



Management's Discussion and Analysis

***For the Year Ended
March 31, 2024***

DATE OF REPORT: June 26, 2024

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following management's discussion and analysis ("MD&A") has been prepared as at June 26, 2024 for the year ended March 31, 2024 and should be read in conjunction with the audited consolidated financial statements of Medicenna Therapeutics Corp. for the year ended March 31, 2024 (the "Annual Financial Statements"). The audited consolidated financial statements and accompanying notes for the years ended March 31, 2024 have been 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. Drug development and commercialization involve a high degree of risk, and only a small number of research and development programs result in commercialization of a product. Results in early-stage clinical studies may not be indicative of full results or results from later stage or larger scale clinical studies and do not ensure regulatory approval. You should not place undue reliance on these statements or the scientific data presented. 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 "seek", "plan", "expect", "is expected", "continue", "predict", "potential", "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", "should", "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. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such 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 and the Company's Annual Information Form ("AIF") for the fiscal year ended March 31, 2024 filed with on SEDAR+ on June 26, 2024.

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

- the therapeutic potential, clinical development and related milestones of the Company's Superkines and Empowered Superkines including MDNA11, the BiSKITs™ platform, the T-MASK™ platform and bizaxofusp (formerly MDNA55);
- the timely completion of the milestones related to the MDNA11 ABILITY Study (as defined below);
- the impact of the delay on clinical data;

- the clinical trial collaboration and supply agreement with Merck (known as MSD outside the United States and Canada);
- statements related to the potential extensions of the term of patents;
- potential strategic partnership to facilitate bizaxofusp's further development and commercialization; and
- the use of proceeds from public equity offerings and private placements and the necessity for the Company to have recourse to such equity offerings.

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, including the following:

- 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 favorable 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 (if approved), its products
- 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 than 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 bizaxofusp (formerly MDNA55);
- the costs and uncertainty associated with extensive government regulation;
- the potential negative results from clinical trials or studies, adverse safety events or toxicities involving the Company's products used alone or in combination with other products of collaborators;
- the Company's ability to manage the unique risks and uncertainties related to developing biologics which could have a negative impact on future results of operations;
- the risk that preliminary and interim data from our clinical trials that we may announce or publish from time to time may change as patient data are further examined, audited or verified and more patient data become available;
- the value of the "Fast Track" designation granted to bizaxofusp and that it may not actually lead to a faster development or regulatory review or approval process and could be withdrawn by the United States Food and Drug Administration ("FDA");
- the value of the "Orphan Drug" designation granted to bizaxofusp and that it may not actually lead to a faster development or regulatory review or approval process, may not be granted additional market exclusivity, may not receive tax credits and could be withdrawn by the United States Food and Drug Administration ("FDA") or the European Medicines Agency ("EMA");
- the unfavorable pharmacokinetic or pharmacodynamic properties of MDNA11 used alone or in combination with other products of collaborators;
- the potential of the pre-clinical products of the Company;
- the risk of product liability claims;
- the Company's inability to enroll subjects in clinical trials or to enter 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 or to maintain any ongoing regulatory requirements it may be subject to;
- 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 and for the manufacture of drug product;

- 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 Cancer Prevention and Research Institute of Texas ("CPRIT") grant;
- the ability to protect the Company's intellectual property and proprietary technology;
- the ability for the Company to obtain patent's term extensions;
- the potential involvement in intellectual property litigation;
- the risk that third parties on 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 ("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 U.S. 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;
- 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;
- failure to comply with healthcare laws;
- 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;
- 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.

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

Medicenna Therapeutics is a clinical-stage immunotherapy company developing engineered cytokines, called Superkines, designed to improve the specificity, function and safety profile of unmodified interleukins. Medicenna's Superkine Platform transforms Superkines into multi-functional therapies that modulate, dampen, amplify or fine-tune the immune system.

Medicenna's mission is to harness the power of directed evolution to develop novel immunotherapies that have the potential to revolutionize the treatment landscape in oncology and other immune-related diseases.

Medicenna owns diverse platforms licensed from Stanford University ("Stanford") to develop a pipeline of Superkine candidates: IL-2 agonists, IL-2 antagonists and partial agonists of IL-2. Additional assets from Stanford also include several super-agonists of IL-4 and IL-13 and dual IL-4/IL-13 antagonists. These Superkines can be developed either on their own as short or long-acting therapeutics or fused with cell-killing proteins 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, checkpoint inhibitors, and even other Superkines to incorporate two synergistic therapeutic activities into one molecule, creating novel Bi-specific SuperKine ImmunoTherapies and Targeted Metalloprotease Activated SuperKines, referred to by Medicenna as BiSKITs™ and T-MASK™, respectively.

Medicenna's most advanced candidate is bizaxofusp, formerly MDNA55, a first-in-class IL-4R targeted therapy for the treatment of recurrent glioblastoma ("rGBM"), the most common and uniformly fatal form of brain cancer. Bizaxofusp 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"). Bizaxofusp has successfully completed a Phase 2b trial for rGBM and holds FastTrack and Orphan Drug status from the FDA and FDA/EMA, respectively.

Our second clinical program is MDNA11, a next-generation long-acting beta-enhanced not-alpha IL-2 super agonist. MDNA11 comprises a molecule of human albumin that accumulates in tumors and augments MDNA11's half-life. MDNA11 is currently being evaluated in the ABILITY Phase 1/2 study in patients with melanoma and other solid cancers. The ABILITY study is a global, multi-center, open-label study that will assess the safety, tolerability and anti-tumor activity of MDNA11 as monotherapy or in combination with pembrolizumab (KEYTRUDA®) under a clinical collaboration with Merck. MDNA11 has successfully completed Phase 1 dose escalation with a favourable safety profile and demonstrated signs of efficacy in the monotherapy setting. The monotherapy recommended dose for expansion (RDE) for MDNA11 has been established and enrollment in the phase 2 dose expansion portion of the ABILITY trial is currently underway.

Our earlier stage candidates from the BiSKITs™ and T-MASK™ platforms, encompassing IL-2, IL_4 and IL-13 super-agonists and super-antagonists, are in pre-clinical development.

RECENT ACHIEVEMENTS & HIGHLIGHTS

The following are the achievements and highlights for the year ended March 31, 2024 through to the date hereof:

- On June 26, 2024, the Company announced that the EMA has approved the Clinical Trial Application ("CTA") for the conduct of the Phase 1/2 ABILITY-1 Study with MDNA11 either alone or in combination with pembrolizumab (KEYTRUDA®) thereby expanding the clinical trial in the European Union ("EU").
- On June 3, 2024, the Company reported data showing significant survival benefit in patients with recurrent glioblastoma following a single treatment with bizaxofusp when compared to a matched external control arm at the 2024 American Society of Clinical Oncology ("ASCO") Annual Meeting held in Chicago.
- On May 31, 2024, the Company presented evidence of durable single agent activity and potent immune effector response with MDNA11 in the dose escalation portion of Phase 1/2 ABILITY-1 Study (A Beta-only IL-2 ImmunoTherapY) at the 10th Annual Oncology Innovation Forum held in Chicago. The

Company presented data demonstrating durable response in a pancreatic cancer patient with 100% regression of target and non-target lesions for over 104 weeks that continues to show remission four months after stopping treatment in addition to complete regression of target lesions in a patient with advanced melanoma. The presentation shared direct evidence of proliferation of cancer fighting immune cells in the tumor from patient biopsies and stimulation of long-lived stem-like and memory immune cells capable of prolonging anti-tumor effects of MDNA11.

- On April 26, 2024, the Company announced a \$20 million investment by RA Capital Management (“RA”), a multi-stage investment manager based in Boston, MA, by way of a non-brokered private placement (the “2024 Offering”). The 2024 Offering closed on April 30, 2024.
- On April 9, 2024, the Company presented updated results of single agent MDNA11 anti-tumor activity from dose escalation and ongoing dose expansion of the Phase 1/2 ABILITY-1 Study at the 2024 Annual Meeting of the American Association for Cancer Research (“AACR”). Key data presented included 100% reduction of target lesions in one melanoma and one pancreatic cancer patient observed among 4 partial responses (PR) to date which include 2 of 4 evaluable dose expansion patients and 2 of 2 MSI-H patients. In addition, the Company reported durable stable disease (SD) in 3 melanoma patients for 6 to 18 months with concomitant tumor shrinkage
- On April 9, 2024, the Company presented new pre-clinical data on MDNA113, which is a targeted and Masked Bi-functional anti-PD1-IL2 Superkine, at the 2024 Annual Meeting of the AACR.
- On February 14, 2024, the Company reported clinical data from the on-going monotherapy escalation and expansion arms of the ABILITY-1 Study. Amongst 13 patients, all having previously failed or resistant to immune checkpoint inhibitors, receiving high doses of MDNA11 ($\geq 60 \mu\text{g}/\text{kg}$) with tumor types being evaluated in the monotherapy expansion cohort, the response rate, clinical benefit rate, and tumor control rate were 23% (3 partial responses), 46% (3 PRs and 3 patients with stable disease for ≥ 24 weeks), and 69% (3 PRs and 6 SDs), respectively, with concomitant shrinkage of target lesions in all patients with stable disease.
- On February 14, 2024, the Company announced that Dr. Humphrey Gardner transitioned from Chief Medical Officer to consultant and that Dr. Arash Yavari, Chair of Medicenna’s Development Advisory Committee, will henceforth lead the clinical activities as Director of Clinical Strategy. The Company also announced the appointment of David Hyman, CA, CBV as Chief Financial Officer of the Company.
- On February 13, 2024, the Company announced that it had dosed the first patient in the combination arm of the ABILITY-1 clinical trial, evaluating potential synergistic effect of MDNA11 when administered with KEYTRUDA® (pembrolizumab). The study will evaluate the safety, tolerability, recommended combination dose for expansion and therapeutic activity of MDNA11 when combined with pembrolizumab in the dose-escalation and dose-expansion arms of the clinical trial.
- On January 12, 2024 the Company announced that its board of directors accepted the resignation of Pricewaterhousecoopers LLP and appointed MNP LP as auditor of the Company until the next annual general meeting of the shareholders of the Company.
- On January 9, 2024, the Company announced the initiation of enrollment in the combination arm of the Phase 1/2 ABILITY (A Beta-only IL-2 ImmunoTherapy) study evaluating MDNA11 with KEYTRUDA® (Pembrolizumab). The combination portion of the study is being conducted as part of the previously announced Clinical Trial Supply and Collaboration Agreement between Medicenna and Merck (known as MSD outside the United States and Canada).
- On December 19, 2023, the Company announced the commencement of trading on the OTCQB Venture Market in the United States.
- On November 17, 2023, a poster presentation and an oral summary highlighting longer term follow up results from the Phase 2b clinical trial of bizaxofusp, the Company’s first-in-class IL-4R targeted therapy

for the treatment of patients with recurrent glioblastoma (rGBM), were presented by Dr. Steven Brem, M.D. (Medical Director, Centre for Precision Surgery, Perelman School of Medicine, University of Pennsylvania) at the Society for Neuro-Oncology (SNO) 2023 Annual Meeting, held in Vancouver.

- On November 6, 2023, Medicenna announced encouraging single-agent activity from the dose escalation and evaluation portion of the ABILITY-1 study in advanced cancer patients receiving doses ≥ 60 $\mu\text{g}/\text{kg}$ of MDNA11 (N = 15) who had previously failed immune check-point inhibitor therapies. The results included ongoing partial responses with 100% and 70% reduction of target lesions in pancreatic and melanoma cancer patients, respectively, in addition to durable stable disease in 3 melanoma patients (> 20 to 80 weeks) with concomitant shrinkage of target lesions. This data was presented at the 38th Annual Meeting of the Society for Immunotherapy of Cancer (“SITC”) held in San Diego.
- On November 3, 2023, the Company presented preclinical data on its first-in-class IL-13R α 2 targeted candidate, MDNA113, from its T-MASK platform, which delivers a masked bispecific anti-PD1-IL2 Superkine to IL-13R α 2 expressing tumors (annual incidence of over 2 million) where it is activated by tumor enzymes. This data was presented at the 38th Annual Meeting of the SITC held in San Diego.
- On November 2, 2023, trading of the Common Shares on the Nasdaq Capital Market (“Nasdaq”) was suspended as a result of the Company’s failure to comply with the US\$1.00 per share minimum bid price requirement. Form 25-NSE was filed with the United States Securities and Exchange Commission, removing the Company’s securities from listing and registration on Nasdaq (the “Nasdaq Delisting”). The Common Shares continue to trade on the Toronto Stock Exchange.
- On October 27, 2023, Medicenna announced that it was delisted from the Nasdaq as the Company did not meet the listing requirements, that it is reducing its presence in the United States to conserve cash, and that Jeff Caravella, Chief Financial Officer, and Brent Meadows, Chief Business Officer, departed the Company, effective October 26, 2023.
- On October 25, 2023, Medicenna announced dosing of the first patient in the Phase 2 monotherapy dose expansion portion of the ABILITY-1 Study.
- On October 3, 2023, new preclinical data characterizing MDNA223, an anti-PD1-IL-2 BiSKIT (Bifunctional SuperKine for ImmunoTherapy), including its synergy when combined with STING agonists were presented at the 2023 AACR Special Conference in Cancer Research: Tumor Immunology and Immunotherapy held in Toronto.
- On August 8, 2023 Medicenna announced the appointment of Dr. Arash Yavari as the Chair of its Development Advisory Committee (“DAC”). Dr Yavari is a University Research Lecturer and Principal Investigator at the Radcliffe Department of Medicine, University of Oxford, CSO of Imbria Pharmaceuticals, and serves as Senior Drug Development Clinician with Weatherden, a London-based biotech-focused consulting organization. Dr. Yavari holds a BSc and MBBS from the University of London, and a DPhil from the University of Oxford.

FINANCING UPDATE

Subsequent Events

Private Placement

On April 30, 2024, the Company closed the 2024 Offering. Pursuant to the terms of the 2024 Offering, RA subscribed for 5,141,388 Common Shares at a price of \$1.95 per share and, in lieu of common shares, pre-funded warrants to purchase 5,141,388 Common Shares at a purchase price of \$1.94 per pre-funded warrant, for total net proceeds to the Company of \$20 million. The Company intends to use the net proceeds from the

2024 Offering for further development of its MDNA11 program, advancement of its preclinical programs and general corporate purposes.

Warrants

Subsequent to year end, 294,000 warrants with a strike price of \$1.20 were exercised for proceeds of \$352,800 and 303,017 warrants with a strike price of \$1.75 were exercised for proceeds of \$530,280.

Year ended March 31, 2024

Warrants

During the year ended March 31, 2024 no warrants were exercised.

On July 5, 2023, the warrants issued on October 17, 2019 were due to expire on July 17, 2023 and were extended to October 17, 2024. On December 18, 2023, the warrants issued on December 21, 2018 were due to expire on December 21, 2023 and were extended to July 31, 2024.

Year ended March 31, 2023

August 2022 Public Offering

On August 11, 2022, pursuant to the 2022 Public Offering, we sold 13,333,334 units at a purchase price of US\$1.50 per unit for gross proceeds of US\$20.0 million (\$25.6 million). Each unit included one Common Share with a fair value of US\$1.06 and one Common Share purchase warrant with a fair value of US\$0.44. Each Common Share purchase warrant entitles the holder to purchase one Common Share at an exercise price of US\$1.85, until August 9, 2027. We incurred transaction costs of \$2.2 million (US\$1.7 million) of which \$1.6 million (US\$1.2 million) were allocated to share issue costs and \$0.6 million (US\$0.5 million) were allocated to operating expenses, based on their relative fair values.

2023 At-The-Market Facility

On February 17, 2023, the Company entered into the 2023 ATM Agreement with Oppenheimer & Co. Inc., acting as sales agent, pursuant to which the Company may, from time to time sell, through at-the-market offerings on the Nasdaq such number of Common Shares as would have an aggregate offering price of up to US\$10.0 million. During the year ended March 31, 2023, the Company did not issue any Common Shares pursuant to the 2023 ATM Facility.

2020 At-The-Market Facility

On December 30, 2020, the Company entered into a sales agreement with SVB Securities LLC (f/k/a SVB Leerink LLC), acting as sales agent (the "2020 ATM Agreement"), pursuant to which the Company may have sold through an at-the-market offering on the Nasdaq such number of Common Shares as would have an aggregate offering price of up to US\$25.0 million (the "2020 ATM Facility"). The 2020 ATM Facility expired on December 30, 2022. During the year ended March 31, 2023, the Company issued 656,656 Common Shares (March 31, 2022: 1,748,600 Common Shares) for gross proceeds of US\$0.8 million (March 31, 2022: US\$3.1 million) at an average price of US\$1.20 (March 31, 2022: US\$1.77). The Company received, proceeds net of commissions, US\$0.7 million (March 31, 2022: US\$2.9 million).

Warrants

During the year ended March 31, 2023, no warrants were exercised.

The term of certain warrants outstanding and exercisable, totaling 1,549,052 due to expire on October 17, 2022, and issued on October 17, 2019, as part of a public offering of an aggregate of 5,307,693 units of the Company, was extended on October 17, 2022 to July 17, 2023.

Year ended March 31, 2022

During the year ended March 31, 2022, a total of 1,748,600 Common Shares were sold under the 2020 ATM Facility for total gross proceeds of \$3.9 million (US\$3.0 million).

During the year ended March 31, 2022, 266,290 warrants were exercised for proceeds of \$0.4 million.

RESEARCH & DEVELOPMENT UPDATE

Our Pipeline of Superkines



Bizaxofusp (formerly MDNA55) for the Treatment of Recurrent Glioblastoma (“rGBM”)

Unmet Need in Glioblastoma

Glioblastoma (“GBM”) is one of the most complex, deadly, and treatment-resistant cancers. It is expected that in the US and Canada, there will be at least 15,000 new diagnoses of GBM with more than 10,000 individuals succumbing to the disease within one year. Five-year survival rate for GBM patients is only 6.9 percent; these survival rates and mortality statistics have remained virtually unchanged for decades.

Despite first being identified in the scientific literature in the 1920’s, there have only been four drugs and one device ever approved by the FDA specifically for the treatment of GBM. Unfortunately, none have succeeded in significantly extending patient lives beyond a few extra months for newly diagnosed GBM and a few extra weeks for patients with rGBM. GBM is also one of the more expensive cancers to treat, often leaving patients and families with major financial hardship in addition to the burden of the disease. Given the limitation of all current therapeutics, development of novel approaches for treating GBM and rGBM remains a great unmet need.

Medicenna’s Bizaxofusp

Medicenna’s phase 3 ready asset for rGBM, bizaxofusp, is a genetically engineered fusion of a circularly permuted version of interleukin 4 (“IL-4”) to a potent catalytic component of the bacterial toxin, Pseudomonas exotoxin, which effectively arrests protein synthesis leading to cell death. The IL-4 component is engineered and designed to preferentially target tumor cells that over-express the interleukin 4 receptor (“IL-4R”). The drug is delivered only once locally into the tumor, using a minimally invasive technique, bypassing the blood-brain barrier. Bizaxofusp holds both FastTrack and Orphan Drug status from the FDA and FDA/EMA, respectively.

Bizaxofusp, to-date, has been tested in 118 patients with high grade gliomas (including 112 patients with rGBM) and most recently completed a successful Phase 2b (N=44) trial for nonresectable rGBM where it demonstrated a doubling of median overall survival (“mOS”) to 14.0 months in the high-dose population compared to the standard of care (“SOC”) mOS of 6-9 months. The Phase 2b clinical trial was conducted 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. Results were published in June 2023 issue of NeuroOncology (doi: 10.1093/neuonc/noac285).

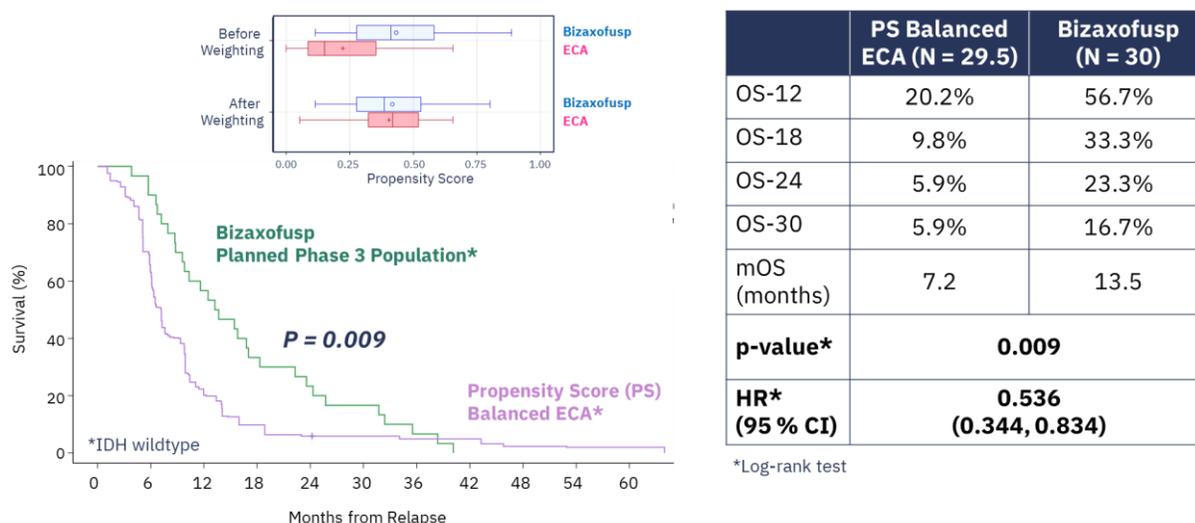
A separate analysis collected rGBM survival and prognostic data from 81 eligibility matched patients who had contemporaneously received treatment at major clinical centres using current SOC. These data from patient registries were used to establish a matched External Control Arm (“ECA”). Blinded survival data from propensity score (“PS”) balanced ECA (established by matching with bizaxofusp-treated population based on 10 different prognostic factors using propensity scoring methods) were then used as a control arm versus survival data from matched patients in the Phase 2b bizaxofusp trial.

ASCO 2024 Presentation

On June 1st, 2024, the Company presented survival follow-up, and updated final study results at the 2024 ASCO Annual Meeting in Chicago. Key findings from the presentation are shown in the figure below and include:

- In the Phase 2b study, a single treatment with bizaxofusp in unresectable rGBM patients achieved significant survival benefit (mOS of 13.5 vs. 7.2 months, p=0.009) and reduced risk of death by almost half (hazard ratio: 0.54, 95% confidence interval: 0.34-0.83) versus a PS balanced ECA.
- Bizaxofusp significantly increased median overall survival (mOS) by 88% (p = 0.009) and improved overall survival at 1 and 2 years by 180% and 290%, respectively.
- Tumor control was associated with a significant increase in mOS following treatment with bizaxofusp and consequently, may be an early surrogate of survival benefit in future studies.

Bizaxofusp Significantly Improved Overall Survival in Phase 3 Population vs. Propensity Score Balanced ECA



Phase 3 Partnering and 2024 Milestones

Following the end of Phase 2 (EOP2) meeting with the FDA, an innovative open-label hybrid Phase 3 registration trial that allows the use of a substantial number of patients (two-thirds) from a propensity matched ECA to support marketing authorization of bizaxofusp for rGBM, was accepted by the FDA.

To add additional value to the bizaxofusp program Medicenna is planning to seek Breakthrough Therapy Designation from the FDA and is also seeking alignment from the EMA for the hybrid Phase 3 trial design (accepted by the FDA) in the coming months.

Medicenna is also pursuing strategic partnerships to assist with additional clinical development of bizaxofusp, as well as preparing the program for commercialization and its subsequent launch in various countries where marketing authorization is granted. Medicenna estimates that the total cost of completing a pivotal registrational trial, associated regulatory and manufacturing activities and preparing bizaxofusp for commercial launch to be approximately \$60 to \$80M USD.

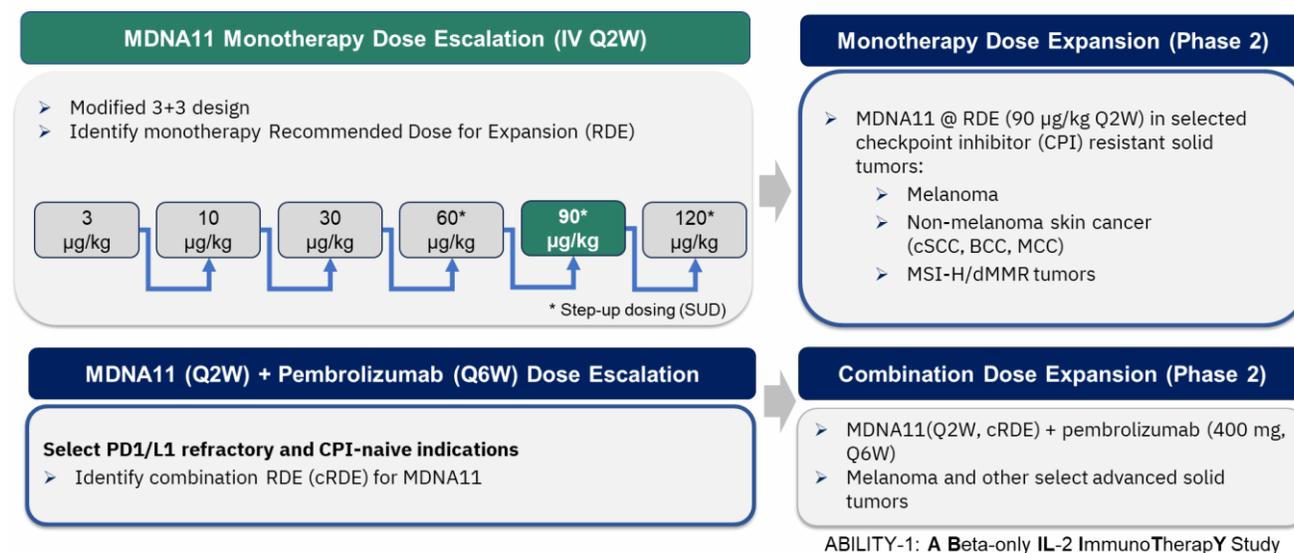
Confidential primary market research conducted for the Company has estimated that bizaxofusp has a market potential of more than \$800M USD in annual revenues for unresectable rGBM alone and an additional ~\$3B USD potential in other brain cancers in adults such as newly diagnosed GBM, metastatic brain tumors and various pediatric brain cancers known to express the IL-4R

MDNA11

A Potential Best-in-Class ‘β-Enhanced Not-α’ Interleukin 2 Super Agonist

MDNA11 is the only long-acting ‘beta-enhanced not-alpha’ interleukin 2 (“IL-2”) super agonist in clinical development, designed to preferentially activate anti-cancer immune cells (CD8⁺ T and NK cells) over immunosuppressive (pro-cancer) Tregs. Fusion with human albumin augments MDNA11’s half-life and promote its accumulation in tumors and tumor draining lymph-nodes. MDNA11 is currently being evaluated in the ABILITY Phase 1/2 Study (NCT05086692) in patients with melanoma and other solid cancers. The ABILITY Study is a global, multi-center, open-label study that assesses the safety, tolerability, and anti-tumor activity of MDNA11 as monotherapy or in combination with pembrolizumab (KEYTRUDA®). The figure below describes the ABILITY Phase 1/2 Study.

ABILITY Phase 1/2 Study Schema: MDNA11 Monotherapy and in Combination with Pembrolizumab



Third Partial Response Reported from On-Going Monotherapy Dose Expansion in Fiscal Q3 2024

On February 14, 2024, Medicenna reported its Q3 2024 results, highlighting a new, third, partial response (“PR”) in a melanoma patient (PR per iRECIST) in the monotherapy dose expansion portion of the ABILITY-1 Study. With the response rate increasing to 23% amongst high-dose phase-2 eligible patients that failed checkpoint inhibitor therapies (N=3/13) the Company affirmed that MDNA11 continued to show compelling single agent activity whilst maintaining a favorable safety profile.

In conjunction with the announcement of its Q3 results, the Company reported that the first patient was dosed in the combination escalation arm of the ABILITY-1 Study on February 13, 2024.

Deep and Durable Anti-tumor Activity with Single-Agent MDNA11: 29% Response Rate in High-dose Phase 2 Eligible Patients who Failed Checkpoint Inhibitors

Subsequently, on April 9, 2024, at the 2024 Annual Meeting of the AACR held in San Diego, CA, Medicenna reported updated clinical results from the monotherapy dose escalation and ongoing expansion portion of the ABILITY-1 Phase 1/2 Study. The updated results demonstrated that the response rate increased to 29% with 4 PRs observed amongst high-dose phase-2 eligible patients that had failed checkpoint inhibitor therapies (N=14), which included 100% reduction of target lesions in one melanoma and one pancreatic patient, 2 of 4 dose evaluable expansion patients, and 2 of 2 MSI-High patients.

Key, detailed findings from the presentation included:

Safety:

MDNA11 demonstrated a favorable safety profile and was generally well tolerated across all dose cohorts, with no dose limiting toxicities (“DLT”) or vascular leak syndrome reported, and a majority of treatment related adverse events (TRAEs) being grade 1 or 2, with no grade 4 or 5 AEs.

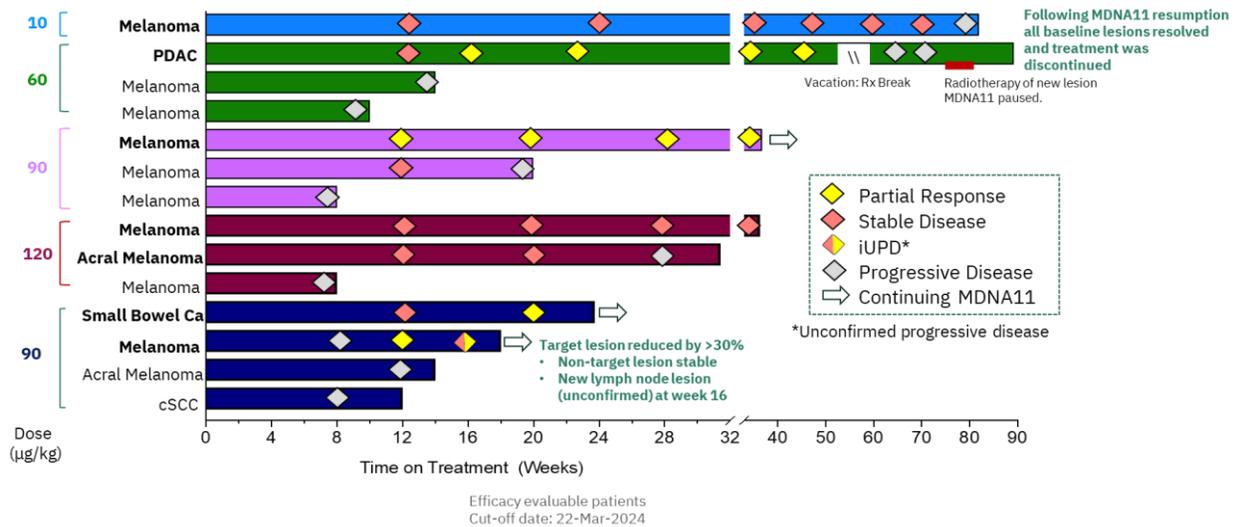
Pharmacodynamics:

Pharmacodynamic data on effector anti-tumor immune cells continue to support the mechanistic rationale for MDNA11’s promising anti-tumor activity, with MDNA11 inducing robust peripheral expansion of a population of potent activated CD8⁺T cells and increasing NK cells, but with limited expansion of Tregs which can suppress anti-tumor immunity.

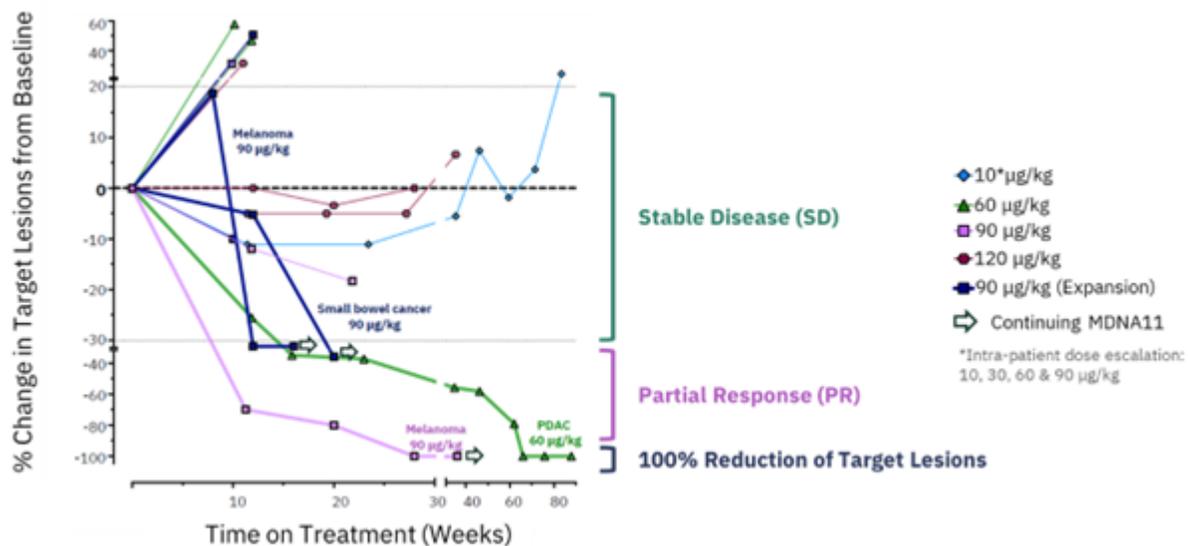
Single-Agent Activity:

- Fourth Partial Response Reported: A new partial response was reported in an 85-year-old MSI-High patient with small bowel cancer and secondary resistance to pembrolizumab at week 20 with 37% reduction in target lesions, with the patient continuing MDNA11 treatment in the dose expansion cohort.
- Updated clinical data on three other partial responses that were previously reported were also presented and included:
 - A pancreatic ductal adenocarcinoma (MSI-H) patient with primary resistance to pembrolizumab who was treated with MDNA11 (60 µg/kg) showed 100% resolution of all baseline lesions at week 66. A new lymph node lesion developed during a 8-week MDNA11 treatment break (vacation) was treated with a single course of radiotherapy prior to resumption of MDNA11. All baseline lesions remained completely resolved and the new lymph node lesion was <10 mm (considered physiological per RECIST v1.1), and MDNA11 treatment ended at week 90 while follow-up continues.
 - A patient with cutaneous melanoma progressed on dual checkpoint inhibitors, was treated with MDNA11 (90 µg/kg) and showed 100% resolution of the target lesion at weeks 28 and 36 with continuing reduction of the non-target lesions. Patient remains on MDNA11 treatment.
 - A second checkpoint-resistant cutaneous melanoma patient (nivolumab & rechallenge) showed partial response on MDNA11 (90 µg/kg) with a 31.25% reduction of the target lesion at week 12 following pseudo-progression at week 8. A new lymph node lesion developed at week 16 while baseline target and non-target lesions remained stable or decreased. Patient remains on treatment.
- Durable stable disease (SD) for ≥ 24 weeks with shrinkage of target lesions observed in three metastatic melanoma patients:
 - Two patients (acral and cutaneous) with SD for >24 weeks on MDNA11 (120 µg/kg).
 - A third patient (cutaneous) with SD for > 1.5 years started on MDNA11 at 10 µg/kg dose and was subsequently dose escalated to 30, 60 and 90 µg/kg.

29% Response Rate and 50% Clinical Benefit Rate Amongst High Dose Phase 2 Eligible Patients who Failed Checkpoint Therapies: (Data cut-off as of March 22, 2024)



Deep Shrinkage of Tumor Lesions with Single-Agent MDNA11



Based on the totality of the updated data reported by the Company at the 2024 Annual Meeting of the AACR, Medicenna noted MDNA11’s results were reaffirming of its potential to be a best-in-class IL-2 therapy due to its differentiated deep and durable single-agent activity.

Evidence of Potent Immune Effector Response and Continued Durable Single Agent Activity: Complete Remission 4 Months After Stopping MDNA11 Treatment in Pancreatic Cancer Patient and Continued 100% Reduction of Target Lesions in a Melanoma Patient

On May 31, 2024, the complete ABILITY-1 Phase 1 monotherapy dose escalation data, including updated anti-tumor activity results, and initial safety data from the combination escalation portion of the study were presented by Medicenna at the 10th Annual Oncology Innovation Forum. Key updates were as follows:

Monotherapy Safety

No DLTs were reported and without any evidence of vascular leak syndrome (VLS). Vast majority (95 %) of TRAEs were of grade 1-2 and resolved within 48 hours; grade 3 TRAEs mainly constituted asymptomatic transient LFT elevations; no grade 4 or 5 events were reported. Repeat administration of MDNA11 at the target doses showed further improvement in tolerability.

Combination Safety

The first dose level in the combination escalation portion of the study was as follows:

- MDNA11: Priming dosing at 2 x 30 µg/kg followed by target dose of 60 µg/kg every 2 weeks by IV infusion
- Pembrolizumab (KEYTRUDA®): 400 mg every 6 weeks by IV infusion

No DLTs were observed in any of the 3 patients during the DLT observation period. The Safety Review Committee approved enrolment of 3 patients in the next higher dose as follows:

- MDNA11: Priming dosing at 30 and 60 µg/kg followed by target dose of 90 µg/kg every 2 weeks by IV infusion
- Pembrolizumab (KEYTRUDA®): 400 mg every 6 weeks by IV infusion

Pharmacodynamics:

In depth pharmacodynamic analyses in the complete Phase 1 monotherapy dose escalation dataset showed potent and durable systemic immune response following MDNA11 administration with clear evidence of immune activation in the tumor microenvironment (TME). Key findings were as follows:

- Durable expansion of circulating CD8+ T and NK cells but not immune suppressive Tregs with each repeat dose of MDNA11.
- Expanding populations of CD8+ T and NK cells expressing TCF-1, a key regulator of 'stemness' responsible for maintaining self-renewal capacity, high proliferative potential and diverse immune effector characteristics.
- Increased expression of DNAM-1 (aka CD226), a potent regulator of anti-tumor immunity necessary for maintaining immune effector cell function.
- Increased central and effector memory CD8+ T cells provides a reliable reservoir of educated immune cells that can continually expand to enable durable anti-tumor immunity.
- Immune suppressive Tregs showed limited increase in number and were further functionally compromised based on increased OX-40, TCF-1 and DNAM-1 that repress the expression of FoxP3, a key master regulator of Tregs.
- Analysis of paired tumor biopsies by multiplex immunofluorescence (mIF) showed higher number of CD8+ T and NK cells within the TME following MDNA11 treatment, including increased activated CD8+ T cells
- Gene expression analysis captured signature of enhanced immune effector function in on-treatment biopsies vs pre-treatment biopsies, characterized by increased cytotoxic activity of CD8+ T and NK cell populations (i.e., elevated Granzyme gene family members) responsible for tumor cell killing.

Single-Agent Activity: Complete Remission 4 Months after Treatment in PDAC Patient and Continued 100% Regression of Target Lesions in a Melanoma Patient Continuing Treatment

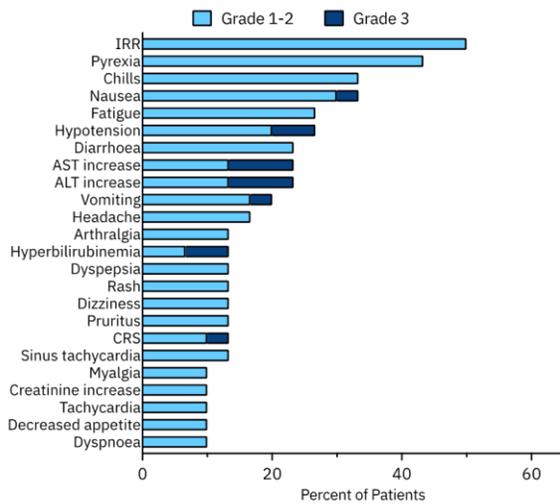
- A pancreatic ductal adenocarcinoma (PDAC; MSI-H) patient with primary resistance to pembrolizumab was treated with 60 µg/kg MDNA11 and showed 100% resolution of all baseline target and non-target lesions at week 66. A new lymph node lesion that developed while patient was on an 8-week treatment break during vacation was treated with a single course of radiotherapy prior to resumption on MDNA11. At week 88, all baseline lesions remained completely resolved and the new lymph node lesion was

reduced to <10 mm in size (considered physiological per RECIST v1.1), at which time MDNA11 treatment ended. The patient continues to be in complete remission at follow-up on week 104, nearly 4 months after ending treatment. Off-study follow-up is continuing.

- A patient with cutaneous melanoma, progressed on a prior line of dual checkpoint inhibitors, was treated with MDNA11 (90 µg/kg) and showed deepening tumor shrinkage on successive scans at weeks 12 and 20. Subsequent scans at week 28, 36 and 44 all showed 100% resolution of target lesions. Non-target lesions continue to regress, and the patient remains on MDNA11 treatment.

MDNA11 has Highly Favorable Safety Profile Across All Doses in the Complete Monotherapy Dose Escalation Study: No DLT and Increased Tolerability with Repeat Administration

Most Common Treatment Related Adverse Events (TRAEs in ≥10% of Patients)

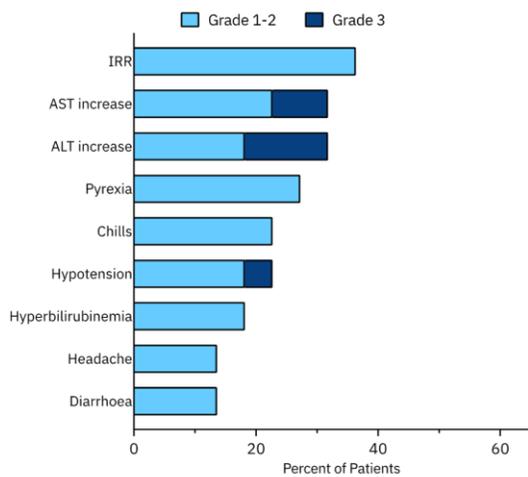


	No. (%) of Patients	
	All Grades (N=30)	Grade 3 (N=30)
All AEs	30 (100%)	20 (66.66%)
Treatment related AEs	30 (100%)	11 (36.6%)
All SAEs	12 (40%)	8 (26.6%)
Treatment related SAEs	9 (30%)	5 (16.6%)

- **No dose limiting toxicity (DLT)**
- No grade 4 or 5 TRAE
- 96.3% of TRAEs were grade 1-2; majority resolved within ≤72 hours
- Grade 3 LFT elevations were asymptomatic and transient; resolved prior to next scheduled dose
- Grade 3 hypotension seen in patients with baseline adrenal insufficiency

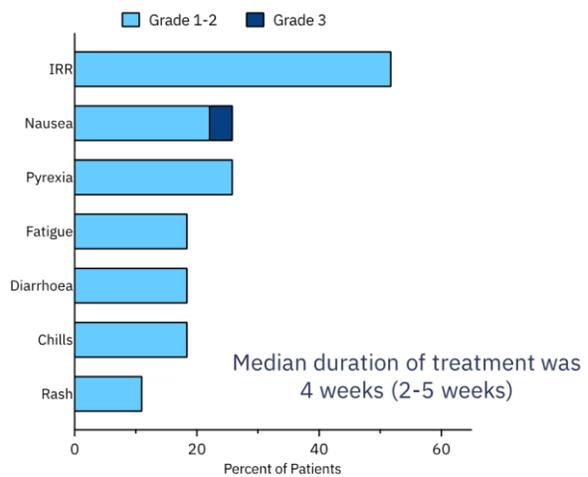
Median duration of treatment is 10 weeks (1- 90 weeks)
IRR, Infusion Related Reaction

Most Common TRAEs (≥10% of Patients) At Step up Doses#



#In cohorts with Step up dosing: Cohort 4 & 5: 2X30 µg/kg, Cohort 6: 30, 60 and 90 µg/kg, Dose evaluation: 30 & 60 µg/kg

Most Common TRAEs (≥10% of Patients) During DLT Period*

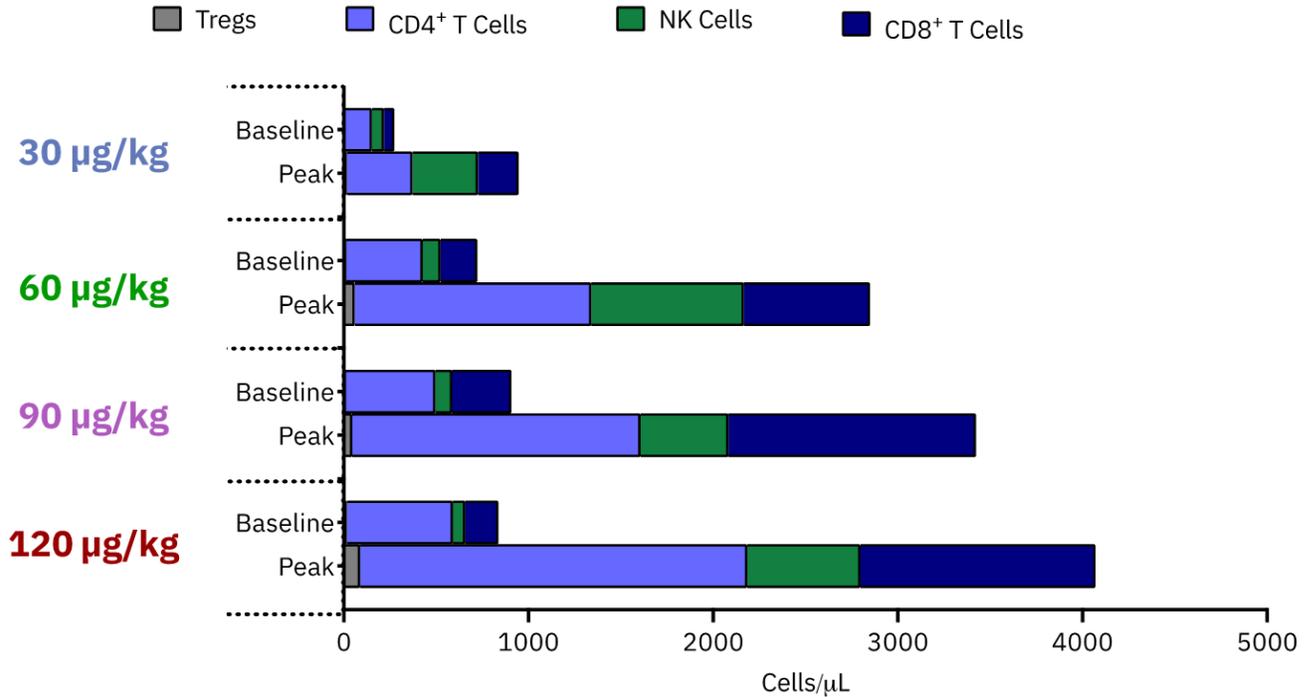


Median duration of treatment was 4 weeks (2-5 weeks)

*28 days from first target dose

IRR, Infusion Related Reaction

Robust Expansion and Activation of Anti-Cancer Effector Cells but Not Immune Suppressive Tregs



Immune cells were assessed by flow cytometry and the numbers were calculated based on the absolute lymphocyte count
 Peak values are from day 8 post treatment following dose 1, 2 or 3
 Tregs: CD4⁺CD25⁺FOXP3⁺, NK Cells: CD3⁻CD56⁺

MDNA11 Shows Significant Increases in Stemness, Central and Effector Memory and Markers of Enhanced Effector Function in Circulating CD8⁺ T and NK cells: All of Which are Critical for Achieving Meaningful and Durable Anti-Cancer Response.

TCF1:

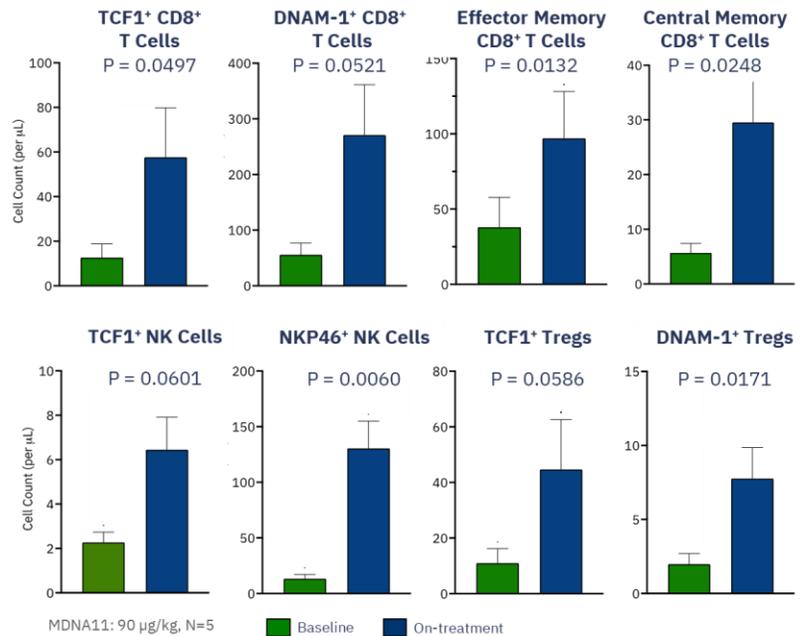
- Positive regulator of CD8⁺ T and NK cell 'stemness' (i.e., self renewal, proliferation and effector functions)
- Represses FoxP3 leading to dysfunctional Tregs and loss of immune suppression

DNAM-1 (CD226):

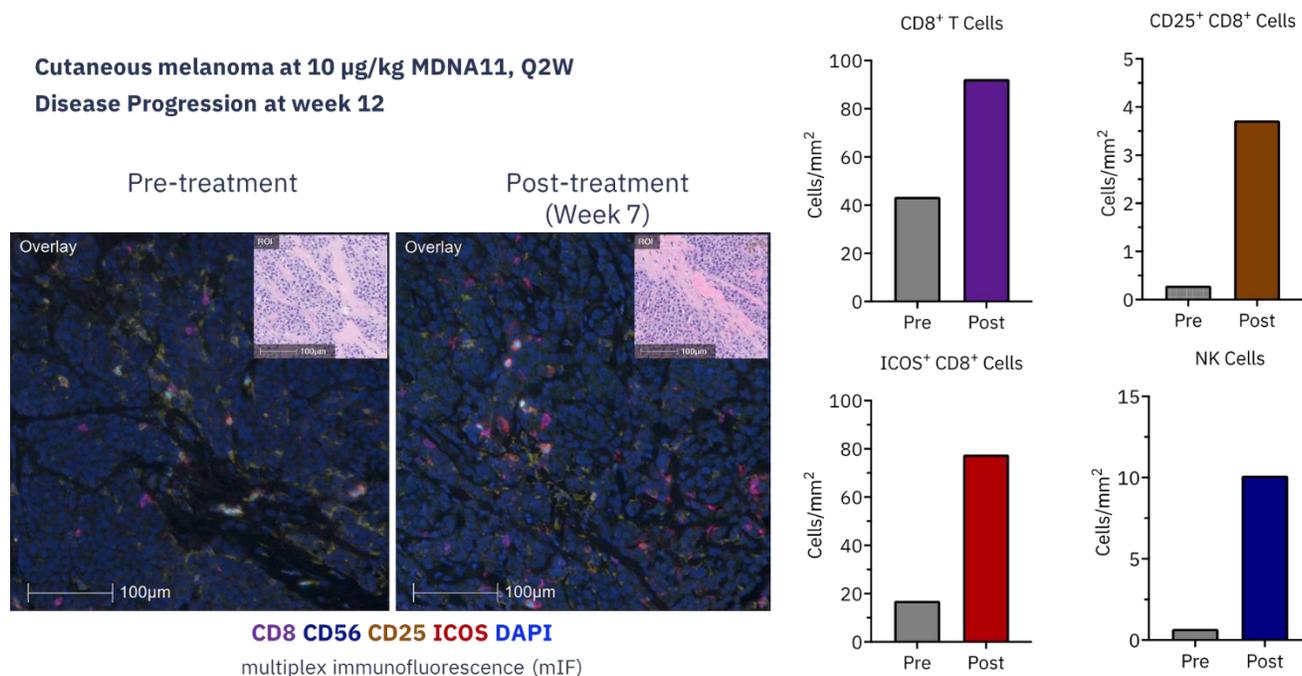
- Positive regulator of immune effector function of CD8⁺ T and NK cells
- Attenuates immune suppressive activity of Tregs

NKP46:

- Positive regulator of NK cell activation (increased cytotoxic activity and cytokine production)



Paired Biopsy Samples Demonstrate MDNA11 Increase Tumor Infiltrating CD8⁺ T and NK Cells



Q42024 and Milestones

In totality, Medicenna reported significant clinical updates in the most recent quarter and financial year 2024. The Company has been encouraged by four partial responses to date, especially 2 patients from the dose-escalation cohort where a pancreatic cancer patient is in remission following complete regression of all target and non-target lesions in addition to a melanoma patient that continues to show durable complete response of the target lesions. Furthermore, good tolerability of MDNA11 in combination with KEYTRUDA® allowed us to increase its dose to the next higher level which is identical to the MDNA11 dose used in the monotherapy expansion arm. These advances, together with the first ever observation of increases in unique biomarker specific cancer fighting immune cells in the tumor micro-environment, differentiates MDNA11's mechanism relative to other competing IL-2 programs and demonstrates its potential to be a best-in-class next-generation IL-2 super-agonist for treatment of advanced solid tumors.

On June 26th, 2024, the Company announced that the EMA approved its Clinical Trial Application to expand the phase 1/2 ABILITY-1 study to Europe, marking an important milestone for the Company and adding positive momentum behind the MDNA11 program. Medicenna anticipates the expansion to Europe will expedite enrolment in the trial and advance the study towards key updates in the monotherapy expansion and combination escalation portions of the ABILITY-1 study which will be presented at medical conferences during H2 2024.

Pre-Clinical Assets

BiSKITs™ (Bi-functional SuperKine ImmunoTherapies) Platform

Our BiSKITs™ platform allows us to develop designer IL-2, IL-4 and/or IL-13 Superkines by fusing them to other proteins, checkpoint inhibitors, antibodies or cytokines in order to combine two distinct and yet synergistic mechanisms of action into a single multi-functional molecule: a BiSKIT™.

T-MASK™ (Targeted Metallo/protease Activated SuperKine) Platform

Medicenna's novel T-MASK™ (Targeted Metallo/protease Activated SuperKine) platform involves fusion of a dual tumor-targeting/masking domain to an immune modulator (such as a Superkine or a BiSKIT™) via a matrix metalloprotease (MMP) sensitive linker to (i) fine-tune the potency of the immune modulator, (ii) increase its systemic tolerability (iii) prolong its retention in the TME and (iv) to maximize its full potency at

the intended target site where the masking domain is removed by design. In summary, the T-MASK™ platform offers opportunity to target and fine-tune immune cell stimulation in the tumor microenvironment (TME) to improve the therapeutic index of Medicenna's Superkine and BiSKIT™ platforms.

MDNA113: A Tumor-targeting and Activatable 'Masked' Anti-PD-1-IL-2 BiSKIT™ for Cancer

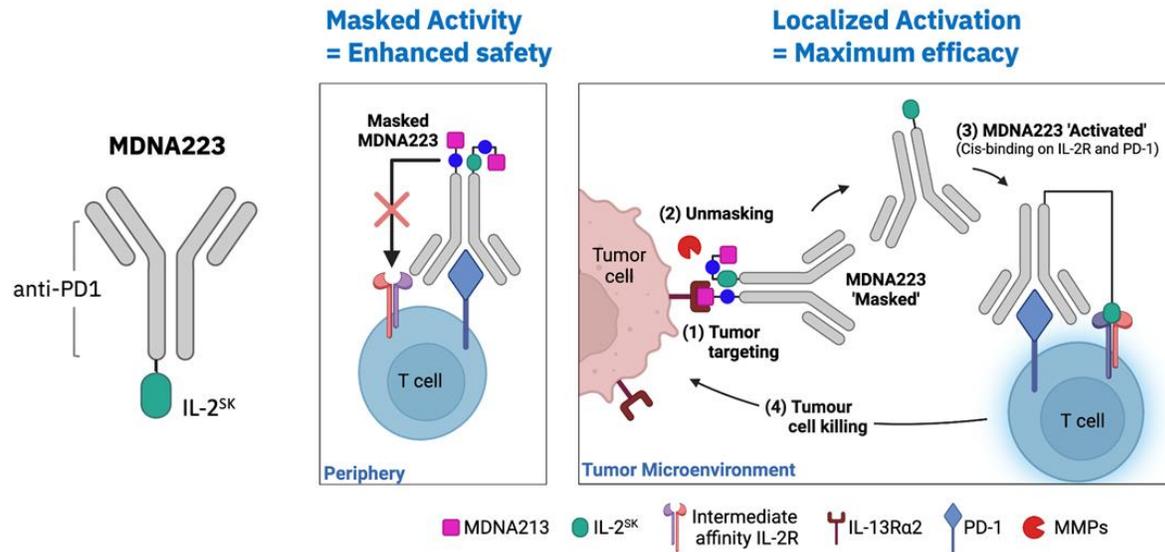
MDNA113, is our most advanced pre-clinical asset encompassing both, the T-MASK™ and BiSKIT™ platforms. It is a novel first-in-class tumor targeted and activatable bifunctional anti-PD1-IL-2 superkine (also known as MDNA223) in which the tumor targeting/masking domain is an engineered IL-13 superkine with exceptionally high affinity and specificity for IL-13R α 2, a tumor associated antigen overexpressed in diverse tumors but not normal tissues. The IL-13 superkine also provides a 'masking' domain to partially reduce the immune stimulatory activity of MDNA113 to reduce risk of systemic toxicity due to immune stimulation. Within the TME where there is abundant MMPs, the IL-13 masking domain is released and the activity of the core anti-PD1-IL-2^{SK} is fully restored to activate cytotoxic CD8 T cells (by inducing IL-2R) while at the same time preventing these anti-tumor cells from becoming exhausted (by PD1/PDL1 blockade). In summary, MDNA113 has the potential to make a meaningful impact on a broad range of IL-13R α 2 expressing tumors, including immunologically "cold" tumors (e.g., pancreatic, prostate, ovarian, breast and brain tumors), affecting over two million patients every year world-wide.

On April 9th, 2024, at AACR 2024 held in San Diego, CA, Medicenna reported updated pre-clinical data on MDNA113.

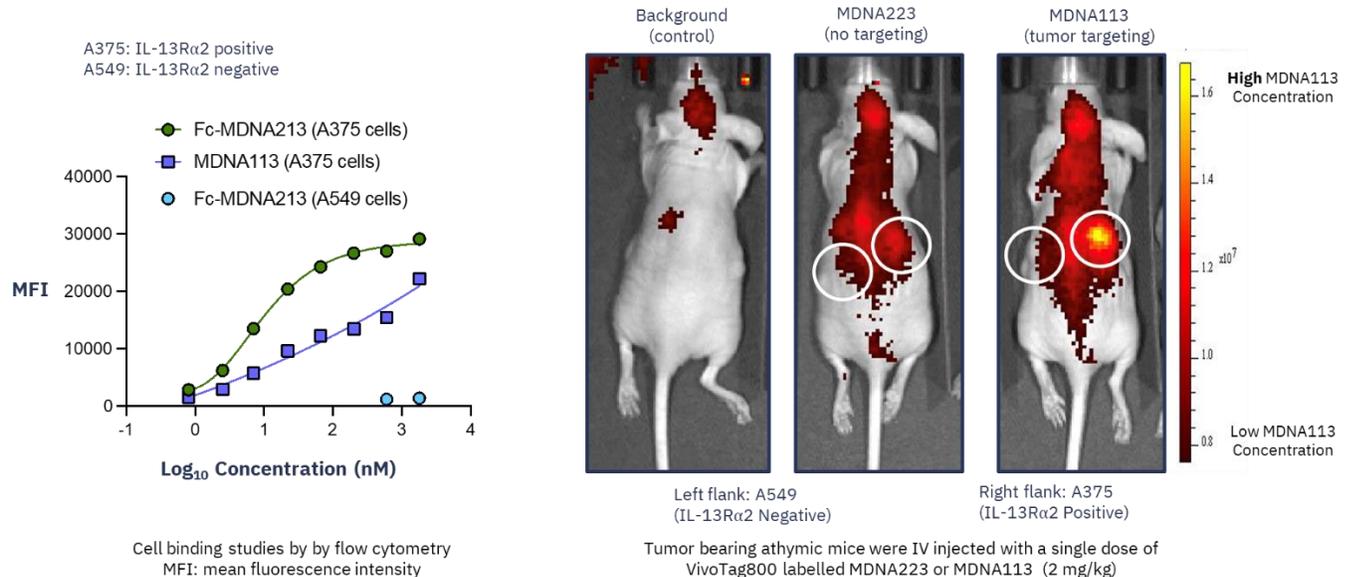
Key findings from the presentation included:

- When not activated, MDNA113 shows reduced IL-2R agonism with no change in PD-1/PDL-1 blockade activity.
- Cleavage and activation of MDNA113 by cancer specific enzymes (metalloproteases) releases the IL-13 masking domain (MDNA213), restoring activity of the IL-2 Superkine at the tumor site.
- MDNA113 shows attenuated systemic lymphocyte expansion compared to non-masked version (MDNA223), consistent with design of MDNA113.
- MDNA113 is better tolerated than non-masked counterpart (MDNA223), supporting higher and more efficacious dosing schedule.
- MDNA113 selectively binds IL-13R α 2 positive tumor cells *in vitro*, and durably accumulates (>7 days) in IL-13R α 2 positive tumors in mice.
- Cleavable MDNA113 shows similar efficacy as non-masked MDNA223 in mouse tumor models by either localized (intra-tumoral) or systemic (intra-peritoneal) delivery, consistent with proteolytic activation within TME.
- Single neoadjuvant treatment with MDNA113 in a highly invasive orthotopic 4T1.2 breast cancer model significantly increases survival by preventing metastasis.
- In summary, the T-MASK™ platform exemplified by MDNA113, facilitates tumor targeting and minimizes systemic toxicity while maximizing therapeutic activity at the tumor site.

Proposed Mechanism of Action of MDNA113 (aka Masked MDNA223 via MDNA213, an IL-13 Superkine)



Selective Binding to IL-13Rα2 Positive Cells and Durable Accumulation in Tumors for >7 Days



MDNA209: An IL-2/IL-15 Pathway Super-Antagonist

MDNA209 binds with exceptional affinity to IL-2Rβ but has reduced binding to the common IL-2γ_c receptor. Therefore MDNA209 occupies IL-2Rβ and blocks downstream effect and in doing so effectively prevent activation of effector CD4⁺ and CD8⁺ T cells and NK cells. As a result, we believe that MDNA209 can provide effective therapy against diseases such as autoimmune (e.g., multiple sclerosis) and graft-versus-host (e.g., transplant rejection) diseases ([Mitra et al., 2015](#)).

MDNA413: An IL-4/IL-13 Super-Antagonist

Medicenna's IL-4 and IL-13 Superkines, licensed from Stanford, are engineered cytokines which possess enhanced affinity and selectivity for either the Type 1 or Type 2 IL-4 receptor or dedicated IL-13 receptor such as IL-13Rα2. Receptor selectivity is achieved by engineering mutations into the IL-4 or IL-13 cytokines to enhance binding to specific IL-4R or IL-13R subunits. These mutations also modulate the bioactivity of IL-

4 or IL-13, resulting in Superkines with enhanced signalling (super-agonists) or capacity to block signalling (super-antagonists).

Our promising IL-13 Superkine antagonist is MDNA413. Compared to wild-type IL-13, MDNA413 has been engineered to have a 2,000-fold higher selectivity for the Type 2 IL-4R and potentially blocks both IL-4 and IL-13 signalling ([Moraga et al., 2015](#)). Blocking of Type 2 IL-4R by MDNA413 potentiates anti-tumor response by reversing Th2 condition (tumor-promoting) of the TME to a Th1 condition which supports and promotes anti-tumor immune cells. We believe that MDNA413's capacity to block IL-4/IL-13 signalling has the potential to address a significant unmet medical need for effective therapies against immunologically cold tumors which are often resistant to approved checkpoint inhibitors and other immunotherapies.

Additionally, Th2 skewing also underlies non-oncology conditions such as asthma and atopic dermatitis as well as other allergic diseases. MDNA413 has the potential to make a meaningful impact on the treatment of these allergic conditions which can be reformulated to provide options for nasal (for asthma) and topical administration (for atopic dermatitis).

SELECTED FINANCIAL INFORMATION

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

	2024	2023	2022
	\$	\$	\$
General and administration	7,874	6,999	7,757
Research and development	10,800	9,304	14,716
Total operating costs	18,674	16,303	22,473
Change in fair value of warrant derivative (gain)	7,920	(4,347)	-
Transaction costs on derivative warrant liability	-	652	-
Finance (income)	(1,198)	(914)	(69)
Foreign exchange loss (gain)	70	(1,646)	173
Net (loss)	(25,466)	(10,048)	(22,577)
Basic and diluted loss per share	(0.37)	(0.16)	(0.42)
Total assets	19,134	36,446	23,456
Total liabilities	13,943	6,960	2,621

The Company has not generated revenue in any of the previous fiscal years, other than income from interest earned on cash and cash equivalents.

For the year ended March 31, 2024, the Company reported total operating costs of \$18.7 million compared to total operating costs of \$16.3 million for the year ended March 31, 2023. The increase is related to an increase in general and administrative expenses (\$0.9 million) and research and development expenses (\$1.5 million) as discussed further below.

For the year ended March 31, 2024, the Company reported a net loss of \$25.5 million (\$0.37 loss per share), compared to a net loss \$10.0 million (\$0.16 loss per share) for the year ended March 31, 2023. The \$15.7 million increase in net loss for the year ended March 31, 2024, compared with the year ended March 31, 2023, is primarily due to an increase in the fair value of the derivative warrant liability of \$12.2 million, increased research and development expenses of \$1.5 million, and increase general and administrative costs of 0.9 million. The significant increase in fair value of the warrant derivative is due to the 111% increase in the Company's share price year-over-year. As discussed in the Annual Financial Statements, warrants with an exercise price denominated in a currency that differs from an entity's functional currency are treated as a derivative liability measured at fair value with subsequent changes in fair value accounted for through the consolidated statement of loss. The Company uses the Black-Scholes model to determine the fair value of the warrant derivative. Variances related to research and development and general and administrative expenses are discussed in further detail below.

For the year ended March 31, 2023, the Company total operating costs of \$16.3 million compared to total operating costs of \$22.5 million for the year ended March 31, 2022. The decrease is related to a decrease in general and administrative expenses (\$0.8 million) and research and development expenses (\$5.4 million) as discussed further below.

For the year ended March 31, 2023, the Company reported a net loss of \$10.0 million (\$0.16 loss per share), compared to a net loss \$22.6 million (\$0.42 loss per share) for the year ended March 31, 2022. The decrease in net loss for the year ended March 31, 2023, compared with the year ended March 31, 2022, was partially a result of decreased research and development expenditures related to the MDNA11 program, where GMP manufacturing and IND-enabling studies were completed in the prior year. There was a foreign exchange gain of \$1.6 million during the year ended March 31, 2023, compared to a loss of \$0.2 million in the year ended March 31, 2022, resulting from a gain on USD cash and cash equivalents. In addition, a non-cash change in the fair value of the warrant derivative (gain) of \$4.3 million for the year ended March 31, 2023 further contributed to the reduction in net loss. These reductions were offset by a reimbursement of \$1.8 million under the CPRIT grant in the year ended March 31, 2022 which reduced R&D expenditures in 2022.

RESULTS OF OPERATIONS FOR THE YEAR ENDED MARCH 31, 2024

Research and Development (“R&D”) Expenses

	2024	2023	2022
	\$	\$	\$
Research and Development Expenses			
Clinical	4,695	3,554	2,322
Salaries and benefits	2,544	2,266	2,759
Discovery and pre-clinical	1,407	1,274	3,441
Licensing, patent, legal fees and royalties	1,370	1,295	733
Chemistry, manufacturing and controls	923	906	6,841
Regulatory	107	196	502
Stock based compensation	573	505	467
Other research and development expenses	170	56	104
CPRIT grant claimed in eligible expenses	-	-	(1,753)
Refundable tax credits	(989)	(748)	(700)
	10,800	9,304	14,716

Research and development expenses of \$10.8 million were incurred during the year ended March 31, 2024, compared with \$9.3 million during the year ended March 31, 2023. The year-over-year increase is net of the following year-over-year variances:

- Increased clinical costs during the year relative to the prior year due to the expansion of the MDNA11 ABILITY-1 Study to new clinical sites in South Korea, and the enrollment of additional patients to the study throughout the year, and commencement of the combination portion of the study with pembrolizumab.
- An increase in salaries and benefits due to the addition of research staff during the period to support MDNA11 activity and the payment of a bonus to research and development staff in the current year and not in the previous year.
- An increase in discovery and pre-clinical expenses during the current year related to the BiSKIT™ research program.

The decrease in R&D expenses during the year ended March 31, 2023 compared to the year ended March 31, 2022 is primarily attributable to:

- One-time chemistry, manufacturing and controls costs (“CMC”), associated with the scale-up of good labor practices (“GLP”) and good manufacturing practices (“GMP”) and manufacturing of MDNA11

required to supply adequate drug product for IND-enabling studies and the ABILITY Study, completed in the prior year.

- Discovery and pre-clinical expenses associated with the GLP compliant MDNA11 IND enabling studies, completed in prior year.
- Decrease in regulatory costs due to the preparation of regulatory filings necessary to initiate the MDNA11 ABILITY study incurred in the prior year.

The above decreases were partially offset by an increase in clinical costs as more patients were enrolled in MDNA11 ABILITY Study in the year ended March 31, 2023, and by the reimbursement of previously incurred expenses with respect to the CPRIT grant of \$1.8 million in the year ended March 31, 2022.

General and Administrative (“G&A”) Expenses

	2024	2023	2022
	\$	\$	\$
General and Administration Expenses			
Public company expenses	4,731	4,603	5,424
Salaries and benefits	1,711	943	963
Stock based compensation	791	582	949
Facilities and operations	636	866	384
Depreciation expense	5	5	37
	7,874	6,999	7,757

G&A expenses of \$7.9 million were incurred during the year ended March 31, 2024, compared with \$7.0 million during the year ended March 31, 2023. The year-over-year increase is net of the following year-over-year variances:

- Increased salaries and benefits in fiscal 2024 related to recruitment of executive staff in the US and subsequent departure of the US based executives as the Company refocused its executives to Canada following its delisting from Nasdaq. This is anticipated to result in cost savings in future periods.
- Increased facilities and operations expense during the year due to non-recurring costs for software implementation and licensing and increased travel expenses related to the addition of US based employees during the year.
- Increased public company expenses in fiscal 2024 related to the expiry of the company’s ATM which resulted in the expensing of prepaid fees associated with the ATM facility during the current period, and non-recurring legal expenses in the current period related to SEC deregistration and employment transition matters.
- A decrease in stock-based compensation expense primarily due to options issued at lower strike price than previous comparable period.

G&A expenses of \$7.0 million were incurred during the year ended March 31, 2023, compared with \$7.8 million during the year ended March 31, 2022. The decrease in G&A expenses in the year ended March 31, 2023, compared to the year ended March 31, 2022, primarily relates to a reduction in directors and officers liability insurance premiums.

RESULTS OF OPERATIONS FOR THE THREE MONTHS ENDED MARCH 31, 2024

Research and Development Expenses

	Three months ended March 31, 2024	Three months ended March 31, 2023
	\$	\$
Research and Development Expenses		
Clinical	1,133	802
Salaries and benefits	784	427
Discovery and pre-clinical	305	108
Licensing, patent, legal fees and royalties	305	556
Chemistry, manufacturing and controls	112	220
Regulatory	30	144
Stock based compensation	174	53
Refundable tax credits	(989)	(748)
Other research and development expenses	9	5
	1,863	1,586

Research and development expenses of \$1.9 million were incurred during the three months ended March 31, 2024, compared with \$1.6 million incurred in the three months ended March 31, 2023. The net increase is primarily attributable to:

- Increased clinical costs during the year relative to the prior year due to higher activity related to the MDNA11 ABILITY-1 Study during the three months ended March 31, 2024 relative to the comparable prior period.
- Increased salaries and benefits during the three months ended March 31, 2024 relative to the prior comparable period related to the addition of research and development staff and the payment of a research and development bonus in the current year which was not paid in the prior comparable period.
- The above increases were partially offset by lower licensing, patent, and legal fees due to higher IP related legal payments and IP consulting in the prior comparable period, and a higher refundable tax credit due to increase research and development expenditures in Australia during the period.

General and Administrative Expenses

	Three months ended March 31, 2024	Three months ended March 31, 2023
	\$	\$
General and Administration Expenses		
Public company expenses	1,281	1,016
Salaries and benefits	355	66
Stock based compensation	313	142
Facilities and operations	188	160
Depreciation expense	1	1
	2,138	1,385

G&A expenses of \$2.1 million were incurred during the three months ended March 31, 2024, compared with \$1.4 million during the three months ended March 31, 2023.

The increase in G&A expenses is primarily attributable to:

- Increased public company expenses related to the expiry of the company's ATM which resulted in the expensing of prepaid fees associated with the ATM facility, and non-recurring legal expenses related to SEC deregistration.
- Increased salaries and benefits during the three months ended March 31, 2024 relative to the prior comparable period related to the payment of bonuses in the current year, and nonrecurring expenses related to separation agreements.

SUMMARY OF QUARTERLY FINANCIAL RESULTS:

	Mar. 31 2024	Dec. 31 2023	Sep. 30 2023	Jun. 30 2023	Mar. 31 2023	Dec. 31 2022	Sep. 30 2022	Jun. 30 2022
		\$	\$	\$	\$	\$	\$	\$
General and administration	2,138	1,786	2,303	1,647	1,385	1,976	1,719	1,919
Research and development	1,863	2,991	3,134	2,812	1,586	2,945	2,362	2,411
Total operating costs	4,001	4,777	5,437	4,459	2,971	4,921	4,081	4,330
Change in fair value of warrant derivative	10,467	160	(960)	(1,747)	1,200	(3,747)	(1,800)	-
Net loss	(13,904)	(4,977)	(3,723)	(2,862)	(3,856)	(1,141)	(896)	(4,155)
Basic and diluted loss per share	(0.21)	(0.07)	(0.05)	(0.04)	(0.06)	(0.02)	(0.01)	(0.07)
Total assets	19,134	23,268	27,743	31,546	36,446	38,174	42,560	20,140
Total liabilities	13,943	4,026	4,306	4,646	6,960	4,949	8,644	2,147

R&D expenses have remained relatively constant over the last four quarters as there have been no significant changes in the Company's clinical programs. Refundable tax credits contributed to a decrease in R&D expenses during the quarter ended March 31, 2024 and March 31, 2023.

G&A expenses have remained relatively consistent quarter over quarter other than the quarter ended September 30, 2023, which reflects non-recurring legal and recruitment costs related to personnel additions during the quarter, and the quarter ended March 31, 2024 as explained above.

There was a non-cash change in the fair value of the warrant derivative (gain) loss from the quarter ended September 30, 2022 onwards. The fair value of the warrant derivative will fluctuate quarterly due to volatility of share price, expected dividend yield and expected risk-free interest rate. The significant increase in fair value of the warrant derivative in the current quarter is due to the significant appreciation in the Company's shares (increase of 343% during the quarter).

LIQUIDITY AND CAPITAL RESOURCES

Since inception, the Company has devoted its resources to funding research and development 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 research and development activities, which has resulted in an accumulated deficit of \$106.5 million as of March 31, 2024. With current revenues only consisting of interest earned on cash and cash equivalents, losses are expected to continue while the Company's research and development programs are advanced.

The Company does not earn any revenues from its product candidates and is therefore considered to be in the development stage. As required, the Company will continue to finance its operations through the issuance of equity or pursue non-dilutive funding sources in the foreseeable future. The continuation of the Company's research and development activities for bizaxofusp, MDNA11 and the BiSKITs™ platform and the commercialization of bizaxofusp is dependent upon its ability to successfully finance and complete its research and development programs through a combination of equity financing, finance income, and potential 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. The Company's cash is expected to fund operations through mid 2026.

CASH POSITION

Excluding the recent \$20 million financing, as at March 31, 2024, the Company had a cash and cash equivalents balance of \$17.0 million, compared to \$33.6 million at March 31, 2023. The Company invests cash in excess of current operational requirements in highly rated and liquid instruments. Working capital at March 31, 2024 was \$16.2 million (March 31, 2023 - \$32.6 million). These funds, in addition to the 2024 Offering completed subsequent to quarter end (see "*Financing Update*") are expected to provide the Company with sufficient capital to execute planned expenditures through the completion of the MDNA11-ABILITY study and through mid 2026.

The Company does 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 R&D activities. It is expected that negative cash flow from operations will continue until such time, if ever, that the Company receives marketing authorization to commercialize any of its product candidates under development and/or receives royalty or milestone revenue from any such products.

CONTRACTUAL OBLIGATIONS

CPRIT Assistance

In February 2015, the Company was awarded a grant by the CPRIT whereby the Company was eligible to receive up to US\$14.1 million on qualifying expenditures over a three-year period related to the development of the Company's Phase 2b clinical program for bizaxofusp. As of March 31, 2024, all of the US\$14.1 million had been received and the grant with CPRIT was completed.

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 bizaxofusp 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

The Company is entitled to receive approximately \$1.0 million through our Australian R&D incentive program relating to the year ended March 31, 2024 (March 31, 2023: \$0.7 million). The amount receivable was recorded as a reduction in applicable research and development expenses in the years ended March 31, 2024 and 2023.

Intellectual Property

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, minimum royalties, and other milestone payments.

As of March 31, 2024, the Company is obligated to pay the following:

Contractual obligations	Less than 1 year	1-3 years	3-5 years	Total
Patent licensing, milestone and minimum royalty costs	\$ 176	\$ 582	\$ 731	1,489

The Company cannot reasonably estimate future royalties which may be due upon the commercialization of bizaxofusp or MDNA11.

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, Mr. David Hyman, Chief Financial Officer, Ms. Rosemina Merchant, Chief Development Officer, Mr. Jeff Caravella, former Chief Financial Officer, Ms. Elizabeth Williams, former Chief Financial Officer, Mr. Humphrey Gardener, former Chief Medical Officer, and Mr. Brent Meadows, former Chief Business Officer), and directors, earned the following compensation for the following years.

	2024	2023
	\$	\$
Salaries and wages	2,224	1,059
Board fees	329	322
Stock option expense	814	1,181
	3,367	2,562

As at March 31, 2024, the Company had trade and other payables in the normal course of business, owing to directors and officers of \$0.2 million (2023: \$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 at www.sedarplus.ca.

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 at www.sedarplus.ca.

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, other receivables, and accounts payable and accrued liabilities. The fair value of these instruments, approximate their carrying values due to their short-term maturity.

Classification of financial instruments

Financial instruments measured at fair value on the consolidated 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 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. The warrant derivative is measured using Level 2 inputs with assumptions as outlined in Note 12 of the Company's Annual Financial Statements and changes in fair value are recognized through profit or loss, with changes in fair value being recorded in net income.

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 fulfil its obligations. The financial instruments that are exposed to concentrations of credit risk consist of cash and cash equivalents and other receivables.

The Company manages credit risk associated with its cash and cash equivalents by investing its cash and cash equivalents in liquid investments with high-quality financial institutions. Other receivables have low credit risk as they are from government agencies.

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, 2024, the Company's liabilities consist of accounts payable and accrued liabilities that have contracted maturities of less than one year.

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, 2024 of \$1.0 million (March 31, 2023 - \$2.3 million).

Balances in US dollars are as follows:

	March 31, 2024	March 31, 2023
	\$	\$
Cash and cash equivalents	8,177	18,250
Accounts payable and accrued liabilities	(1,061)	(1,598)
	7,116	16,652

MANAGEMENT OF 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.

2022 PUBLIC OFFERING AND USE OF PROCEEDS

The following table provides an update on the anticipated use of proceeds raised in the 2022 Public Offering along with amounts actually expended. As of March 31, 2024, the following expenditures had been incurred (in thousands of US dollars):

Item	Amount to Spend (\$USD)	Spent to Date (\$USD)	Adjustments (\$USD)	Remaining to Spend (\$USD)
Phase 1/2 MDNA11 ABILITY Study	8,000	2,289	-	5,711
General corporate purposes and pre-clinical development of a BiSKIT candidate	8,000	5,140	-	2,860
Total	16,000	7,429	-	8,751

RISKS AND UNCERTAINTIES

The Company is an immunotherapy company that operates in a highly competitive industry that is dependent on a number of factors that include the Company's capacity to raise additional funding on reasonable terms when necessary, secure partnerships for the development of its product candidates, obtain necessary regulatory approvals and achieve market acceptance, face disruption in availability of key components for ongoing clinical studies, obtain positive results from pre-clinical and clinical studies, successfully develop existing and new products, hire and retain skilled staff and key personnel, rely on third-party providers, protect its intellectual property and face litigation risk in connection thereof. An investment in the Common Shares is subject to a number of risks and uncertainties, including the risks related to the Company being a foreign private issuer.

In addition, the Company may, from time to time, announce or publish preliminary or interim data from its clinical trials. Preliminary and interim data remains subject to audit and verification procedures that may result in the final data being materially different from the preliminary or interim data. Preliminary and interim results of a clinical trial are not necessarily predictive of final results. There can be no assurance that favorable interim or preliminary data will result in favorable final data. Preliminary and interim data are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues, patient data are further examined and reviewed, more patient data become available, and the Company prepares and issues its final clinical study report. As a result, preliminary and interim data should be viewed with caution until the final, complete data are available. Material adverse changes in the final data compared to the preliminary or interim data could significantly harm the Company's business, prospects, financial condition and results of operations. Drug development and commercialization involve a high degree of risk, and only a small number of research and development programs result in commercialization of a product. Results in early-stage clinical studies may not be indicative of full results or

results from later stage or larger scale clinical studies and do not ensure regulatory approval. You should not place undue reliance on these statements or the scientific data presented.

An investor should carefully consider these risks, as well as the risks described in the Company's Annual Information Form, 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, financial condition and the results of operations could be seriously harmed and investors could lose all or part 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 Annual Information Form filed on SEDAR at www.sedarplus.ca.

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, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

As of March 31, 2024, the Company's management 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	76,182,036
Pre-funded warrants	5,141,388
Warrants	15,388,369
Stock options	7,136,890
Total	103,848,683

For a detailed summary of the outstanding securities convertible into, exercisable or exchangeable for voting or equity securities of Medicenna as at March 31, 2024, refer to notes 9, 10, and 11 of the Annual Financial Statements of the Company, available under the Company's profile on SEDAR at www.sedarplus.ca.