Medicenna Announces That Initiation of MDNA11 Phase 1/2 Study is on Track; Update to be Provided at the PropThink Digital Conference

July 27, 2021

- *Phase 1/2 ABILITY Study is designed to evaluate MDNA11, a potentially best-in-class IL-2 Superkine, in patients with advanced solid tumors*

- *Study to start enrollment in the third quarter of 2021 in Australia, with expansion to additional sites in the US, UK and Canada*

- *Presentation by management team to take place today, July 27, 2021, at 2:00 p.m. ET*

TORONTO and HOUSTON, July 27, 2021 (GLOBE NEWSWIRE) -- Medicenna Therapeutics Corp. ("Medicenna" or "the Company") (NASDAQ: MDNA TSX: MDNA), a clinical stage immuno-oncology company, is providing an update on its MDNA11 program today. The update will be delivered by Dr. Fahar Merchant, President and CEO of Medicenna, together with Dr. Mann Muhsin (Chief Medical Officer) and Ms. Elizabeth Williams (Chief Financial Officer) during a PropThink Digital conference taking place today, July 27, 2021, at 2:00 p.m. ET. Those interested in viewing the management presentation can register here.

Medicenna's Phase 1/2 ABILITY Study (A Beta-only IL-2 ImmunoTherapY Study) of MDNA11, the Company's selective, long-acting and novel IL-2 super-agonist, is designed to assess safety, pharmacokinetics (PK), pharmacodynamics (PD), and anti-tumor activity of various doses of intravenously administered MDNA11 in patients with advanced solid tumors. The study, MDNA11-01, includes a monotherapy dose escalation phase followed by expansion phase for both the MDNA11 monotherapy arm at the recommended phase 2 dose (RP2D), and a combination arm designed to evaluate MDNA11 with a checkpoint inhibitor. As previously announced, in addition to enrolling patients in Australia, the Phase 1/2 ABILITY Study will be expanding enrollment to clinical sites in the United States, United Kingdom and Canada.

Medicenna recently submitted a clinical trial application to a Human Research Ethics Committee (HREC) in Australia to initiate the Phase 1/2 ABILITY Study and expects the remaining regulatory submissions and approvals for other trial jurisdictions to be completed this year.

Following discussions with Australian clinicians, investigators, contract research organizations, and clinical trial sites participating in the study regarding the status of oncology clinical trials amid COVID-19-related government restrictions in Australia, the Company continues to expect to initiate the Phase 1/2 ABILITY Study in Australia in the third quarter of 2021, as previously disclosed. Key points from these discussions include:

- Treatment of medical conditions is exempt from COVID-19-related travel restrictions;
- Prior government-mandated lockdowns have had minimal impact on enrollment in Phase 1 oncology trials;
- Enrollment in Phase 1 oncology trials at sites participating in Medicenna's MDNA11-01 Study has continued with no effect on enrollment amid the COVID-19-related restrictions currently in place in some Australian states.

Dr. Muhsin commented, "MDNA11's 'beta-only' IL-2 receptor selectivity is significantly differentiated from the "pegylated not-alpha" IL-2 agents currently in the clinic. Our albumin fused engineered IL-2 variant could lead to better tumor accumulation and improved monotherapy efficacy unlike the "pegylated not-alpha" approach. We look forward to evaluating this hypothesis in our upcoming Phase 1/2 ABILITY Study and are pleased that the COVID-19 pandemic has not to date impacted the trial's timelines. As the situation continues to evolve, we plan to remain in constant contact with our partners and investigators and will update the market if any material changes to our disclosed timelines relating to our Phase 1/2 ABILITY Study occur. With a talented team, experienced trial sites across multiple geographies, and funding through the end of calendar 2022, we are well positioned to ensure the program's continued advancement and the potential to improve outcomes in patients with advanced solid tumors, who have failed multiple approved therapies."

A preliminary update on safety, PK/PD, and biomarker data, from patients enrolled in the dose escalation phase this year, is expected by the end of calendar 2021, and preliminary efficacy updates are expected at various times during calendar 2022.

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 Superkines for the treatment of a broad range of cancers. Medicenna's long-acting IL-2 Superkine asset, MDNA11, is a next-generation IL-2 with potentially superior CD122 binding without CD25 affinity thereby preferentially stimulating cancer killing effector T cells and NK cells unlike competing IL-2 programs. Medicenna's early-stage BiSKITs ™ program, (**Bi**functional **S**uper**K**ine **I**mmuno**T**herapie**s**) is designed to further enhance the ability of Superkines to treat immunologically "cold" tumors. Medicenna's lead IL4 Empowered Superkine, 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 subjects, including 112 adults with rGBM. MDNA55 has obtained Fast-Track and Orphan Drug status from the FDA and FDA/EMA, respectively.

Forward-Looking Statement

This news release contains forward-looking statements within the meaning of applicable securities laws and relate to the future operations of the Company and other statements that are not historical facts including statements related to the Phase 1/2 ABILITY Study and its timeline, design and expansion, regulatory submissions and approvals, the clinical potential of MDNA11 and the impact of COVID-19 pandemic on the Company's business and operations. Forward-looking statements are often identified by terms such as "will", "may", "should", "anticipate", "plan", "expects", "believes" and similar expressions. All statements other than statements of historical fact, included in this release, including the future plans and objectives of the Company, are forward-looking statements that are subject to 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 and Form 40-F of the Company and in other filings made by the Company with the applicable securities regulators from time to time in Canada and the United States.

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, 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. Except as required by law, we do not intend and do not assume any obligation to update or revise publicly any of the included forward-looking statements.

Further Information

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