Medicenna Reports First Quarter Fiscal 2021 Financial Results and Operational Highlights

August 4, 2020

TORONTO, **Ontario** and **HOUSTON**, **Texas**, August 4, 2020 - Medicenna Therapeutics Corp. ("Medicenna" or the "Company") (TSX: MDNA; OTCQB: MDNAF), a clinical stage immuno-oncology company, today announced its financial results and operational highlights for the quarter ended June 30, 2020. All dollar amounts are expressed in Canadian currency unless otherwise noted.

"I am very pleased with the progress made last quarter, as we were able to execute on planned clinical, scientific, and corporate milestones despite the unprecedented and industry wide challenges posed by COVID-19," said Dr. Fahar Merchant, President and CEO of Medicenna. "Our MDNA11 IL-2 super-agonist continues to advance rapidly towards the clinic, with compelling preclinical safety, efficacy, and pharmacodynamic data presented at the 2020 American Society of Clinical Oncology ("ASCO") meeting. We look forward to the continued development of this program, which will be facilitated by the recent $40 million financing. Notably, our fiscal first quarter also saw the advancement of our recurrent glioblastoma ("rGBM") program toward the next stage of development, with new data and analyses from our completed Phase 2b trial presented at ASCO demonstrating MDNA55's potential to change the treatment paradigm in this high need indication."

Dr. Merchant continued, "Looking forward, our accomplishments last quarter have left us well positioned for the continued achievement of value creating milestones throughout the remainder of the calendar year. We expect such milestones to include a productive EOP2 meeting with the FDA regarding MDNA55 as well as the initiation of IND-enabling studies for MDNA11 this quarter. Importantly, these expected regulatory advances, combined with our intended listing on Nasdaq this year, will facilitate the continued near- and long-term growth of Medicenna through calendar year 2020 and beyond."

Program highlights for the quarter ended June 30, 2020, along with recent developments, include:

MDNA55: Recurrent Glioblastoma Program:

- In July, 2020 Medicenna submitted its EOP2 meeting package to the FDA and feedback from the FDA is expected in calendar Q4 2020 following this meeting which has been scheduled for 29th September, 2020.

- On May 29, 2020, Medicenna announced that Dr. John Sampson presented new data and analyses from a Phase 2b clinical trial of MDNA55 in rGBM patients at the 2020 ASCO virtual meeting. Results showed a 126% increase in median overall survival ("mOS") in Medicenna's proposed patient population (mOS = 15.8 months) compared to an eligibility matched synthetic control arm (mOS = 7.0 months). The proposed patient population included all MDNA55-treated trial participants with high IL4R expression and participants with low IL4R expression that received a high dose of MDNA55 treatment.

MDNA11: IL-2 Superkine Program

- On May 29, 2020 Medicenna announced presentation of data at the 2020 ASCO virtual meeting related to MDNA11, the Company's long-acting IL-2 super-agonist. Non-human primate data demonstrated that MDNA11 could induce up to 10-fold expansion in cancer fighting immune cells without: (a) generating anti-drug antibodies, (b) causing hypotension associated with vascular leak syndrome, (c) cytokine storms, or (d) other undesirable immune mediated side effects. Further, monotherapy with MDNA11 treatment led to durable tumor control for over 200 days and a strong immune memory response in a murine colon cancer model.

Operational Highlights

- On July 29, 2020 Medicenna received confirmation that its shares were DTC eligible, allowing non-Canadian investors to easily trade the Company's stock through the broker of their choice.

- On April 15, 2020 Medicenna announced that agents exercised their over-allotment option in connection with the Company's public offering of common shares completed on March 17, 2020. As a result of the exercise of this over-allotment option, Medicenna received additional gross proceeds of approximately $5.2M for total gross proceeds of $40.25M, which the Company will use to advance its IL-2 superkine program.

Upcoming Milestones

Medicenna will focus on achieving the following milestones in the upcoming quarters:

- Discuss the development path for MDNA55 for rGBM with the FDA at the EOP2 meeting scheduled for 29th September, 2020. Medicenna expects that feedback from this meeting will be available in Q4 of calendar 2020.

- Initiation of IND enabling studies for MDNA11 in Q3 of calendar 2020.
- Intended Nasdaq listing in calendar 2020.
- Initiation of Phase 1 clinical study for MDNA11 in H1 of calendar 2021.

Medicenna's intended listing on the Nasdaq is subject to Medicenna meeting the requirements and criteria to complete such listing, and there can no assurance that such requirements and criteria will be satisfied.

Financial Results

Net loss for the quarter ended June 30, 2020 was $2,351,665, or $0.05 per share, compared to a loss of $1,294,634, or $0.05 per share, for the quarter ended June 30, 2019. The increase in net loss for the quarter ended June 30, 2020 compared with the quarter ended June 30, 2019 was primarily a result of no reimbursement under the CPRIT grant in the current year period compared with a reimbursement of $994,648 in the prior year period.

Research and development expenses of $1,813,105 were incurred during the year ended June 30, 2020, compared with $828,442 incurred in the year ended June 30, 2019. The increase in expenses in the current quarter is primarily attributable to no reimbursement under the CPRIT grant related to research and development expenses in the current year period compared with a reimbursement of $869,276 in the prior year period.

General and administrative expenses of $732,085 were incurred during the quarter ended June 30, 2020, compared with $461,539 during the quarter ended June 30, 2019. This increase in expenditures is primarily attributed to no reimbursement from CPRIT in the current year period as well as higher legal expenses in the current year period due to corporate initiatives.

Medicenna had cash, cash equivalents and marketable securities of $40,631,008 at June 30, 2020. These funds provide the Company with sufficient capital to late 2022 based on its current plans and projections.

The press release, the financial statements and the management's discussion and analysis for the quarter ended June 30, 2020 will be available on SEDAR at www.sedar.com and EDGAR at www.sec.gov.

About Medicenna

Medicenna is a clinical stage immunotherapy company focused on the development of novel, highly selective versions of IL-2, IL-4 and IL-13 Superkines and first in class Empowered Cytokines™ (ECs) for the treatment of a broad range of cancers. Medicenna's lead IL4-EC, MDNA55, has completed a Phase 2b clinical trial for rGBM, the most common and uniformly fatal form of brain cancer. MDNA55 has been studied in five clinical trials involving 132 patients, including 112 adults with rGBM. MDNA55 has demonstrated compelling efficacy and has obtained Fast-Track and Orphan Drug status from the FDA and FDA/EMA respectively. Medicenna's long-acting IL2 Superkine asset, MDNA11, is potentially a best-in-class next-generation IL-2 with superior CD122 binding without CD25 affinity and therefore preferentially stimulating cancer killing effector T cells and NK cells when compared to competing IL-2 programs. It is anticipated that MDNA11 will be ready for the clinic in 2021. For more information, please visit www.medicenna.com.

This news release contains forward-looking statements under applicable securities laws. Forward-looking statements are often identified by terms such as "will", "may", "should", "anticipate", "expects", "believes" and similar expressions. All statements other than statements of historical fact, included in this release, including, without limitation, that our MDNA11 IL-2 super-agonist continues to advance rapidly towards the clinic, that our accomplishments last quarter have left us well positioned for the continued achievement of value creating milestones throughout the remainder of the calendar year, that the End of Phase 2 meeting with the FDA regarding MDNA55 will be productive and will be held on September 29, 2020, that we will initiate IND-enabling studies for MDNA11 in calendar Q3, our planned listing on Nasdaq later this year and other regulatory advances, will facilitate the continued near- and long-term growth of Medicenna through calendar year 2020 and beyond, the planned initiation of a Phase 1 clinical study for MDNA11 will occur in H1 of calendar 2021 and statements related to the future plans and objectives of the Company, are forward-looking statements that involve risks and uncertainties. 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. Important factors that could cause actual results to differ materially from the Company's expectations include the risks detailed in the annual information form of the Company dated May 14, 2020 and in other filings made by the Company with the applicable securities regulators from time to time.

The reader is cautioned that assumptions used in the preparation of any forward-looking information may prove to be incorrect. Events or circumstances may cause actual results to differ materially from those predicted, as a result of numerous known and unknown risks, uncertainties, and other factors, many of which are beyond the control of the Company. The reader is cautioned not to place undue reliance on any forward-looking information. Such information, although considered reasonable by management at the time of preparation, may prove to be incorrect and actual results may differ materially from those anticipated. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement. The forward-looking statements contained in this news release are made as of the date of this news release and the Company will update or revise publicly any of the included forward-looking statements only as expressly required by applicable securities laws.

For further information: For further information about the Company please contact: Elizabeth Williams, Chief Financial Officer, 416-648-5555, ewilliams@medicenna.com, Investor Contact: Dan Ferry, Managing Director, LifeSci Advisors, 617-430-7576, daniel@lifesciadvisors.com