Management's Discussion and Analysis

For the Year Ended
March 31, 2022

DATE OF REPORT: June 21, 2022

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following management's discussion and analysis ("MD&A") has been prepared as at June 21, 2022 for the year ended March 31, 2022 and should be read in conjunction with the audited consolidated financial statements of Medicenna Therapeutics Corp. for the year ended March 31, 2022 (the "Annual Financial Statements"). The audited consolidated financial statements and related notes of Medicenna were prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). Our IFRS accounting policies are set out in note 2 of the Annual Financial Statements 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. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on current beliefs, expectations or assumptions regarding the future of the business, future plans and strategies, operational results and other future conditions of the Company. 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 other than statements of historical fact regarding the prospects of the Company's industry or its prospects, plans, financial position or business strategy may constitute forward-looking statements and can generally be identified by the use of forward-looking 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.

By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and risks exist that predictions, forecasts, projections and other forward-looking statements will not be achieved. The Company cautions readers not to place undue reliance on these statements as a number of important factors could cause the actual results to differ materially from the beliefs, plans, objectives, expectations, anticipations, estimates and intentions expressed in such forward-looking statements. Risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company, as applicable, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking information and statements include, but are not limited to, the risks described under the heading "Risks and Uncertainties" in this MD&A.

Forward-looking statements in this MD&A include, but are not limited to:

- the lack of product revenue and inability to continue operations and research and development without sufficient funding;
- the Company's requirements for, and our ability to obtain, future funding on favourable terms or at all;
- the Company's history of losses and expectations of future losses;
- the Company's inability to complete development of or the inability to commercialize the Company's product candidates, which are in the early stages of development;
- the expense, length, and uncertainty of clinical drug development programs;
- the inability to achieve publicly announced milestones according to schedule, or at all;
- the risk that competitors may develop and market products that are more effective that the Company's product candidates or that the products developed by competitors may render the Company's product candidates obsolete or uncompetitive;

- the Company's inability to secure a partnership for MDNA55;
- the costs and uncertainty associated with extensive government regulation;
- the potential negative results from clinical trials or studies, or adverse safety events involving the targets of the Company's products;
- the risk of product liability claims;
- the Company's inability to enroll subjects in clinical trials or complete clinical trials on a timely basis
- the failure of our product candidates to receive the marketing approval or market acceptance necessary for commercial success;
- the potential for environmental exposure to hazardous or radioactive materials that are used in the Company's discovery and development process;
- the disruption in the availability of key components for ongoing clinical studies that could delay clinical studies, product testing, and regulatory approval of the Company's product candidates
- the Company's reliance on third parties for the planning, conduct, and monitoring of preclinical and clinical trials;
- the Company's reliance on contract manufacturers over whom the Company has limited control;
- the loss of license rights due to breach of license agreements;
- the conditions and restrictions of the CPRIT agreement;
- the ability to protect the Company's intellectual property and proprietary technology;
- the potential involvement in intellectual property litigation;
- the risk that third-parties to whom we rely for product development may not adequately protect the Company's trade secrets;
- the risk of product liability claims;
- the limitations surrounding intellectual property rights
- the volatility in the price of our Common Shares
- the dilution of investor's voting power and reductions in earnings per share owing to future issuances of equity or the conversion of securities into Common Shares;
- the fact that future profits will likely be used for the continued growth of the Company's business and not for the payment of dividends
- the Company's treatment as a passive foreign investment company and potential adverse U.S. federal income tax consequences associated with such treatment;
- the difficulty United States investors may face in bringing actions against the Company for violations of U.S. federal or state securities laws and challenges in enforcing the judgments of U.S. courts against the Company and its directors and executive officers;
- the Company's status as a foreign private issuer under applicable U.S. securities laws;
- the Company could lose its s status as a foreign private issuer;
- the ability of the Company's significant shareholders to assert a material influence over the Company's operations and governance;
- the adverse impact of factors outside our control, such as global health pandemics, natural disasters, geopolitical conflict and macroeconomic challenges;
- the Company's ability to successfully manage its growth;
- the failure of any acquired business, product, service, or alliance to yield expected benefits
- the Company's dependence upon certain key personnel, the loss of whom could adversely affect our ability to achieve our business objectives;
- changes in government regulations that could impact our business and operations;
- failure to comply with the U.S. Foreign Corrupt Practices Act, the Canadian Corruption of Foreign Public Officials Act and other global corruption and anti-bribery laws;
- a failure to comply with healthcare laws;
- foreign currency exchange risks relating to the relative value of the United States dollar;
- the failure of our disclosure controls and procedures to detect all errors or prevent all incidences of fraud;
- the failure to maintain an effective system of internal controls;
- the vulnerability of the computer and information systems of the Company, its consultants and contractors, and third-parties on which the Company relies, to security breaches or failure; and

- the pursuit of opportunities for further research and development or additional business opportunities.

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 efforts to mitigate it and the ongoing and developing indirect global and regional economic impacts. The Company continues to experience uncertainty related to the on-going COVID-19 pandemic. The spread of COVID-19 and global measures to contain it and its variants, have had, and are anticipated to 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, contract development and manufacturing organizations and suppliers to assess any impacts and risks. The Company believes that ongoing COVID-19 restrictions could impact the planned clinical development timelines of the MDNA11 Phase 1/2a clinical trial including patient recruitment although the Company is not aware of any delays at this time.

All forward-looking statements reflect the Company's beliefs and assumptions based on information available at the time the assumption was made

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, inflammation and immune-mediated diseases. 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 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 it's 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 payloads 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 to 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 Revolutionary Medicines using Evolutionary Superkines. Compared to naturally occurring cytokines – that bind to multiple receptors on many cell types – Superkines are engineered with unique selectivity 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 built a diverse platform, each comprised of a pipeline of Superkine candidates in-licensed from Leland Stanford Junior University ("Stanford"). These include the MDNA109, MDNA209, MDNA413 and MDNA132 platforms that consist of IL-2 agonists, IL-2 antagonists, dual IL-4/IL-13 antagonists and IL-13Ralpha2 selective superkines, respectively. Additional assets from Stanford also include partial agonists of IL-2 and several super-agonists of IL-4 and IL-13.

The most advanced of these programs is the MDNA109 platform which is a genetically engineered IL-2 Superkine designed to specifically bind to CD122 (IL-2Rβ) with high affinity. To further enhance its selectivity, 2 additional mutations (FEAA) were incorporated in MDNA109 to abolish binding to CD25. To improve the pharmacokinetic ("PK") properties of the highly selective version of MDNA109 (MDNA109FEAA), it was genetically fused to inactive protein scaffolds such as the Fc domain of IgG1 (MDNA19) or human albumin (MDNA11) effectively increasing the size of the Superkine and improving its half-life in order to avoid frequent daily dosing required for Proleukin®.

We believe that, unlike Proleukin®, both MDNA11 and MDNA19, have superior PK properties, lack CD25 binding in order to improve safety and reduce immune suppression, potently stimulate effector T cells, reverse natural killer ("NK") cell exhaustion and act with exceptional synergy when combined with checkpoint inhibitors.

Although MDNA19 was initially identified as the Company's lead IL-2 candidate, a pilot non-human primate ("NHP") study comparing MDNA11 with MDNA19 demostrated that the former had better PK and pharmacodynamic ("PD") features. Medicenna is therefore advancing the clinical development of MDNA11 as it is a more promising molecule and has been selected as the lead IL-2 Superkine candidate. Medicenna initiated the Phase 1/2 ABILITY Study (A Beta-only IL-2 ImmunoTherapY Study) with MDNA11 (the "ABILITY Study") in the third calendar quarter of 2021. MDNA19 remains relevant for Medicenna as it provides unique design features in the development of our BiSKITs™ platform. Our BiSKITs™ platform allows us to develop designer Superkines by fusing them to other proteins, antibodies, cytokines or other Superkines in order to incorporate two distinct but synergistic functions into one molecule: a BiSKIT™.

Complementing our Superkine platform is 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, the results of which support our belief that it has 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. We continue to pursue a strategic partnership to facilitate MDNA55's further development and commercialization.

ACHIEVEMENTS & HIGHLIGHTS

The following are the achievements and highlights for the year ended March 31, 2022 through to the date hereof:

- On April 12, 2021, we announced new preclinical data demonstrating the immune modulatory effects of MDNA19-MDNA413, an IL-2/IL-13 dual specific cytokine derived from our BiSKITs™ platform.
- On May 7, 2021, Medicenna announced the peer-reviewed publication of clinical data from the MDNA55 Phase 2b recurrent glioblastoma (rGBM) trial in the journal Clinical Cancer Research entitled "Modified

RANO, Immunotherapy RANO, and Standard RANO Response to Convection-enhanced Delivery of IL4R-targeted Immunotoxin MDNA55 in Recurrent Glioblastoma.

- On June 23, 2021, we announced submission of a clinical trial application to the Human Research Ethics Committee (HREC) in Australia to initiate a Phase 1/2 ABILITY Study (A Beta-only IL-2 ImmunoTherapY Study) of MDNA11 to assess the safety, PK, pharmacodynamics ("PD") and anti-tumor activity of MDNA11 in patients with advanced solid tumors.
- On June 30, 2021, Medicenna received US$0.9 million as a grant from the Cancer Prevention Research Institute of Texas ("CPRIT'). The remaining US$0.5 million of the US$14.1 million grant was received in August 2021. The grant has been fully received as at March 31, 2022.
- On September 14, 2021, Medicenna announced that the first patient was dosed in the MDNA11 Phase 1/2 ABILITY Study.
- On September 20, 2021, Medicenna announced that the US Patent and Trademark Office ("USPTO") has issued its patent, titled "Superagonists and Antagonists of Interleukin-2." The patent provides intellectual property protection for methods of treating a wide range of cancers specified in the claims with IL-2 variants such as MDNA11.
- On September 23, 2021, Medicenna announced the election of John H. Sampson, MD, PhD, MBA, a world-renowned clinician-scientist, to its Board of Directors
- On October 7, 2021, Medicenna announced the presentation of new preclinical data from its MDNA11 program during a poster session at the AACR-NCI-EORTC Virtual International Conference on Molecular Targets and Cancer Therapeutics.
- On October 27, 2021, Medicenna announced that the FDA allowed the Company to expand the Phase 1/2 ABILITY Study at clinical trial sites in the United States, under an Investigational New Drug ("IND") application.
- On November 18, 2021, Medicenna announced that Dr John H. Sampson, a director of Medicenna, received The Abstract Award for Excellence in Clinical Trials in connection with an oral presentation on MDNA55, which was delivered by Dr. Sampson at the 26th Annual Meeting of the Society for Neuro-Oncology (SNO).
- On December 17, 2021, Medicenna announced that Health Canada had approved the expansion of the Phase 1/2 ABILITY Study to clinical trial sites in Canada.
- On December 22, 2021, Medicenna announced preliminary data from the Phase 1/2 ABILITY Study, which were subsequently updated in May 2022.
- On January 17, 2022, Medicenna announced the appointment of industry veterans to its Development Advisory Committee, including Mr. Paul Smith, Dr. Bruce Pearce, and Dr. Peter Lloyd who have been instrumental in supporting MDNA11's pre-clinical safety, PK/PD studies, international regulatory filings and designing the Phase 1/2 ABILITY Study.
- On January 26, 2022, Medicenna announced the peer-reviewed publication of preclinical data on MDNA11 entitled "Fine-tuned Long-Acting Interleukin-2 Superkine Potentiates Durable Immune Responses in Mice and Non-Human Primate" published in the Journal for ImmunoTherapy of Cancer.
- On January 31, 2022, Medicenna announced the formation of its Scientific Advisory Board ("SAB"). The SAB consists of four highly accomplished leaders in oncology, immunotherapy and drug development: Sergio Quezada, Ph.D. (Chairman), Burkhard Becher, Ph.D., David Mooney, Ph.D., and William Redmond, Ph.D.
- On March 3, 2022, Medicenna announced the formation of its Clinical Advisory Board (CAB) comprised of Paolo Ascierto, M.D., Lillian Siu, M.D., FRCPC, and Hussein Tawbi, M.D., Ph.D., and the appointment of Dr. Kapil Dhingra as a Strategic Advisor.
- Subsequent to the year end, on April 8, 2022, Medicenna announced new preclinical data highlighting the potent anti-tumor efficacy of the next-generation BiSKIT, anti-PD1-MDNA109FEAA, an anti-PD1 antibody fused to an IL-2 Superkine, during a poster session at the American Association for Cancer Research (AACR) Annual Meeting.
- Subsequent to the year end, on April 8, 2022, Medicenna announced new preclinical data on its long-acting dual IL-4/IL-13 super-antagonist, Fc-MDNA413, during a poster session at the AACR Annual Meeting. Fc-MDNA413.
- Subsequent to the year end, on May 2, 2022, Medicenna announced new clinical data from the Phase 1/2 ABILITY Study. Subjects treated in the third dose cohort (30 µg/kg of MDNA11 every 2 weeks) had a 17-fold and 10-fold increase in Ki67+ expression relative to baseline by CD8+ T and NK cells,

respectively; A dose-dependent expansion of CD8+ T and NK cells of >3-fold and >6-fold over baseline, respectively; preferentially increased anti-cancer CD8+ T cells over pro-tumor Treg cells was observed after treatment with MDNA11, as the mean peak CD8+ T cell / Treg ratio increased by 2.6 fold over baseline; preferentially increased anti-cancer NK cells over Treg cells was observed after MDNA11, as the mean peak NK cell / Treg ratio increased 4.4-fold over baseline.

- Subsequent to the year end, on May 11, 2022 , Medicenna announced that clinical data from the Phase 1/2 ABILITY Study, were featured in a poster presentation at the 9th Annual Frontiers in Cancer Immunotherapy Meeting organized by the New York Academy of Sciences ("NYAS"). Key findings included: a dose-dependent expansion of cancer fighting lymphocytes (>200% increase at 30 µg/kg) and no significant increases in eosinophil count when compared to baseline after treatment with MDNA11; Unlike with IL-2, there was no increase in ICOS+ Treg cells after treatment with MDNA11. ICOS+ Treg cells are highly immunosuppressive and associated with lack of response to high dose IL-2 immunotherapy; Granulysin expressing immune cells also increased by 3-fold in a dose-dependent manner. Granulysin is a potent agent causing cancer specific cell death and is associated with better patient outcomes.
- Subsequent to the year end, on June 9, 2022, Medicenna announced announced that the U.S. Patent and Trademark Office (USPTO) has issued U.S. Patent No. 11,352,402 titled, "Interleukin-4 Receptor-Binding Fusion Proteins And Uses Thereof." The patent provides intellectual property (IP) protection for composition and methods of treating degenerative diseases via administration of a fusion protein comprising an IL-4 or IL-13 Superkine and an anti-apoptotic Bcl-2 family polypeptide. The patent's term extends into at least 2038 without accounting for any potential extensions.

FINANCING UPDATE

Year ended March 31, 2022

On December 30, 2020, the Company entered into an at-the-market ("ATM") agreement with SVB Leerink acting as sales agent (the "ATM Agreement"), 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"). 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. 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 year ended March 31, 2022, 1,748,600 common shares raising total gross proceeds of $3.9 million (US$3.1 million) were sold under the ATM Facility. As at March 31, 2022, there was approximately $20.1 million (US$16.1 million) available to use under the ATM Facility.

During the year ended March 31, 2022, 266,290 warrants were exercised for proceeds of $0.4 million, the details of which are described below:

Number of Warrants	Exercise Price	Proceeds	Expiry Date
	$	$	
50,000	1.20	60,000	December 21, 2023
71,744	1.30	93,267	October 17, 2021
144,546	1.75	252,955	October 17, 2022
266,290		**406,222**	

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 is being 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.

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 $7.1 million (US$5.8 million).

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:

Year ended March 31, 2020

On October 17, 2019, Medicenna completed a public offering raising total gross proceeds of $6.9 million. 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 $0.5 million 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 million. 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 $3.4 million, including an amount of $0.5 million 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 $2.4 million.

RESEARCH & DEVELOPMENT UPDATE

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 by virtue of its ability to bind to the IL-2 receptor.

The IL-2 receptor is composed of three different subunits, IL-2Rα (also known as CD25), IL-2Rβ (CD122) and IL-2Rγ (CD132). The arrangement of these different proteins determines the response to IL-2 signaling.

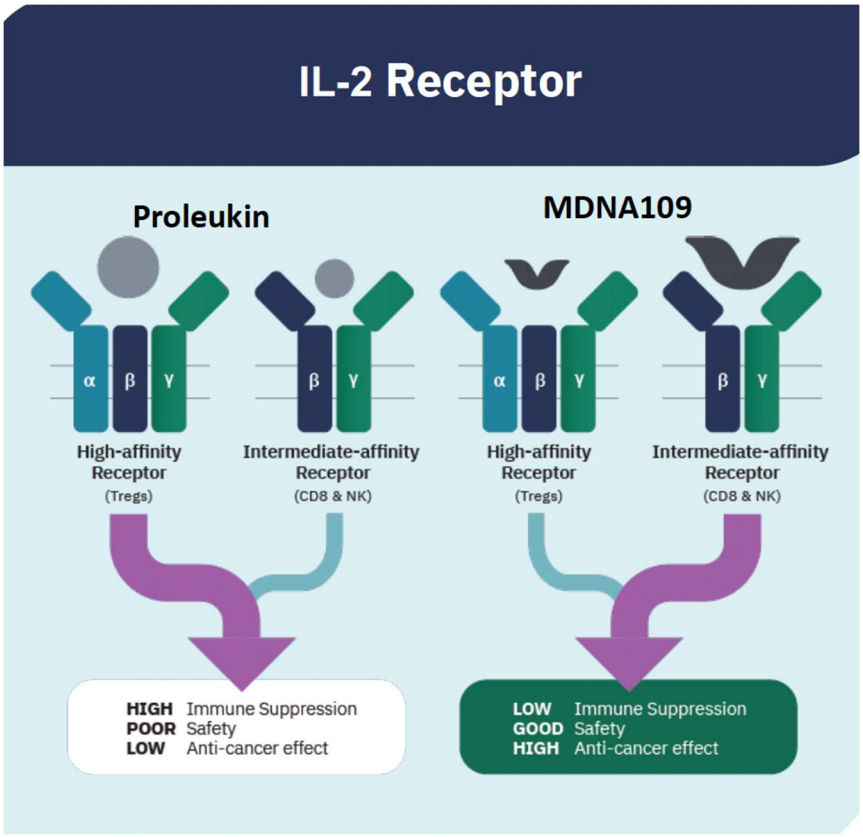
The IL-2β and IL-2γ components together make a receptor capable of binding IL-2, but only moderately so. When all three components are together, including IL-2Rα, the receptor binds IL-2 with a much higher affinity. This complete receptor is usually found on regulatory T cells, which dampens an ongoing immune response. The intermediate affinity receptor, composed of just the IL-2β and IL-2γ 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, in particular MDNA11 which is currently enrolling patients in the Phase 1/2 ABILITY study.

Like the MDNA109 platform, MDNA209 based therapeutics bind with exceptional affinity to IL-2Rβ, but have varying degrees of reduced affinity towards the common IL-2γ receptor which in turn results in partial or complete blockade of signaling and activation of NK cells and effector CD8 T cells. Therefore, we believe that the MDNA209 platform can offer 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 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 candidates have been initiated but development timelines have not been established at this time.

MDNA11

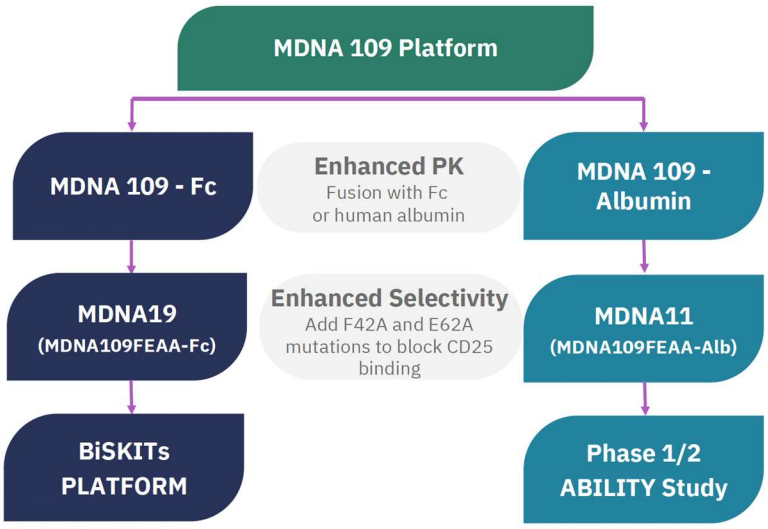
MDNA109 (a precursor to MDNA19 and MDNA11) is an enhanced version of IL-2 that binds up to 200 times more effectively to IL-2Rβ, thus greatly increasing its ability to activate and proliferate the immune cells needed to fight cancer. Because it preferentially binds IL-2Rβ and not the receptor containing IL-2Rα, 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 we have demonstrated that these fusions have better pharmacokinetic properties enabling less frequent dosing without sacrificing its potential efficacy or safety.

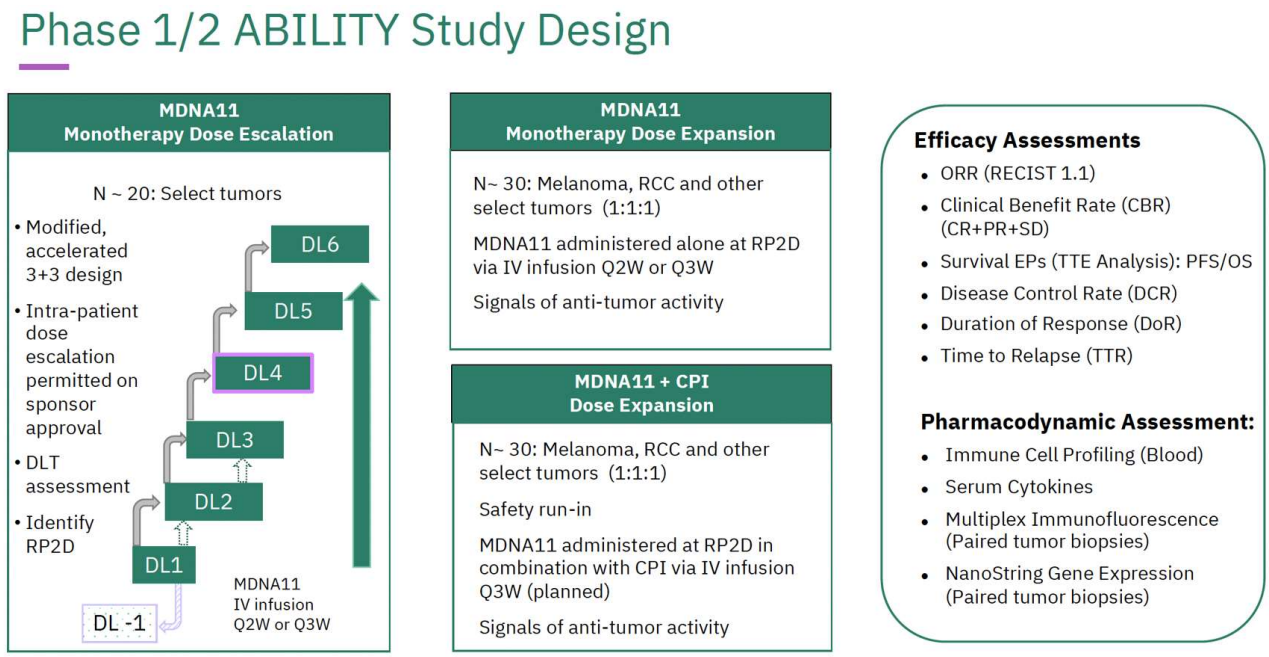
Further modifications were made to MDNA109 in its extended half-life forms to enhance pharmacodynamics and further enhance selectivity in order to reduce binding to CD25 which is associated with the toxic side effect profile of Proleukin®. These modifications have provided us with two candidates

in development, MDNA19 and MDNA11 of which MDNA11 has been selected as the lead candidate for clinical development. MDNA is currently enrolling patients in the Phase 1/2 ABILITY study in Australia, Canada, and the United States.



	Enhanced affinity for IL-2Rβ	IL-2Rα affinity abolished
	K_D(nM)	K_D(nM)
rhIL-2	210	24
MDNA11	6.6	No binding

On June 23, 2021, we announced that we had submitted a clinical trial application to a Human Research Ethics Committee in Australia to initiate a Phase 1/2 clinical study of MDNA11. Medicenna's Phase 1/2 ABILITY Study is designed to assess the safety, PK, PD, and anti-tumor activity of various doses MDNA11 administered intravenously every 2 weeks, in patients with advanced solid tumors. The basket, dose finding study includes a dose escalation phase followed by a dose expansion phase with both an MDNA11 monotherapy arm as well as a combination arm designed to evaluate MDNA11 with a checkpoint inhibitor. The study will include patients with melanoma and renal cell carcinoma where Proleukin® is known to have clinical activity, as well as cluster of other tumor types in order to explore the pan-tumor potential of MDNA11. The study also permits alternative dosing schedules, as well as options for intra-patient dose escalation.



On September 14, 2021, Medicenna announced that it had dosed the first patient in the Phase 1/2 ABILITY Study.

On September 20, 2021, Medicenna announced that the United States Patent and Trademark Office issued U.S. Patent No. 11,117,943, titled "Superagonists and Antagonists of Interleukin-2." The patent provides intellectual property protection for methods of treating a wide range of cancers specified in the claims with IL-2 variants such as MDNA11, which is Medicenna's selective, long-acting and novel IL-2 super-agonist. The patent's term extends into at least 2032, without accounting for any potential extensions.

On October 7, 2021, Medicenna announced the presentation of new MDNA11 preclinical data at the AACR-NCI-EORTC Annual International Meeting. Data presented in the poster were from murine studies evaluating the anti-tumor activity of MDNA11 as monotherapy and in combination with anti-PD1 checkpoint inhibition in MC38 colon cancer model and NHP studies evaluating safety, PK, and PD of MDNA11.

On October 27, 2021, Medicenna announced that the FDA allowed it to proceed with the Phase 1/2 ABILITY Study and begin enrolling patients in the United States under its IND.

On December 17, 2021, Medicenna announced that Health Canada approved the expansion of the Phase 1/2 ABILITY Study to clinical trial sites in Canada.

On December 22, 2021, Medicenna announced preliminary data from the Phase 1/2 ABILITY (study of MDNA11, the Company's selective, long-acting and novel IL-2 super-agonist). This data was subsequently updated in May 2022.

On January 26, 2022, Medicenna announced the peer-reviewed publication of preclinical data on MDNA11. The paper, which was published in the Journal for ImmunoTherapy of Cancer, is entitled, "Fine-tuned Long-Acting Interleukin-2 Superkine Potentiates Durable Immune Responses in Mice and Non-Human Primate."

Key data and conclusions from the paper include:

In vitro studies:

- MDNA11 demonstrated a 30-fold increase in binding affinity for IL-2Rβ compared to rhIL-2
- MDNA11 showed no affinity for IL-2Rα at concentrations up to 2,000 nM MDNA11.
- MDNA11 showed enhanced signaling in anti-cancer T and NK cells and reduced activation of pro-tumor Treg cells when compared to rhIL-2 as shown by 231-fold and 124-fold enhancements in $CD8^+$/Treg and NK/Treg pSTAT EC_{50} ratios, respectively.

Murine studies:

- The terminal half-life of MDNA11 in mice was 25 times greater than that of rhIL-2.
- Cell depletion studies showed that both, $CD8^+$ T cells and NK cells are important for MDNA11 mediated anti-tumor efficacy.
- There was enhanced activation of $CD8^+$ T cells within the tumors as demonstrated by significant increase in expression of intracellular interferon γ.
- MDNA11 alone or in combination with checkpoint inhibitors generated durable complete responses and provided long-term protection against tumor re-challenge in murine cancer models.

NHP studies:

- MDNA11 preferentially induced durable proliferation and expansion of anti-cancer immune effector cells ($CD8^+$ T-cells, NK cells and non-Treg $CD4^+$ T-cells), with limited stimulation of pro-tumor Treg cells.

- Proliferation of anti-cancer immune effector cells remained elevated for at least 7 days following treatment with MDNA11.
- MDNA11 was well tolerated. The main safety observations of reduced activity and diarrhea were primarily observed at the highest dose level following the first dose and were generally transient in nature.

Subsequent to the year end, on May 2, 2022, Medicenna announced new clinical data from the third cohort of the Phase 1/2 ABILITY Study of MDNA11. Key findings from these initial dose escalation cohorts included:

- There were increases in levels of Ki67+ expression by CD8+ T and NK cells of 17-fold and 10-fold over baseline, respectively, following treatment with MDNA11 in the trial's third dose escalation cohort.
- Dose-dependent and significant expansion of CD8+ T and NK cells at the 30 µg/kg when compared to MDNA11 doses of ≤ 10 µg/kg was observed following MDNA11 treatment. Levels of each cell type increased >3-fold and >6-fold over baseline, respectively.
- There was an increase of anti-cancer CD8+ T cells over pro-tumor Treg cells following MDNA11 treatment, as the mean peak CD8+ T cell / Treg ratio increased by 2.6 fold over baseline.
- There was an increase of anti-cancer NK cells over Treg cells following MDNA11 treatment, as the mean peak NK cell / Treg ratio increased 4.4-fold over baseline.
- MDNA11 continues to be well tolerated. No dose limiting toxicities have been reported in the ABILITY Study in the first 3 cohorts.

Subsequent to the year end, on May 11, 2022 , Medicenna presented additional clinical data from the Phase 1/2 ABILITY Study during a poster presentation at the 9th Annual Frontiers in Cancer Immunotherapy Meeting, organized by the New York Academy of Sciences. Key findings from the new analyses include:

- A dose-dependent expansion of cancer fighting lymphocytes (>200% increase at 30 µg/kg) and no significant increases in eosinophil count when compared to baseline were observed following MDNA11 treatment. Extremely high eosinophil count is associated with severe toxicity and is a known side effect of high-dose recombinant human IL-2 (Proleukin®).
- A potently activated anti-cancer CD8+ T cells by increasing (a) their population by >3-fold, and (b) boosting their activation as shown by increase in both, CD25+ and ICOS+ CD8+ T cells was observed following MDNA11 treatment.
- Unlike with IL-2, there was no increase in ICOS+ Treg cells after treatment with MDNA11. ICOS+ Treg cells are highly immunosuppressive and associated with lack of response to high dose IL-2 immunotherapy.
- MDNA11 has shown a favorable and consistent PK profile following multiple doses suggesting that it may not be generating anti-drug antibodies associated with immunogenicity.
- Granulysin expressing immune cells also increased by 3-fold in a dose-dependent manner. Granulysin is a potent agent causing cancer specific cell death and is associated with better patient outcomes.

An initial update on efficacy data from the dose-escalation portion of the ABILITY Study is expected in calendar year 2022.

BiSKITs™ (Bi-functional SuperKine ImmunoTherapies) Platform

Our BiSKITs™ platform allows us to develop designer Superkines by fusing them to other proteins, antibodies, cytokines or other Superkines in order to combine two distinct but synergistic functions into one molecule: a BiSKIT™.

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 IL13Rα2. 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 the 2021 American Association for Cancer Research (AACR) Annual Meeting as described below.

On April 12, 2021, we announced new preclinical data demonstrating the immune modulatory effects of MDNA19-413, an IL-2/IL-13 dual specific cytokine derived from the Company's BiSKITs™ platform. 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-4Rα/IL-13Rα1).

Subsequent to the year end, on April 8, 2022, we announced new preclinical data highlighting the potent anti-tumor efficacy of the next-generation BiSKIT, anti-PD1-MDNA109FEAA, in an electronic poster at the AACR Annual Meeting. Anti-PD1 drugs, such as Keytruda® and Opdivo®, have been approved for a number of cancer indications and have shown to benefit patients by reducing exhaustion of cancer fighting immune cells. By fusing Medicenna's IL-2 Superkine to an anti-PD1, the combined benefits of stimulating cancer fighting immune cells and preventing their exhaustion has the potential to substantially improve patient outcomes. Key data and conclusions from the AACR poster include:

- Anti-PD1-MDNA109FEAA showed no binding to IL-2Rα and a 313-fold increase in binding affinity for IL-2Rβ compared to a wild-type IL-2 fusion protein.
- Human and mouse versions of anti-PD1-MDNA109FEAA showed enhanced signaling in anti-cancer T cells and reduced activation of pro-tumor Treg cells as shown by 169-fold and 155-fold enhancements in CD8/Treg EC50 ratios, respectively.
- Anti-PD1-MDNA109FEAA's potency against the PD1/PDL1 checkpoint was similar to that of control anti-PD1 antibodies.
- Treatment with the anti-PD1-IL-2 BiSKIT led to dose-dependent and statistically significant improvements in tumor growth inhibition and survival compared to co-administration of individual components, namely MDNA19 (MDNA109FEAA-Fc) and anti-PD1 in murine tumor models.

Subsequent to the year end, on April 8, 2022, Medicenna announced new preclinical data on its long-acting IL-13 super-antagonist, Fc-MDNA413, in an electronic poster at the AACR Annual Meeting. Fc-MDNA413 is derived from Medicenna's Superkine platform and comprises of an IL-13 super-antagonist (MDNA413) fused to the Fc domain for half-life extension. Key data and conclusions from the AACR poster included:

- Compared to a fusion protein consisting of a Fc domain linked to wild-type IL13, Fc-MDNA413 is >300-fold more selective for IL-13Rα1 over IL-13Rα2 (a decoy receptor).
- Fc-MDNA413 potently inhibits pro-tumor IL-4/IL-13 mediated pathways, as measured by reductions in pSTAT6 signaling and TF-1 cell proliferation.
- Fc-MDNA413 potently inhibits IL-4 and IL-13 mediated M2a polarization of TAMs, which are known to accumulate in the TME and promote cancer growth and metastasis.
- Fc-MDNA413 inhibits tumor growth as a monotherapy and synergistically when combined with a long-acting IL-2 super-agonist (MDNA19) in a poorly immunogenic murine tumor model.

Medicenna is currently screening and optimizing a variety of IL-2/IL-4/IL-13 superkines as part of our BiSKITs™ platform. We believe that MDNA413's ability to block 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. Additional funding will be necessary to advance one or more of these product candidates into clinical trials.

MDNA55

MDNA55 has been studied in 5 clinical trials in 132 patients, including 112 patients with rGBM, suggesting potentially superior efficacy when compared to the current 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 directly to the site of the tumor using convection enhanced delivery ("CED"), a technology used 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.

A Phase 2b clinical trial with MDNA55 was completed in a multi-center, open-label, single-arm study in patients with first or second recurrence or progression of GBM after surgery or radiotherapy ± adjuvant therapy or other experimental therapies. Subsequently, a separate blinded study that collected rGBM survival and prognostic data from 81 patients, that had contemporaneously received treatment at major clinical centres using current SOC, were used to establish a matched External Control Arm ("ECA"). The blinded survival data from the matched ECA were then used as a control arm versus survival data from the Phase 2b MDNA55 trial.

On September 29, 2020, Medicenna had an End of Phase 2 (EOP2) meeting with the FDA to discuss future development and commercialization of MDNA55, if approved for rGBM. On October 15, 2020, we announced that 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 (ECA) to support marketing authorization of MDNA55 for rGBM. 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 ECA. 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 ECA 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 marketing authorization has been granted. In addition to development and marketing authorization of MDNA55, see "Risk and Uncertainties" below.

On May 7, 2021, Medicenna announced the peer-reviewed publication of clinical data from the MDNA55 Phase 2b rGBM trial in Clinical Cancer Research. The paper, entitled "Modified RANO, Immunotherapy RANO, and Standard RANO Response to Convection-enhanced Delivery of IL4R-targeted Immunotoxin MDNA55 in Recurrent Glioblastoma," was published in collaboration with researchers at several institutions including University of California Los Angeles and Duke University.

Results presented in the peer-reviewed paper show that the median overall survival (OS) of radiographically evaluable patients in the trial irrespective of dose or IL4R expression was 11.8 months, which is longer than what would be expected from currently approved drugs. Notably, the data also show a potential link between patients experiencing radiographic progression and those exhibiting insufficient MDNA55 penetration into the

tumor, suggesting that at least a portion of patients who did not respond well to MDNA55 may have benefited from higher drug concentrations.

These analyses supplement previously presented findings observed in Medicenna's proposed patient population showing an 81% tumor control rate (26/32) based on mRANO and a median OS of 15.7 months, which represents a >100% improvement compared to an ECA (median OS of 7.2 months). 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.

In September 2021, Dr. Fahar Merchant, President and Chief Executive Officer, co-authored an article related to MDNA55 published in Lancet Oncology titled "Leveraging external data in the design and analysis of clinical trials in neuro-oncology."

On October 2, 2021, Medicenna participated in the Virtual SNO/ASCO Conference on CNS Clinical Trials through an Oral Presentation titled: "Incorporating external control arm in MDNA55 recurrent glioblastoma registration trial."

On November 18, 2021, Medicenna announced that John H. Sampson, MD, PhD, MHSc, MBA, Robert H. and Gloria Wilkins Distinguished Professor of Neurosurgery at Duke University School of Medicine and member of Medicenna's Board of Directors, received The Abstract Award for Excellence in Clinical Trials in connection with an oral presentation on MDNA55. The presentation was delivered by Dr. Sampson at the 26th Annual Meeting of the Society for Neuro-Oncology.

SELECTED FINANCIAL INFORMATION

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

	2022	2021	2020
	$	$	$
General and administration	**7,757**	6,525	2,375
Research and development	**14,716**	10,870	5,870
Net loss	**(22,577)**	(17,289)	(8,277)
Basic and diluted loss per share	**(0.42)**	(0.35)	(0.26)
Total assets	**23,456**	42,252	37,996
Total liabilities	**2,621**	4,107	1,847

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, 2022, we reported a net loss of $22.6 million ($0.42 loss per share), compared to a net loss of $17.3 million ($0.35 loss per share) for the year ended March 31, 2021. The increase in net loss for the year ended March 31, 2022, compared with the year ended March 31, 2021, was primarily a result of increased research and development expenditures related to the MDNA11 program, including GMP manufacturing and IND-enabling studies, as well as costs associated with the Nasdaq listing (completed in Q2 of fiscal 2021), in particular directors and officers liability insurance premiums in the current year. There was a reimbursement of $1.8 million under the grant from CPRIT, as well as refundable tax credits of $0.7 million in the current year ended March 31, 2022 which reduced R&D expenditures in the current year (2021 - $nil).

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 liability insurance premiums as well as no reimbursement under the grant from CPRIT in the year ended March 31, 2021 compared with $1.0 million in the year ended March 31, 2020.

Cash utilized in operating activities for the year ended March 31, 2022 was $23.6 million, compared to cash utilized in operating activities for the year ended March 31, 2021 of $15.3 million. The increase in cash utilized in the current year is primarily the result of increased research and development expenses, offset by $1.8 million received from the CPRIT grant and $0.7 million in refundable tax credits.

RESULTS OF OPERATIONS FOR THE YEAR ENDED MARCH 31, 2022

Research and Development ("R&D") Expenses

	2022	2021	2020
	$	$	$
Research and Development Expenses			
Chemistry, manufacturing, and controls	**6,841**	2,356	343
Regulatory	**502**	801	433
Discovery and pre-clinical	**3,441**	2,896	1,899
Clinical	**2,322**	1,225	1,528
Salaries and benefits	**2,759**	1,413	1,095
Licensing, patent, legal fees and royalties	**733**	1,620	811
Stock based compensation	**467**	391	486
CPRIT grant claimed in eligible expenses (Note 12)	**(1,753)**	-	(951)
Refundable tax credits (Note 12)	**(700)**	-	-
Other research and development expenses	**104**	168	226
	14,716	10,870	5,870

R&D expenses of $14.7 million were incurred during the year ended March 31, 2022, compared with $10.9 million incurred in the year ended March 31, 2021, and $5.9 million incurred in the year ended March 31, 2020.

The increase in R&D expenses during the year ended March 31, 2022 compared with the year ended March 31, 2021 is primarily attributable to:

- One-time higher chemistry, manufacturing and controls costs ("CMC"), associated with the first scale-up GLP and GMP manufacturing of MDNA11 required to supply adequate drug product for IND-enabling studies and the Phase 1/2 ABILITY clinical trial, completed in the current year.
- Increased discovery and pre-clinical expenses associated with the one-time GLP compliant MDNA11 IND-enabling studies, completed in the current year, as well as discovery work on the BiSKITs™ platform which has increased in the current year.
- Increased clinical costs due to activities associated with the initiation of the MDNA11 Phase 1/2 ABILITY Study. Prior year activity was primarily related to close-out of the MDNA55 Phase 2b clinical program.
- Higher salary and benefits costs associated with a higher headcount necessary to support increased activities.
- Decrease in licensing costs, due to market research studies completed in the year ended March 31, 2021.

The above increases were partially offset by the reimbursement of previously incurred expenses with respect to the CPRIT grant of $1.8 million, and refundable tax credits of $0.7 million in the year ended March 31, 2022, compared with $nil in the year ended March 31, 2021.

The increase in R&D expenses in the year ended March 31, 2021, compared with the year ended March 31, 2020 is primarily attributable to:

- Higher CMC costs associated with GMP manufacturing of MDNA11 for the Phase 1/2a ABILITY Study.
- 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 ABILITY Study.
- 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.

General and Administrative ("G&A") Expenses

	2022	2021	2020
	$	$	$
General and Administration Expenses			
Depreciation expense	**37**	40	8
Stock based compensation	**949**	614	639
Facilities and operations	**384**	304	253
Public company expenses	**5,424**	4,677	1,004
Salaries and benefits	**963**	890	596
CPRIT grant claimed in eligible expenses (Note 12)	**-**	-	(125)
	7,757	6,525	2,375

G&A expenses of $7.8 million were incurred during the year ended March 31, 2022, compared with $6.5 million during the year ended March 31, 2021, and $2.4 million in the year end March 31, 2020.

The increase in G&A expenditures in the year ended March 31, 2022, compared to March 31, 2021 is primarily attributed to increased directors and officers liability insurance premiums due to twelve months of expense in the current year compared with eight months of expense in the prior year. Salaries and benefit expenses increased in the current year due to increased headcount to support ongoing operations. Stock based compensation expenses increased as options were granted to Executives during the current year.

The increase in G&A expenditures in the year ended March 31, 2021, compared to the year ended March 31, 2020 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 year ended March 31, 2021, including the activities associated with our Nsaqdaq 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 also increased due to increased headcount and bonus payments.

RESULTS OF OPERATIONS FOR THE THREE MONTHS ENDING MARCH 31, 2022

Research and Development Expenses

	Three months ended March 31, 2022	Three months ended March 31, 2021
	$	$
Research and Development Expenses		

Chemistry, manufacturing, and controls	**253**	798
Regulatory	**44**	202
Discovery and pre-clinical	**619**	1,322
Clinical	**366**	226
Salaries and benefits	**698**	431
Licensing, patent, legal fees and royalties	**(50)**	540
Stock based compensation	**(44)**	108
Refundable tax credits (Note 12)	**(700)**	-
Other research and development expenses	**5**	74
	1,191	3,701

R&D expenses of $1.2 million were incurred during the three months ended March 31, 2022, compared with $3.7 million incurred in the three months ended March 31, 2021.

The decrease in R&D expenses in the three months ended March 31, 2022, compared to the three months ended March 31, 2021 is primarily attributable to:

- Lower CMC costs associated with GMP manufacturing of MDNA11, completed prior to current year period.
- Lower discovery and pre-clinical expenses associated with GLP compliant MDNA11 IND enabling studies,completed prior to current year period.
- Higher salary, bonus and benefits costs associated with increased headcount necessary to support ongoing activities.
- Decreased licensing and patent legal fees, related to outsourced business development activities, and market research activities as well as reversal of an accrual due to a change in estimate.
- Reduced stock based compensation due to the forfeiture of options during the current year quarter.

The above noted decreases were further reduced by refundable tax credits in the current year period of $0.7 million.

General and Administrative Expenses

	Three months ended March 31, 2022	Three months ended March 31, 2021
	$	$
General and Administration Expenses		
Depreciation expense	**7**	10
Stock based compensation	**273**	150
Facilities and operations	**93**	79
Public company expenses	**1,308**	1,476
Salaries and benefits	**255**	294
	1,936	2,009

G&A expenses of $1.9 million were incurred during the three months ended March 31, 2022, compared with $2.0 million during the three months ended March 31, 2021.

G&A expenses have remained consistent quarter over quarter. The increase in stock based compensation is due to timing and value of option grants which was offset by lower public company expenses in the

current year period due to favourable foreign exchange and lower legal fees associated with initial Nasdaq listing, compared to prior year period.

SUMMARY OF QUARTERLY FINANCIAL RESULTS

	Mar. 31 2022	Dec. 31 2021	Sep. 30 2021	Jun. 30 2021	Mar. 31 2021	Dec. 31 2020	Sept. 30 2020	June 30 2020
	$	$	$	$	$	$	$	$
Revenue	-	-	-	-	-	-	-	-
General and administration	1,936	1,990	1,964	1,867	2,009	2,093	1,691	732
Research and development	1,191	2,907	6,269	4,349	3,701	3,180	2,176	1,813
Net loss	(3,206)	(4,807)	(8,178)	(6,386)	(5,813)	(5,338)	(3,786)	(2,352)
Basic and diluted loss per share	(0.06)	(0.09)	(0.15)	(0.12)	(0.11)	(0.11)	(0.08)	(0.05)
Total assets	23,456	26,107	30,093	37,336	42,252	36,323	37,640	40,920
Total liabilities	2,621	2,351	5,431	4,958	4,107	2,216	1,656	1,547

R&D expenses fluctuate quarter over quarter based on activites ongoing during that period. During the quarter ended June 30, 2021 there was a $1.8 million reimbursement received from CPRIT which offset increased R&D expenses, primarily due to manufacturing and pre-clinical costs associated with MDNA11. The increase in expenditures from the quarter ended September 30, 2020 onwards, is primarily related to activities associated with the MDNA11 program and establishment of the BiSKITs™ program. One-time higher CMC costs, associated with the scale-up GLP and GMP manufacturing of MDNA11 was completed in the quarter ended September 30, 2021, resulting in a decrease in R&D expenses from the quarter ended December 31, 2021 onwards. Refundable tax credits of $0.7million contributed to decreased R&D expenses during the quarter ended March 31, 2022.

G&A expenses began to increase in the quarter ended September 30, 2020, due to costs associated with completing the Nasdaq listing and an associated increase in directors and officers liability insurance premiums. The increased insurance premiums began in Q2 2020 and as such G&A expenses increased further in the subsequent quarters for a full 3 months of amortization rather than 2 months amortization in the quarter ended September 30, 2020.

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 $70.9 million as of March 31, 2022. 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 product 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 re7venues from strategic partners. We have no current sources of revenues from strategic partners.

The accompanying consolidated financial statements have been prepared on a going concern basis in accordance with International Financial Reporting Standards (IFRS) as issued by the International

Accounting Standards Board (IASB). The going concern basis contemplates the realization of assets and the settlement of liabilities in the normal course of business as they come due for the foreseeable future. Management has forecasted that the Company's current level of cash is expected to be able to fund operations into Q1 of fiscal 2024. The Company is actively pursuing additional financing to further develop certain of the Company's scientific initiatives, but there is no assurance these initiatives will be successful, timely or sufficient. Consequently, the Company's ability to continue as a going concern beyond Q1 of fiscal 2024 is dependent on its ability to secure additional financing. These circumstances cast significant doubt as to the ability of the Company to continue as a going concern and, hence, the appropriateness of the use of accounting principles applicable to a going concern.

These financial statements do not reflect the adjustments to the carrying values of assets and liabilities and the reported expenses and balance sheet classifications that would be necessary if the Company were unable to realize its assets and settle its liabilities as a going concern in the normal course of operations. Such adjustments could be material.

CASH POSITION

At March 31, 2022, we had a cash, cash equivalents and marketable securities balance of $20.5 million, compared to $40.4 million at March 31, 2021. We invest cash in excess of current operational requirements in highly rated and liquid instruments. Working capital at March 31, 2022 was $20.8 million (March 31, 2021 - $38.0 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 Facility for general corporate purposes including, but not limited to working capital expenditures, research and development expenditures, and clinical trial expenditures. As of March 31, 2022, a total of 3,146,957 common shares have been sold under the ATM Facility for total gross proceeds of $11.0 million (US$8.9 million). As of March 31, 2022, approximately $20.1 million (US$16.1 million) remained available under the ATM Facility.

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 marketing authorization to commercialize any of our product candidates 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 the CPRIT whereby the Company was 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. As of March 31, 2022, the grant with CPRIT is complete.

Of the US$14.1 million grant approved by CPRIT, Medicenna has received US$14.1 million from CPRIT as at March 31, 2022. Amounts received in the current year (US$1.4 million) were recorded as a reduction in research and development expenses in the year ended March 31, 2022 (see note 12 in the Annual Financial Statements).

Under the terms of the grant, the Company is 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% of revenues. At this time the royalty is not probable and

therefore no liability has been recorded. In addition, the Company must maintain a presence in Texas for three years following completion of the grant.

Refundable tax credits

In June 2022, the company received $0.7 million through our Australian R&D incentive program relating to the year ended March 31, 2022. The amount receivable is recorded as a reduction in research and development expenses in the year ended March 31 2022 (see note 12 in the Annual Financial Statements).

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, 2022, the Company's intangible assets have a remaining capitalized net book value of $0.07 million.

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, 2022, the Company is obligated to pay the following:

- 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.

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, 2022, we have the following obligations to make future payments, representing contracts and other commitments that are known and committed:

	Payments Due by Period			
Contractual obligations	**Less than 1 year**	**1-3 years**	**3-5 years**	**Total**
Patent licensing costs, minimum annual royalties per license agreements	$ 188	$ 1,137	$ 287	$ 1,612

The Company cannot reasonably estimate future royalties which may be due upon the marketing authorization 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 $10.7 million, of which $8.4 million has been paid or accrued at March 31, 2022. Most of these agreements are cancellable by the Company with notice. These commitments include agreements for clinical CRO's, 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, Ms. Rosemina Merchant, Chief Development Officer, Dr. Mann Muhsin, former Chief Medical Officer, and Dr. Kevin Moulder, former Chief Scientific Officer) and directors, received the following compensation for the following periods:

	2022	2021	2020
	$	$	$
Salaries and wages	**1,555**	1,501	892
Board fees	**285**	230	142
Stock option expense	**886**	797	873
	2,726	2,528	1,907

As at March 31, 2022, the Company had trade and other payables in the normal course of business, owing to directors and officers of $0.1 million (2021: $0.1 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) and EDGAR at www.sec.gov.

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) and EDGAR at www.sec.gov.

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, prepaids and deposits are measured at amortized cost less impairments.

Accounts payable, and accrued liabilities 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 March 31, 2022, 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 an increase or decrease in loss and comprehensive loss for the year ended March 31, 2022 or $0.7 million (March 31, 2021 - $0.9 million).

Balances in thousands of US dollars are as follows:

	March 31, 2022	March 31, 2021
	US$	US$
Cash and cash equivalents	**5,456**	9,593
Accounts payable and accrued liabilities	**(1,269)**	(2,147)
	4,187	7,446

(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, 2022, 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	$ 3,300	–	-
Manufacturing of clinical batch	$ 4,400	$ 4,400	–	-
Clinical development	$ 13,150	$ 4,253	–	$ 8,897
General corporate and working capital purposes	$ 11,350	$ 11,350	–	-
Total	**$ 32,200**	**$ 23,303**	**$ –**	**$ 8,897**

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, 2022, the Company has issued 1,748,600 common shares, raising total gross proceeds of $3.8 million under the ATM Facility. As at March 31, 2022, there were approximately US$16.1 million ($20.1 millon) available to use on the ATM Facility.

RISKS AND UNCERTAINTIES

The Company is a clinical-stage company that operates in an industry that is dependent on a number of factors that include the Company's capacity to raise additional funding on reasonable terms when necessary, obtain positive results from pre-clinical and clinical studies, successfully develop existing and new products, hire and retain skilled staff, protect its intellectual property, manufacture its products and meet demand, and obtain necessary regulatory approvals and the timing in respect thereof, etc. An investment in the Common Shares is subject to a number of risks and uncertainties. An investor should carefully consider the risks described in the Company's Annual Information Form and the Annual Report on Form 20-F filed with the U.S. Securities and Exchange Commission, as well as the other information filed with the securities regulators before investing in the Common Shares. If any of such described risks occur, or if others occur, the Company's business, operating results and financial condition could be seriously harmed and investors may lose a significant proportion of their investment.

There are important risks which management believes could impact the Company's business. For information on risks and uncertainties, please also refer to the "Risk Factors" section of the Company's most recent AIF filed on SEDAR at www.sedar.com and included in the annual report on Form 20-F filed on EDGAR at www.sec.gov/edgar.

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 year ended March 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

As of March 31, 2022, 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:

	Number
Common shares	56,304,135
Warrants	2,964,542

Stock options	4,464,640
Total	**63,733,317**

For a detailed summary of the outstanding securities convertible into, exercisable or exchangeable for voting or equity securities of Medicenna as at March 31, 2022, refer to notes 9, 10, and 11 of the Annual Financial Statements of the Company.

Additional information relating to the Company, including the Company's annual information form and Form 20-F in respect of fiscal year 2022, is available under the Company's profile on SEDAR at www.sedar.com and EDGAR at www.sec.gov.