: May 28, 2021

/s/ Elizabeth Williams  
Elizabeth Williams  
Chief Financial Officer  
(principal financial officer)

**Consent of Independent Auditor**

We hereby consent to the inclusion in this Annual Report on Form 40-F for the year ended March 31, 2021 of Medicenna Therapeutics Corp. of our report dated May 27, 2021, relating to the consolidated financial statements, which is incorporated by reference in such Annual Report.

We also consent to the incorporation by reference in the Registration Statements on Forms F-10 (File No. 333-238905) and Form S-8 (No. 333-240225) of Medicenna Therapeutics Corp. of our report dated May 27, 2021 referred to above.

We also consent to reference to us under the heading "Interest of Experts," which appears in the Annual Information Form included in Exhibit 99.1 of this Form 40-F, which is incorporated by reference in such Registration Statements referred to above.

/s/PricewaterhouseCoopers LLP

**Chartered Professional Accountants, Licensed Public Accountants**

Oakville, Ontario

May 27, 2021

*PricewaterhouseCoopers LLP  
PwC Centre, 354 Davis Road, Suite 600, Oakville, Ontario, Canada L6J 0C5  
T: +1 905 815 6300, F: +1 905 815 6499, [www.pwc.com/ca](http://www.pwc.com/ca)*

"PwC" refers to PricewaterhouseCoopers LLP, an Ontario limited liability partnership.

---

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the use of our report dated May 14, 2020, relating to the consolidated financial statements of Medicenna Therapeutics Corp for the year ended March 31, 2020, appearing in Exhibit 99.2 to this Annual Report on Form 40-F for the year ended March 31, 2021.

We also consent to the incorporation by reference in the Registration Statements on Form F-10 (No. 333-238905) and Form S- 8 (No. 333-240225) of Medicenna Therapeutics Corp. of our report dated May 14, 2020 referred to above.

/s/ **DAVIDSON & COMPANY LLP**

Vancouver, Canada

Chartered Professional Accountants

May 27, 2021



1200 - 609 Granville Street, P.O. Box 10372, Pacific Centre, Vancouver, B.C., Canada V7Y 1G6  
Telephone (604) 687-0947 Davidson-co.com