



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

***For the Three and Six Months Ended  
September 30, 2024***

**DATE OF REPORT: November 14, 2024**

## MANAGEMENT'S DISCUSSION AND ANALYSIS

The following management's discussion and analysis ("MD&A") has been prepared as at November 14, 2024 for the three and six months ended September 30, 2024 and should be read in conjunction with the unaudited interim condensed consolidated financial statements of Medicenna Therapeutics Corp. for the three and six months ended September 30, 2024 and September 30, 2023, and the audited annual consolidated financial statements and accompanying notes for the year ended March 31, 2024 (the "Annual Financial Statements"), which 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.

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 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 bizaxofusp's market potential in annual revenues;
- the potential acceleration of the enrollment process in the ABILITY-1 Study further to the expansion of the Study to Europe;
- the potential impact of MDNA413 on asthma, atopic dermatitis and other allergic diseases; 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 and the Company's capacity to raise such additional funding on reasonable terms when necessary.

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 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-4 receptor ("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 tumor draining lymph nodes and augments MDNA11's half-life. MDNA11 is currently being evaluated in the ABILITY-1 (A Beta-only IL-2 ImmunoTherapY) Study (the "ABILITY-1 Study"), a Phase 1/2 clinical trial in patients with advanced and/or metastatic solid tumors. The ABILITY-1 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 KEYTRUDA® (pembrolizumab) under a clinical collaboration with Merck (known as MSD outside the United States and Canada). The Company has successfully completed a Phase 1 monotherapy dose-escalation study with MDNA11 with a favourable safety profile and demonstrated early signs of efficacy in this setting. The monotherapy recommended dose for expansion ("RDE") for MDNA11 has been established and enrollment in the dose-expansion phase 2 portion of the ABILITY-1 trial is currently underway. In addition, dose escalation study of MDNA11 in combination with KEYTRUDA® is currently in progress.

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 highlights for the three and six month periods ending September 30, 2024 through the date hereof:

- On November 13, 2024, the Company announced that it will present preclinical data on IL-2 superkines at the 29<sup>th</sup> Annual Meeting of the Society for Neuro-Oncology ("SNO") taking place in Houston, Texas from November 21-24, 2024.

- On November 13, 2024, the Company announced that it will present pre-clinical data in the neoadjuvant setting with MDNA11 at the 2024 San Antonio Breast Cancer Symposium (“SABCS”), the world’s largest breast cancer conference, taking place in San Antonio, Texas from December 10-13, 2024.
- On November 11, 2024, the Company announced that data from the ongoing Phase 1/2 ABILITY-1 Study were presented at the 39<sup>th</sup> Annual Meeting of the Society for Immunotherapy of Cancer (“SITC”), demonstrating positive single-agent activity of MDNA11 from the dose expansion cohorts and an encouraging safety profile in combination with Merck’s KEYTRUDA®. MDNA11 continued to demonstrate promising deep and durable single agent activity, with a 30% (3 of 10) objective response rate (“ORR”) in the monotherapy dose expansion cohort (in checkpoint-resistant, patients. See *Research & Development Update – MDNA11* for clinical updates.
- On November 8, 2024, the Company presented data at SITC from its most-advanced preclinical program, MDNA113, an anti-PD1-IL-2 superkine (anti-PD1-IL-2<sup>SK</sup>). Key data demonstrated that MDNA113 is a novel IL-13R $\alpha$ 2 tumor-targeted and conditionally activated BiSKIT™, achieving complete tumor regression of IL-13R $\alpha$ 2 expressing tumors, highlighting its potential to treat a vast range of immunologically “cold tumors” that annually affect over two million cancer patients worldwide. See *Research & Development Update – MDNA113* for research updates.
- On November 8, 2024, an internationally recognized academic team from the University of College London and the University of Edinburgh presented promising pre-clinical results at SITC evaluating MDNA11 and anti-PD1-IL-2<sup>SK</sup> in mouse models of glioblastoma (“GBM”) and patient-derived GBM explants. See *Research & Development Update – MDNA113* for research updates.
- On September 9, 2024, the Company announced the presentation of early pre-clinical data on MDNA113 in animal tumor models as well as MDNA209, a first-in-class IL-2 super-antagonist, in aggressive model of Graft versus Host Disease (GvHD, at the Promise of Interleukin-2 Conference held in Paris, France from September 4-7, 2024. See *Research & Development Update – MDNA209* and *MDNA113* for research updates.
- On August 15, 2024 the Company announced the strengthening of its Board of Directors with the addition of Mr. Karim Lalji. Mr. Lalji brings exceptional transactional expertise, strategic vision and a solid track record of big-pharma partnerships that will be invaluable to Medicenna.
- On August 1, 2024 the Company announced the first complete responder with MDNA11 monotherapy. A patient with melanoma, having failed dual check-point inhibitor therapy, achieved a complete response (“CR”) following treatment with MDNA11 at week 52 with 100% regression of all target and non-target lesions reinforcing the best-in-class potential of MDNA11.

## **FINANCING UPDATE**

### **Six months ended September 30, 2024**

#### Private Placement

On April 30, 2024, the Company closed a \$20 million financing through a private placement (the “2024 Offering”) with RA Capital Management (“RA”). 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

During the six months ended September 30, 2024, 1,037,250 warrants with a strike price of \$1.20 were exercised for proceeds of \$1.2 million. On July 31, 2024, there were 65,750 warrants with a strike price of \$1.20 that expired unexercised. In addition, 369,017 warrants with a strike price of \$1.75 were exercised for proceeds of \$0.6 million.

Subsequent to quarter end, an additional 1,089,650 warrants with a strike price of \$1.75 were exercised for proceeds of \$2.0 million. The remaining 90,385 warrants with a strike price of \$1.75 expired unexercised on October 17, 2024.

**Six months ended September 30, 2023**

2023 At-The-Market Facility

On February 17, 2023, the Company entered into a sales agreement with Oppenheimer & Co. Inc., acting as sales agent (the "2023 ATM Agreement"), 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 (the "2023 ATM Facility"). During the six months ended September 30, 2023, the Company did not issue any Common Shares pursuant to the 2023 ATM Facility.

Further to the Nasdaq Delisting, the 2023 ATM Agreement was terminated.

Warrants

During the six months ended September 30, 2023, no warrants were exercised.

# RESEARCH & DEVELOPMENT UPDATE

## Our Pipeline of Superkines

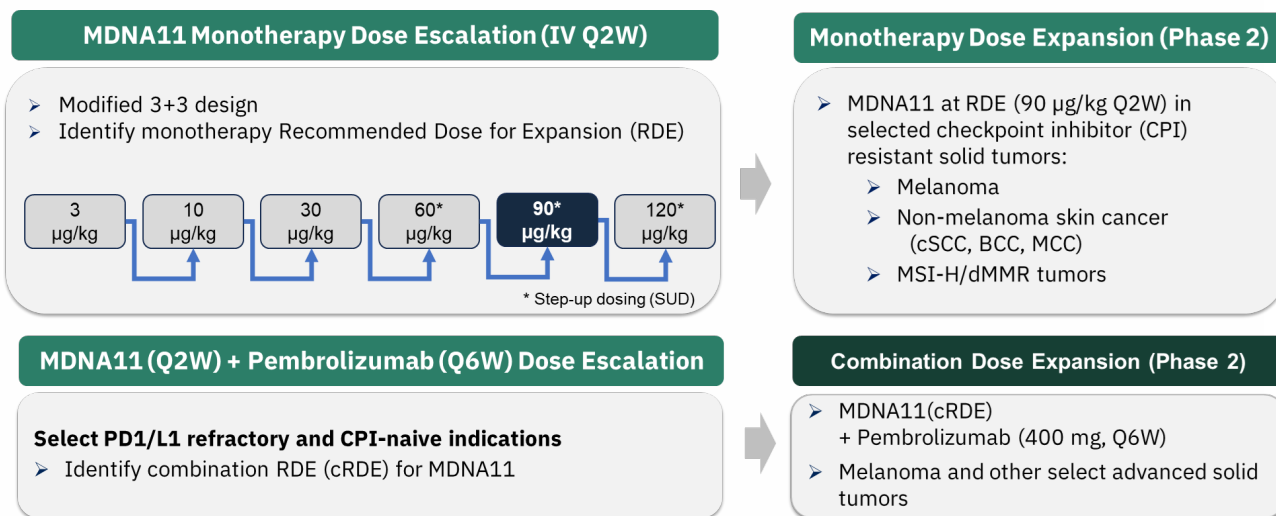
Candidate	Indication	Discovery	Preclinical	Phase 1	Phase 2	Phase 3
<b>Bizaxofusp (MDNA55)</b> IL-4-Toxin Fusion	Recurrent Glioblastoma (GBM)	Phase 3 Ready Asset				
<b>MDNA11</b> IL-2 Super Agonist monotherapy	Melanoma, cSCC, BCC Merkel cell, MSI-H/dMMR					
<b>MDNA11</b> IL-2 Super Agonist KEYTRUDA® combo	Various solid tumors					
<b>MDNA113</b> Anti PD-1-IL-2 Masked BiSKIT	Various solid tumors expressing IL-13Rα2					
<b>MDNA209</b> IL-2/15 Pathway Super Antagonist	Autoimmune Diseases					
<b>MDNA413</b> IL-4/13 Pathway Super Antagonist	Oncology and Th2-mediated diseases					

## 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<sup>+</sup> 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 Phase 1/2 ABILITY-1 Study (NCT05086692) in patients with various solid cancers. The ABILITY-1 Study is a global, multi-center, open-label clinical trial that assesses the safety, tolerability, and anti-tumor activity of MDNA11 as monotherapy or in combination with Merck’s KEYTRUDA®. The figure below describes the ABILITY-1 Study.

### ABILITY-1 Study Schema: MDNA11 Monotherapy and in Combination with KEYTRUDA®



***Deep and Durable Anti-tumor Activity with Single-Agent MDNA11 in Immune Checkpoint Inhibitor (“ICI”) Resistant Patients: 30% Response Rate in Monotherapy Expansion Cohort (3 of 10) and 25% Response Rate Among All High-dose Phase 2 Eligible Patients (5 of 20)***

On November 9<sup>th</sup>, 2024, at the 39<sup>th</sup> Annual Meeting of the SITC, Medicenna reported positive, updated clinical results from the ongoing monotherapy expansion and combination escalation portions of the Phase 1/2 ABILITY-1 Study. Comprehensive clinical updates were also presented on April 9<sup>th</sup>, 2024, at the 2024 Annual Meeting of the AACR and on May 31<sup>st</sup>, 2024, just prior to the 2024 American Society of Clinical Oncology (“ASCO”) Annual Meeting.

The updated results at SITC demonstrated that the ORR was 30% in the monotherapy dose expansion cohort (3 of 10) among ICI resistant patients with advanced and/or metastatic solid tumors. The ORR was 25%, including 1 CR and 4 PRs, among all ICI resistant high dose ( $\geq 60$   $\mu\text{g}/\text{kg}$  MDNA11) phase 2-eligible patients (5 of 20).

Two PRs were observed among 3 microsatellite instability high (“MSI-H”) ICI resistant patients (ORR 66.7%) with both responders having pancreatic ductal adenocarcinoma (“PDAC”). ORR in patients with ICI resistant cutaneous melanoma was 27% (3 of 11), with one patient achieving a complete response at week 52 who remains on treatment at week 63.

***Combination Escalation with KEYTRUDA®: Encouraging Safety Profile and Early Signs of Anti-tumor Activity in Heavily Pre-treated Patients, including a PR in a Microsatellite Stable (“MSS”) Colorectal Cancer Patient***

In the combination portion of the study with KEYTRUDA® no dose limiting toxicities were observed at the 90  $\mu\text{g}/\text{kg}$  dose level, and the next 2 cohorts have started enrollment at the higher dose of 120  $\mu\text{g}/\text{kg}$  administered either once every 2 weeks or once every 3 weeks, with 400 mg KEYTRUDA® administered once every 6 weeks.

Among 5 efficacy-evaluable patients in the combination dose escalation arm, tumor control (PR or SD) was observed in 4 patients including a PR in a microsatellite-stable (MSS) colon cancer patient, a tumor-type which has failed to demonstrate efficacy in response to checkpoint inhibitor therapy in previous clinical trials.

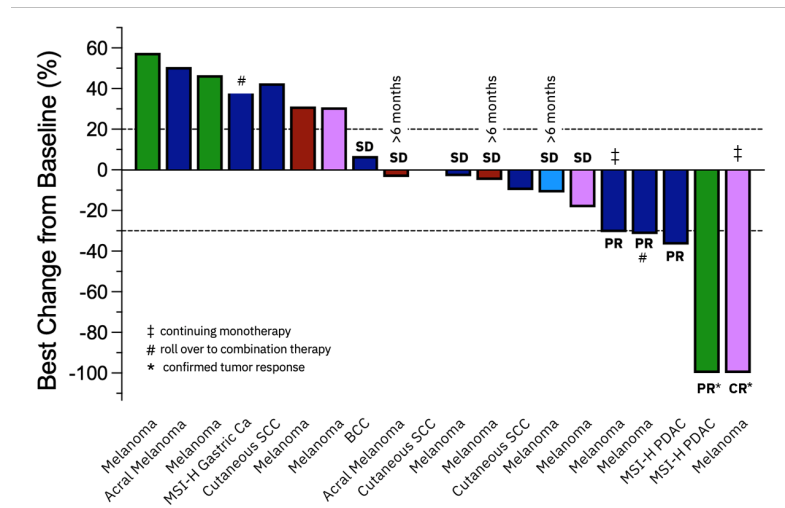
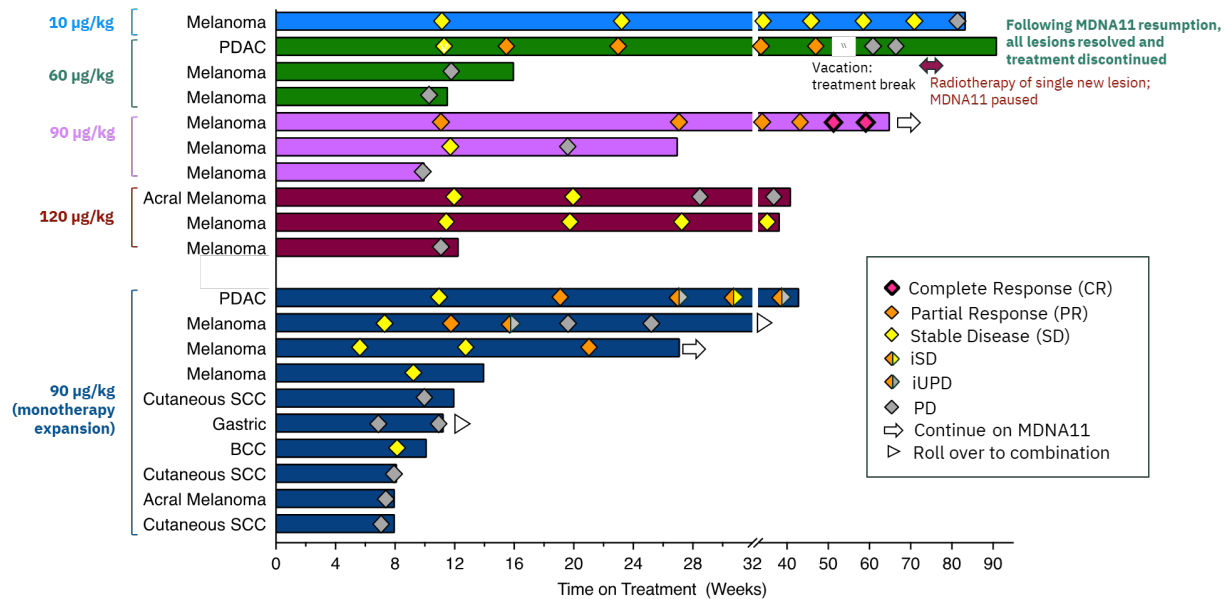
Key, consolidated findings on MDNA11 from the data presented at SITC, prior to ASCO, and at AACR included:

***Monotherapy Tumor Response in Checkpoint Resistant Patients***

MDNA11 continues to demonstrate encouraging deep and durable single-agent anti-tumor activity among patients who progressed on prior ICI therapy:

- An objective response rate (ORR) of 30% in the monotherapy dose expansion arm with 3 PRs among 10 patients who had all previously failed ICI therapy and had advanced and/or metastatic melanoma, non-melanoma skin cancer or MSI-H/dMMR tumors irrespective of tumor origin.
- The ORR is 25% (1 CR, 4 PR) from a total of 20 patients when including 10 phase 2 eligible patients from the MDNA11 monotherapy dose escalation arm who received at least 60  $\mu\text{g}/\text{kg}$ .
- Objective responses included:
  - 2 PRs among 3 MSI-H patients (ORR of 66.7%) with both responders having pancreatic ductal adenocarcinoma (PDAC). One patient with MSI-H PDAC was initially misclassified as MSI-H small bowel cancer with metastases in the pancreas.
  - 1 CR and 2 PRs among 11 patients with cutaneous melanoma (ORR of 27.3%).
  - SD in 6 patients including 3 with duration > 24 weeks, yielding a clinical benefit rate of 40% (8/20).

**30% Response Rate in Monotherapy Expansion Cohort and 25% Response Rate Amongst All High Dose Phase 2 Eligible Patients who Failed Checkpoint Therapies:**



**MDNA11 Single Agent Activity in Immune Checkpoint Inhibitor Resistant Patients:**

**Objective Response Rate (ORR):**

- 5/20 (25%) [95% CI: 6-44]
  - 1 Complete Response
  - 4 Partial Responses

**Clinical Benefit Rate:**

- 8/20 (40%)
  - 1 Complete Response
  - 4 Partial Responses
  - 3 Durable Stable Disease (> 6 months)

Objective response in 3/11 cutaneous melanoma and 2/3 MSI-H tumors

**Monotherapy Safety**

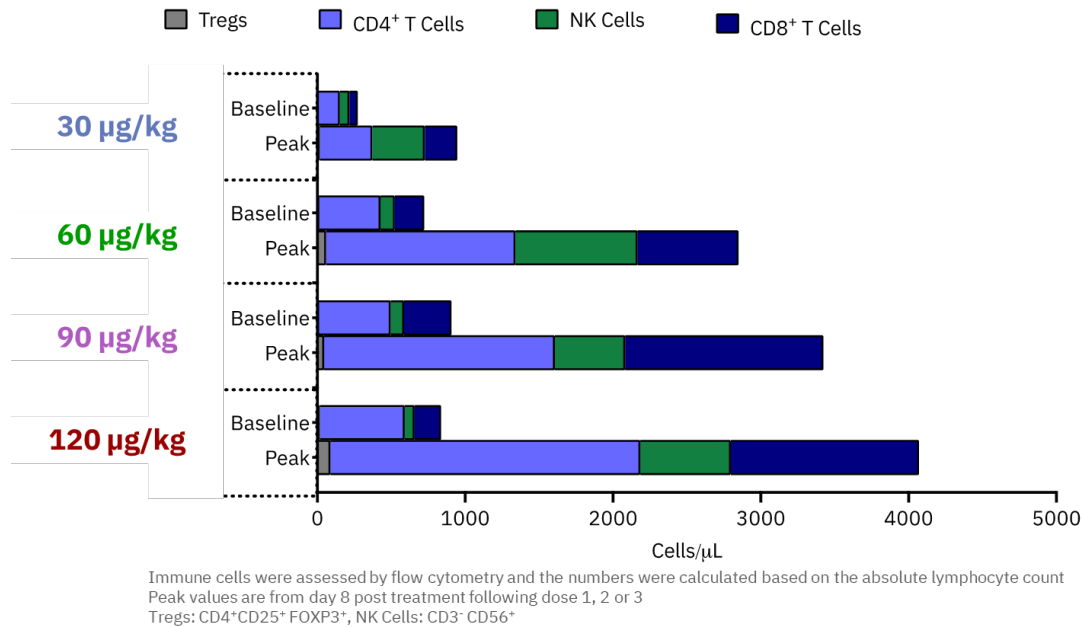
MDNA11 demonstrated a favorable safety profile and was generally well tolerated across all dose cohorts, with no dose limiting toxicities (“DLT”) or vascular leak syndrome reported, and a majority of treatment related adverse events (TRAEs) being grade 1 or 2 (94%) and resolving within 48 hours; grade 3 TRAEs mainly constituted asymptomatic transient LFT elevations; one isolated laboratory based grade 4 TRAE was observed with asymptomatic transient LFT elevation in the monotherapy dose expansion arm which resolved within 72 hours without intervention. Repeat administration of MDNA11 at the target doses continues to improve tolerability.

**Monotherapy Pharmacodynamics**

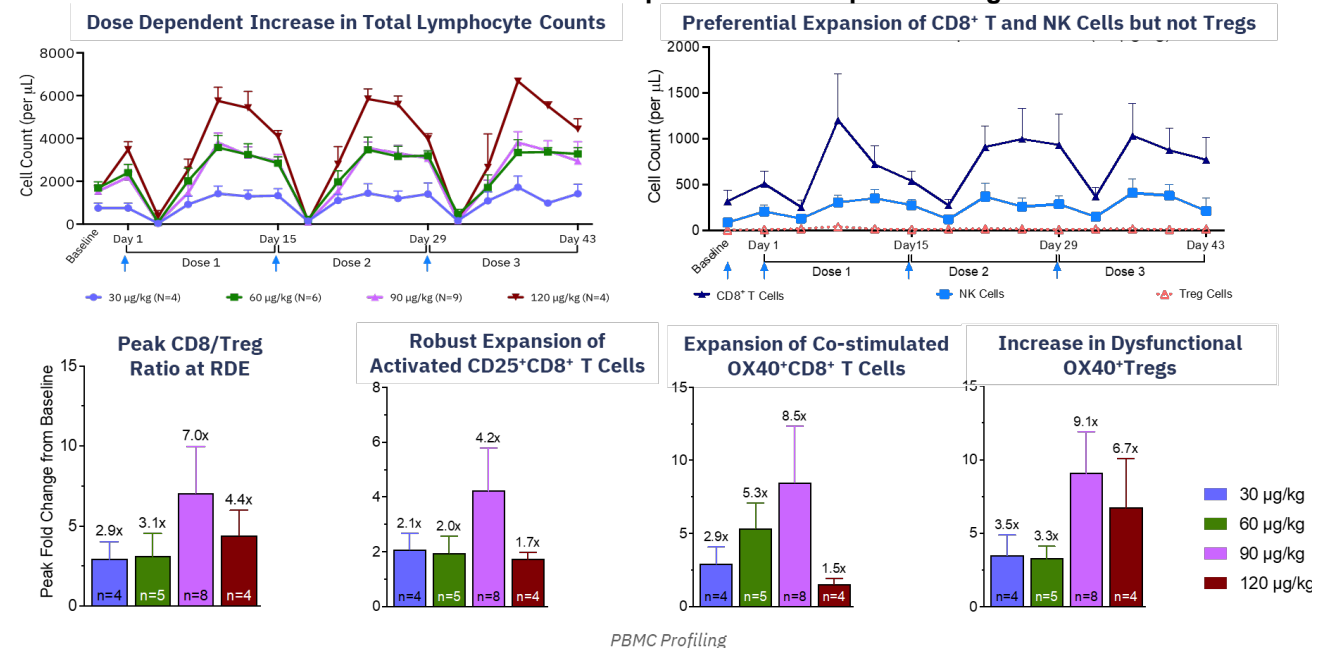
Pharmacodynamic data on effector anti-tumor immune cells continue to support the mechanistic rationale for MDNA11’s promising anti-tumor activity:

- MDNA11 inducing robust peripheral expansion of a population of potent activated CD8<sup>+</sup>T cells and increasing NK cells, but with limited expansion of Tregs which can suppress anti-tumor immunity.
- MDNA11 showed significant increases in markers of stemness, central and effector memory and enhanced effector function in circulating CD8<sup>+</sup> T and NK cells.
- Analysis of paired biopsies showed increased tumor infiltration of CD25<sup>+</sup> activated CD8<sup>+</sup> T cells and NK cells post-MDNA11 treatment.

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



### MDNA11 Demonstrates Sustained Effector Cell Expansion with Repeat Dosing



**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:**

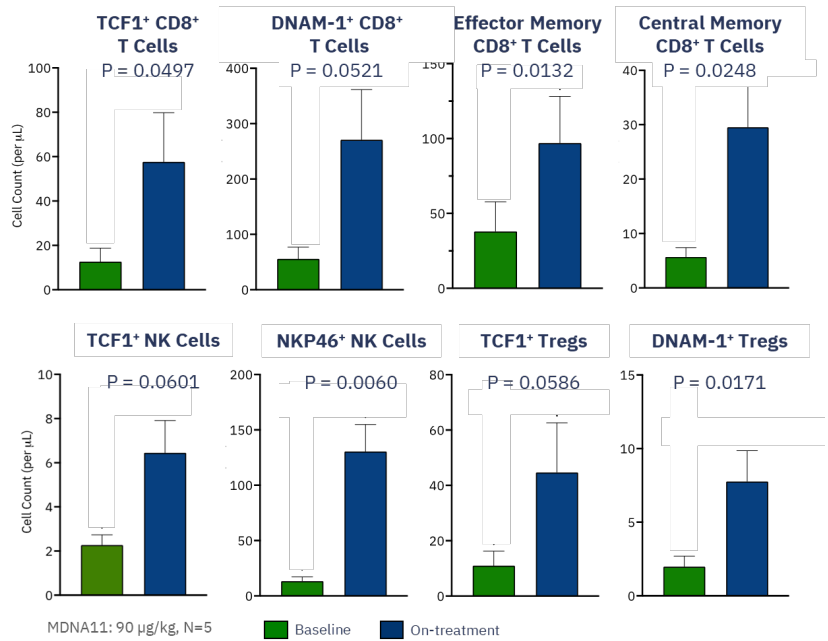
- Positive regulator of CD8+ T and NK cell 'stemness' (i.e., self renewal, proliferation and effector functions)
- Represses FoxP3 leading to dysfunctional Tregs and loss of immune suppression

**DNAM-1 (CD226):**

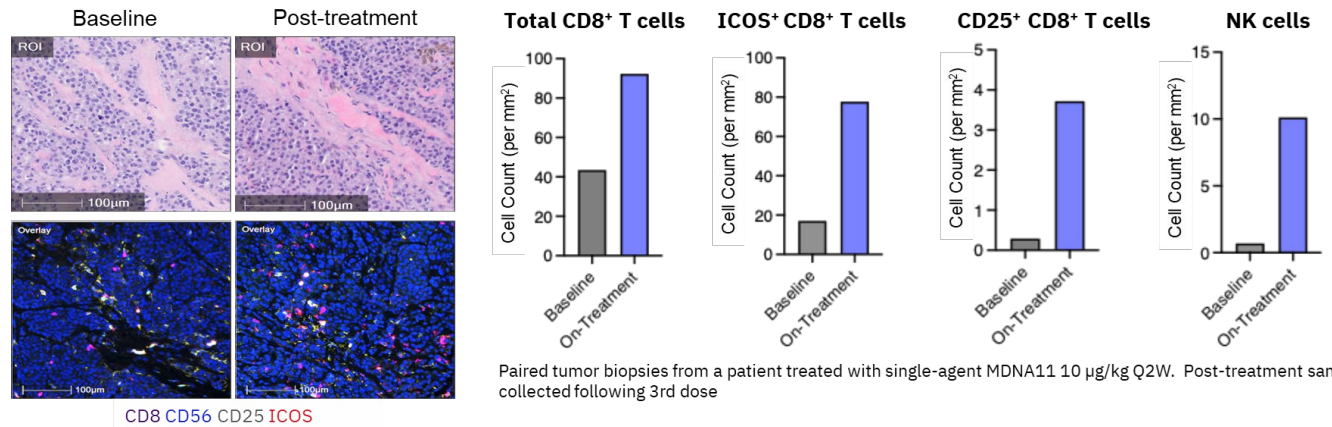
- Positive regulator of immune effector function of CD8+ T and NK cells
- Attenuates immune suppressive activity of Tregs

**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**



Based on the totality of the monotherapy data reported by the Company at SITC, just prior to ASCO, and at 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.

**Combination Safety**

The first dose levels in the combination escalation portion of the study were as follows:

- Cohort 1: 60  $\mu$ g/kg Q2W MDNA11 and 400 mg Q6W KEYTRUDA®
- Cohort 2: 90  $\mu$ g/kg Q2W MDNA11 and 400 mg Q6W KEYTRUDA®

No DLTs, grade 4 or 5 TRAEs were observed in combination dose escalation cohorts 1 or 2 (60 µg/kg Q2W or 90 µg/kg Q2W MDNA11 with 400 mg Q6W KEYTRUDA®) during the DLT observation period. The Safety Review Committee approved enrollment of the next higher-dose cohorts as follows:

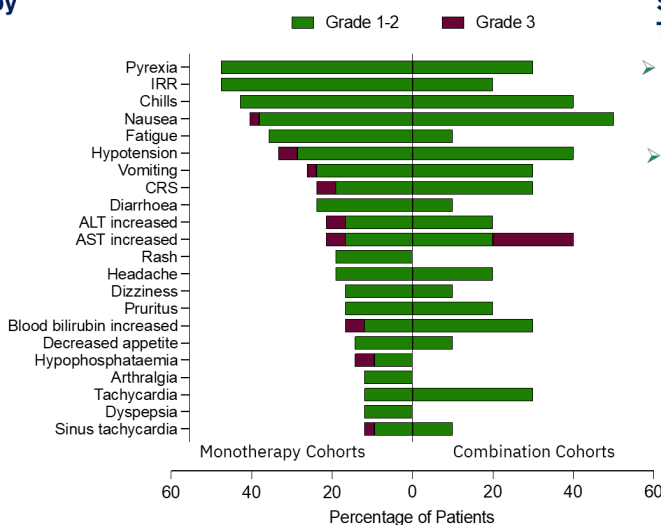
Cohort 3: 120 µg/kg Q2W MDNA11 and 400 mg Q6W KEYTRUDA®  
 Cohort 4: 120 µg/kg Q3W MDNA11 and 400 mg Q6W KEYTRUDA®

Taken together, MDNA11 has demonstrated a favorable safety profile from the monotherapy and combination portions of the Phase 1/2 ABILITY-1 Study, with no new safety signals in the combination portion and no DLTs.

### MDNA11 has Highly Favorable Safety Profile Across All Doses in Monotherapy and Combination Portions of the ABILITY-1 Study

#### Summary of Monotherapy TRAEs (N = 42)

- Majority (94.4%) of TRAEs were Grade 1-2; majority resolved within 48 hours
- Grade 3 liver function test (LFT) elevations were asymptomatic and transient
- Grade 3 hypotension was observed in patients with baseline adrenal insufficiency
- An isolated single asymptomatic Grade 4 hepatic enzyme increase resolved within 72 hours without intervention



#### Summary of Combination TRAEs (N = 10)

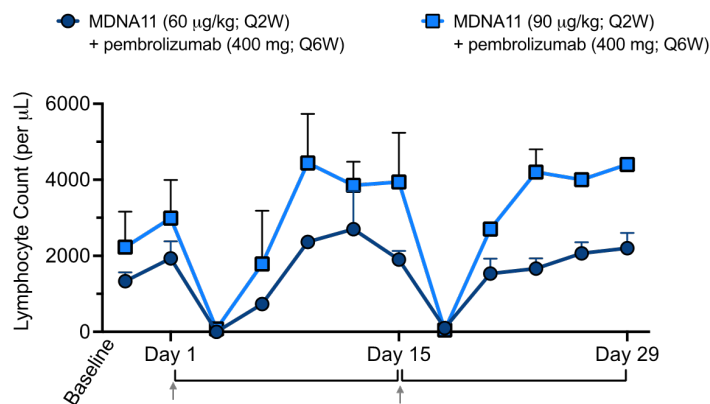
- Majority (95.5%) of TRAEs were Grade 1-2; majority resolved within 48 hours
- Grade 3 TRAEs (4.5%) were asymptomatic and confined to laboratory abnormalities that resolved within days:
  - 2 events of transient AST increase
  - an isolated event of transient WBC decrease

**No new safety signals in combination cohorts**

### Combination Dose Escalation Pharmacodynamics

Early pharmacodynamic analyses demonstrated robust lymphocyte expansion which was sustained with repeat dosing at both 60 µg/kg and 90 µg/kg Q2W MDNA11 in combination with 400 mg Q6W KEYTRUDA®.

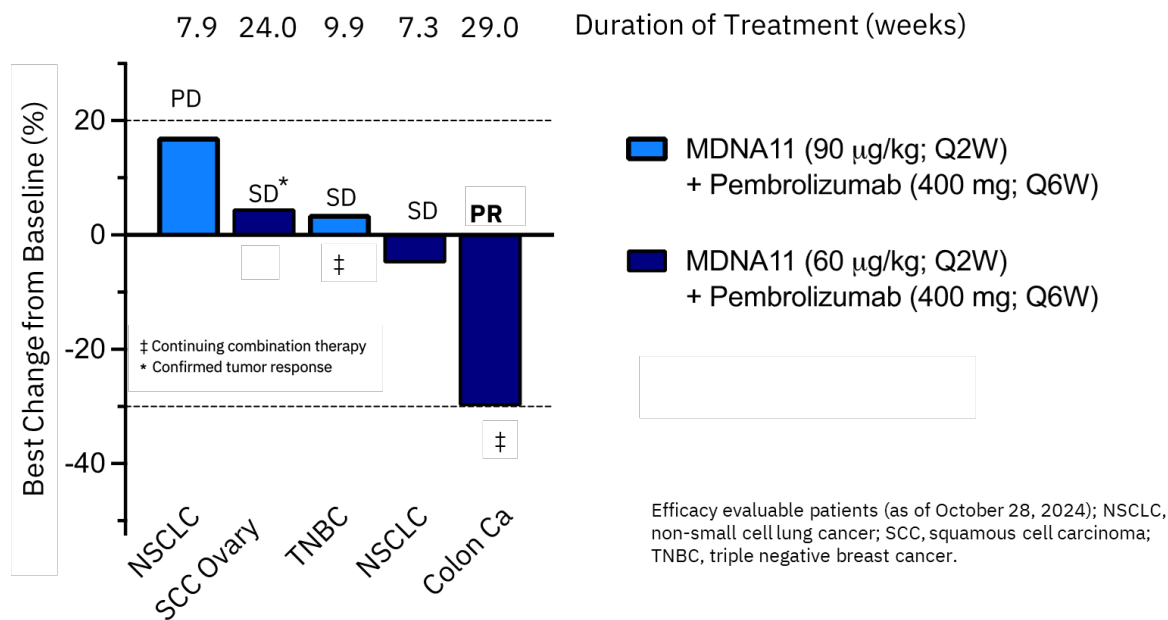
### Robust Lymphocyte Expansion in Combination Dose Escalation



### Combination Dose Escalation Tumor Response

Encouraging preliminary signs of anti-tumor activity were observed with MDNA11 in combination with KEYTRUDA® (400 mg Q6W) in dose escalation cohorts 1 (60 µg/kg Q2W MDNA11) and 2 (90 µg/kg Q2W MDNA11). Among 5 heavily pre-treated efficacy-evaluable patients, tumor control (PR or SD) was observed in 4 patients including a PR in a microsatellite-stable (MSS) colon cancer patient.

The combination dose escalation portion of the Phase 1/2 ABILITY-1 Study aims to evaluate the safety profile and establish the combination RDE for MDNA11 when combined with KEYTRUDA®, recruiting patients with various advanced solid tumors, including those not typically responsive to ICI therapy. Medicenna is encouraged by the tumor control observed, particularly the partial response in a MSS colon cancer patient where checkpoint inhibitors, such as pembrolizumab and nivolumab, have generally lacked efficacy in this tumor type. These data re-affirm MDNA11’s potential of treating immunologically “cold tumors”.



### Expansion of the Phase 1/2 ABILITY-1 Study to Europe

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.

### H2 2024 and H1 2025 Anticipated Milestones

On November 13<sup>th</sup>, 2024, Medicenna announced upcoming presentations at the 29<sup>th</sup> Annual Meeting of the SNO and at the 2024 SABCS. The presentation at SNO will include preclinical data on Medicenna’s IL-2 superkinines in glioblastoma while the presentation at SABCS will include preclinical data on MDNA11 in the neo-adjuvant setting.

The consolidated safety profile, robust pharmacodynamic data, and anti-tumor activity of MDNA11 as a single-agent and in combination with KEYTRUDA® underscore its best-in-class potential in advanced solid tumors. Medicenna anticipates completing monotherapy expansion and combination dose escalation enrolment, and to initiate the combination expansion portion of the Phase 1/2 ABILITY-1 Study in the first half of calendar 2025. Additionally, the Company anticipates providing further clinical updates at medical conferences in the first half of 2025.

## **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).

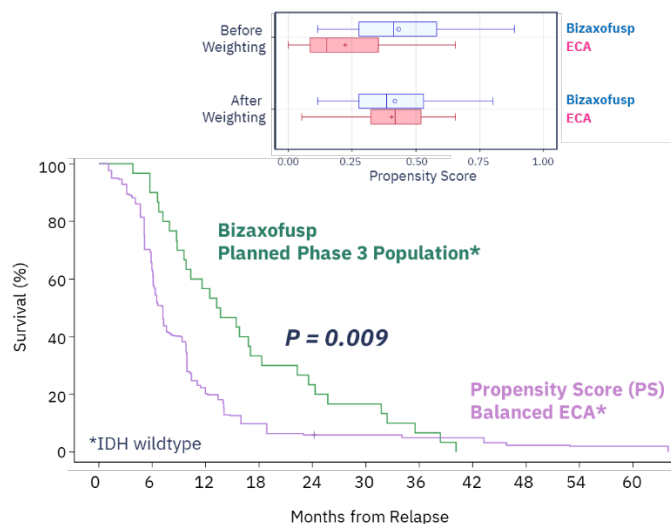
A separate analysis collected rGBM survival and prognostic data from 81 eligibility matched patients who had contemporaneously received treatment at major clinical centres using current SOC. These data from patient registries were used to establish a matched External Control Arm (“ECA”). Blinded survival 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 1<sup>st</sup>, 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 when compared to the ECA.
- 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



	PS Balanced ECA (N = 29.5)	Bizaxofusp (N = 30)
OS-12	20.2%	56.7%
OS-18	9.8%	33.3%
OS-24	5.9%	23.3%
OS-30	5.9%	16.7%
mOS (months)	7.2	13.5
<b>p-value*</b>	<b>0.009</b>	
<b>HR* (95 % CI)</b>	<b>0.536 (0.344, 0.834)</b>	

\*Log-rank test

### Phase 3 Partnering and Regulatory 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 Priority Medicine ("PRIME") designation and alignment from the EMA for the open-label hybrid Phase 3 registration trial.

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.

### 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 $\alpha$ 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<sup>SK</sup> 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 $\alpha$ 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.

At the Promise of Interleukin-2 Therapy Conference held in Paris, France, from September 4<sup>th</sup>-7<sup>th</sup>, 2024 and at the 39<sup>th</sup> Annual Meeting of the SITC held in Houston, TX, on November 8<sup>th</sup>, 2024, Medicenna reported updated pre-clinical data on MDNA113.

Key findings from the presentations included:

- Mice treated with MDNA113 showed reduced peripheral lymphocyte expansion without impacting anti-PD1/PDL1 blockade, and better tolerability when compared to unmasked anti-PD1-IL-2<sup>SK</sup>.
- Cleavage by tumor-specific proteases removes the IL-13<sup>SK</sup> targeting and masking domain of MDNA113, restoring the synergy between IL-2R agonism and anti-PD1 blockade.
- Efficacy of MDNA113 is substantially enhanced in mice harboring MC38 tumors that have been engineered to overexpress IL-13R $\alpha$ 2, resulting in complete tumor regression in a vast majority of animals.
- Single neoadjuvant treatment (pre-surgery) with MDNA113 in a highly invasive orthotopic 4T1.2 model of triple negative breast cancer resulted in 100% survival by preventing metastasis and enrichment of cytotoxic GrzB-positive CD8<sup>+</sup>T cells within the tumor microenvironment.

On April 9<sup>th</sup>, 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 $\alpha$ 2 positive tumor cells *in vitro*, and durably accumulates (>7 days) in IL-13R $\alpha$ 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.

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

MDNA209 binds with exceptional affinity to IL-2R $\beta$  but has reduced binding to the common IL-2 $\gamma_c$  receptor. Therefore MDNA209 occupies IL-2R $\beta$  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](#)).

At the Promise of Interleukin-2 Therapy Conference held in Paris, France, from September 4th-7th, 2024, Medicenna reported pre-clinical results for the first time on MDNA209.

The presentation outlined the potential of MDNA209 to treat autoimmune diseases, including high grade GvHD which has a 1-year survival rate of only 40%. Transplant patients with GvHD experience significant morbidity and mortality with limited therapeutic options to prolong survival. The initial preclinical data presented on the MDNA209 platform highlight the potential of the Company's long-acting, high-affinity IL-2 $\beta$  biased IL-2/IL-15 Super-antagonists to downregulate the immune system, with therapeutic potential for GvHD and autoimmune diseases.

Key findings from the presentation included:

- MDNA209 is an IL-2 Super-antagonist with enhanced affinity for IL-2R $\beta$  but does not engage with the  $\gamma_c$  subunit, therefore acting as a receptor clamp to exclude native IL-2 as well as native IL-15.
- MDNA209 is fused to an Fc scaffold (MDNA209-Fc) to extend its in vivo half-life, reducing the need for frequent dosing.
- MDNA209-Fc inhibits both, IL-2 and IL-15 induced p-STAT5 signaling, reduces IFN $\gamma$  release and slows immune cell proliferation without reducing Treg population.
- In an aggressive animal model of acute GvHD, MDNA209 was able to extend overall survival by 400 percent, reduce weight loss and improve clinical scores.

### ***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-13R $\alpha_2$ . 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 potently 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.

### Statements of loss and comprehensive loss data:

	Three months ended September 30,		Six months ended September 30,	
	2024	2023	2024	2023
	\$	\$	\$	\$
General and administration	1,801	2,303	3,059	3,950
Research and development	3,726	3,134	6,508	5,946
Total operating costs	5,527	5,437	9,567	9,896
Finance (income)	(378)	(342)	(708)	(688)
Change in fair value of warrant derivative (gain)	(1,253)	(960)	(1,213)	(2,707)
Foreign exchange (gain) loss	268	(412)	155	84
Net (loss)	(4,164)	(3,723)	(7,801)	(6,585)
Basic and diluted loss per share	(0.05)	(0.05)	(0.10)	(0.09)

### Statement of financial position data:

	As of	
	September 30, 2024	December 31, 2024
	\$	\$
Cash	30,426	16,982
Total assets	32,929	19,134
Total liabilities	12,877	13,943
Working capital	29,815	16,214
Accumulated deficit	(114,248)	(106,447)
Shareholders equity	20,052	5,191

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 three and six months ended September 30, 2024, the Company reported total operating costs of \$5.5 million and \$9.6 million compared to total operating costs of \$5.4 and \$9.9 million for the three and six months ended September 30, 2023. The decrease is primarily related to a decrease in general and administrative expenses in the current period which more than offsets an increase in R&D expenditures relative to both comparable periods as discussed further below in *Results of operations for the three and six months ended September 30, 2024*.

For the three and six months ended September 30, 2024, the Company reported a net loss of \$4.2 million (\$0.05 per share) and \$7.8 million (\$0.10 per share) compared to a net loss of \$3.7 million (\$0.05 per share) and \$6.6 million (\$0.09 per share) for the three and six months ended September 30, 2023. Net loss was relatively unchanged in the current period relative to the three months ended September 30, 2023 due to off offsetting variances in G&A and R&D expenditures. For the six months ended September 30, 2024 the increase in net loss is primarily related to a higher gain related to the change in value of the warrant derivative incurred during the comparative period which more than offset lower G&A costs in the current period relative to the comparable period. The value of the warrant derivative fluctuates with the Company's share price which was relatively flat during the six months ended September 30, 2024 versus a 54% decline in the prior comparative period.

## RESULTS OF OPERATIONS FOR THE THREE AND SIX MONTHS ENDED SEPTEMBER 30, 2024

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

	Three months ended September 30,		Six months ended September 30,	
	2024 \$	2023 \$	2024 \$	2023 \$
<b>Research and Development Expenses</b>				
Clinical	2,020	1,394	3,060	2,091
Salaries and benefits	934	654	1,550	1,154
Discovery and pre-clinical	486	369	1,083	886
Licensing, patent, legal fees and royalties	238	442	447	857
Chemistry, manufacturing and controls	59	275	167	771
Stock based compensation	149	167	294	302
Regulatory	13	23	23	50
Other research and development expenses	22	10	79	35
R&D credits and grants	(195)	(200)	(195)	(200)
	<b>3,726</b>	<b>3,134</b>	<b>6,508</b>	<b>5,946</b>

R&D expenses of \$3.7 and \$6.5 million were incurred during the three and six months ended September 30, 2024, compared with \$3.1 and \$5.9 million incurred in the three and six months ended September 30, 2023. The net increase in each period is primarily related to:

- increased clinical costs during the current periods relative to the prior comparable periods due to the expansion of the MDNA11 ABILITY-1 Study to new clinical sites, the inclusion of more patients in the study relative to the prior period, and the inclusion of the combination portion of the MDNA11 study with KEYTRUDA® during the current periods which had not commenced in the prior comparable periods;
- increased salaries and benefits during the current periods related to the addition of R&D staff in the current period and the payment of a bonus related to the achievement of corporate goals in the current period versus no bonus payment in the prior comparable period;
- an increase in discovery and pre-clinical expenses during the current period due to higher activity levels related to the Company’s pre-clinical programs and additional pre-clinical work completed related to the MDNA55 program to support partnering efforts; and
- decreased chemistry, manufacturing and controls cost in the current period relative to the prior comparable period due to a significant one-time expenditure incurred in the previous period for comprehensive testing associated with stability studies of MDNA11.

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

	Three months ended September 30,		Six months ended September 30,	
	2024 \$	2023 \$	2024 \$	2023 \$
<b>General and Administration Expenses</b>				
Public company expenses	678	1,350	1,238	2,420
Salaries and benefits	431	627	720	891
Stock based compensation	507	101	795	261
Facilities and operations	175	224	291	376
Depreciation expense	10	1	15	2
	<b>1,801</b>	<b>2,303</b>	<b>3,059</b>	<b>3,950</b>

G&A expenses of \$1.8 and \$3.1 million were incurred during the three and six months ended September 30, 2024, compared with \$2.3 million and \$4.0 million during the three and six months ended September 30, 2023. The net decrease in each period is primarily related to:

- a significant reduction in public company expenses in the current periods relative to the prior comparative periods due to lower D&O insurance premiums, reduced professional services including legal and audit fees, a reduction in US-based investor and public relations expenses, and non-recurring recruitment fees incurred during the comparative periods;
- an increase in stock-based compensation during the current periods relative to the prior comparative periods due to the grant of options during the current periods and a stock-based compensation expense recovery realized in the prior periods related to employee departures; and
- a reduction in facilities and operations expenses related to the ongoing expense optimization in the current periods related to software subscriptions and eliminated expenses in the current periods related to the administration of additional US-based employees in the prior comparative periods.

#### SUMMARY OF QUARTERLY FINANCIAL RESULTS:

	Sep. 30 2024	Jun. 30 2024	Mar. 31 2024	Dec. 31 2023	Sep. 30 2023	Jun. 30 2023	Mar. 31 2023	Dec. 31 2022
	\$	\$	\$	\$	\$	\$	\$	\$
General and administration	1,801	1,258	2,138	1,786	2,303	1,647	1,385	1,976
Research and development	3,726	2,782	1,863	2,991	3,134	2,812	1,586	2,945
Total operating costs	5,527	4,040	4,001	4,777	5,437	4,459	2,971	4,921
Change in fair value of warrant derivative	(1,253)	40	10,467	160	(960)	(1,747)	1,200	(3,747)
Net loss	(4,164)	(3,637)	(13,904)	(4,977)	(3,723)	(2,862)	(3,856)	(1,141)
Basic and diluted loss per share	(0.05)	(0.05)	(0.21)	(0.07)	(0.05)	(0.04)	(0.06)	(0.02)
Total assets	32,929	38,025	19,134	23,268	27,743	31,546	36,446	38,174
Total liabilities	12,877	15,144	13,943	4,026	4,306	4,646	6,960	4,949

G&A expenses increased in the current quarter relative to the most recently completed quarter ended June 30, 2024 due to higher legal fees in the current quarter related to the Company's AGM, the payment of bonus which led to an increase in salaries and benefits during the current period, and higher stock-based compensation expense due the grant of options in the current period.

R&D expenses fluctuate quarter over quarter based on activities ongoing during that period. R&D expenses were higher in the current quarter ended September 30, 2024 due primarily to increased clinical costs related to the expansion of the MDNA11 ABILITY-1 Study. There was also an increase in salaries and benefits in the most recently completed quarter relative to previous quarter due to the payment of a bonus in the current quarter. Refundable tax credits of \$1.0 million and \$0.7 million contributed to a decrease in R&D expenses during the quarter ended March 31, 2024 and March 31, 2023, respectively.

Net loss has been impacted since the quarter ended September 30, 2022 due to the non-cash change in the fair value of the warrant derivative which is recognized in the statement of profit and loss. 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.

#### 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 \$114.2 million as of September 30, 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 intends to continue to finance its operations through the issuance of equity or pursue non-dilutive funding sources in the foreseeable future. There is no guarantee that the Company will be able to obtain significant additional funding on acceptable terms, if at all. If the Company is unable to raise capital when needed or on attractive terms, the Company would be forced to delay, reduce, terminate or eliminate its product development programs. 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 calendar year 2026.

### **CASH POSITION**

As at September 30, 2024, the Company had a cash and cash equivalents balance of \$30.4 million, compared to \$17.0 million at March 31, 2024. Subsequent to quarter end, the Company received \$1.9 million in proceeds from the exercise of approximately 1.1 million warrants with a strike price of \$1.75 per warrant. The Company invests cash in excess of current operational requirements in highly rated and liquid instruments. Working capital at September 30, 2024 was \$29.8 million (March 31, 2024 - \$16.2 million). These funds are expected to provide the Company with sufficient capital to execute planned expenditures through the completion of the ABILITY-1 Study and through mid calendar year 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**

#### ***Refundable tax credits***

The Company expects to receive approximately \$1.0 million through the Australian R&D incentive program relating to the year ended March 31, 2024. The amount receivable was recorded as a reduction in applicable research and development expenses in the years ended March 31, 2024 and remains receivable as at September 30, 2024. The Company has also filed a claim with the Canadian scientific research and experimental development (SR&ED) program for the year ended March 31, 2023 and has been assessed for a refund of \$0.2 million.

#### ***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 September 30, 2024, the Company is obligated to pay the following:

<b>Contractual obligations</b>	<b>Less than</b>			<b>Total</b>
	<b>1 year</b>	<b>1-3 years</b>	<b>3-5 years</b>	
	\$	\$	\$	\$
Patent licensing, milestone and minimum royalty costs	244	552	474	1,270

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 for the three and six months ended September 30, 2024 consists of the Company's officers (Dr. Fahar Merchant, President and Chief Executive Officer, Mr. David Hyman, Chief Financial Officer and Ms. Rosemina Merchant, Chief Development Officer) and directors. For the three and six months ended September 30, 2023 key management personnel consisted of Dr. Fahar Merchant, Ms. Rosemina Merchant, Jeff Caravella, former Chief Financial Officer, Brent Meadows, former Chief Business Officer, and Ms. Elizabeth Williams, former Chief Financial Officer) and directors.

The following compensation was earned for the periods indicated:

	<b>Three months ended</b>		<b>Six months ended</b>	
	<b>September 30,</b>		<b>September 30,</b>	
	<b>2024</b>	<b>2023</b>	<b>2024</b>	<b>2023</b>
	\$	\$	\$	\$
Salaries and wages	639	724	866	977
Board fees	82	101	158	179
Stock option expense	469	184	727	427
	<b>1,190</b>	<b>1,009</b>	<b>1,751</b>	<b>1,583</b>

As at September 30, 2024, the Company had trade and other payables in the normal course of business owing to directors and officers of \$0.1 million, (March 31, 2024 - \$0.2 million) related to 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](http://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](http://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 September 30, 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 period ended September 30, 2024 of \$1.7 million (March 31, 2024 - \$1.0 million).

Balances in US dollars are as follows:

	September 30, 2024	March 31, 2024
	\$	\$
Cash and cash equivalents	14,600	8,177
Accounts payable and accrued liabilities	(1,497)	(1,061)
	<b>13,103</b>	<b>7,116</b>

## 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 September 30, 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	4,549	-	3,451
General corporate purposes and pre-clinical development of a BiSKIT candidate	8,000	7,685	-	315
<b>Total</b>	<b>16,000</b>	<b>12,234</b>	<b>-</b>	<b>3,766</b>

## 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.

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 AIF, 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 AIF filed on SEDAR+ at [www.sedarplus.ca](http://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 three and six months periods ending September 30, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

As of September 30, 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 MD&A, the Company has the following securities outstanding:

	<b>Number</b>
Common shares	78,157,903
Pre-funded warrants	5,141,388
Warrants	13,333,334
Stock options	8,395,890
<b>Total</b>	<b>105,028,515</b>

For a detailed summary of the outstanding securities convertible into, exercisable or exchangeable for voting or equity securities of Medicenna as at March 31, 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](http://www.sedarplus.ca).

Additional information relating to the Company, including the Company's AIF, is also available under the Company's profile on SEDAR+ at [www.sedarplus.ca](http://www.sedarplus.ca).