Medicenna Presents Late Breaking Abstract Updating Results from Phase 2b Recurrent GBM Trial at the 36th EORTC-NCI-AACR Meeting

October 26, 2020

-- *Amongst an all-comer population, a single treatment with MDNA55 resulted in at least 100% increase in both 12 month progression free survival (PFS-12 of 27% versus 2 to 10%) and 2-year survival (OS-24 of 20% vs 5 to10%) when compared to what is achieved with approved therapies*

-- *In a subset of all-comer patients treated with transient low dose bevacizumab, to reduce steroid use, median survival (mOS) was 21.8 months and OS-24 was 44%*

TORONTO and HOUSTON, Oct. 26, 2020 (GLOBE NEWSWIRE) -- Medicenna Therapeutics Corp. ("Medicenna" or "the Company") (NASDAQ: MDNA, TSX: MDNA), a clinical stage immuno-oncology company, today announced a Late Breaking Abstract poster presentation of updated clinical data from the Company's Phase 2b recurrent glioblastoma ("rGBM") trial at the 36 th Annual EORTC-NCI-AACR ("ENA") Symposium on Molecular Targets and Cancer Therapeutics.

Fahar Merchant, PhD, President and Chief Executive Officer of Medicenna, commented, "The updated data presented at the ENA meeting continue to affirm our belief that MDNA55 is a superior treatment option for improved survival and tumor control in difficult to treat rGBM patients. We are continuing to see marked increases in overall and progression-free survival after long term follow-up when compared to approved therapies. These results, combined with FDA's groundbreaking support for a landmark registration trial allowing use of an external control in two-thirds of the control arm, could further bolster our efforts to execute on a partnership strategy and expedite MDNA55's potential to address an urgent unmet medical need that has plagued the global brain tumor community for four decades."

The poster presentation updated long-term survival results from the Phase 2b trial evaluating MDNA55, an interleukin-4 (IL-4)-guided toxin, as a treatment for rGBM, the most common and uniformly fatal form of brain cancer. The new results indicate the potential benefit of including transient low dose Avastin® treatment with MDNA55. Enrolled patients had limited treatment options and poor prognostic factors such as non-resectable tumors at first or second relapse, de-novo GBM at initial diagnosis and lack of IDH1/2 mutations.

Highlights from the poster include updated results following a longer follow-up duration and new data based on transient low-dose use of bevacizumab:

- Data from all trial participants show that a single MDNA55 treatment led to a mOS of 11.9 months (expected 6-9 months) which is comparable to earlier reported mOS of 11.6 months, an OS-24 of 20% (expected 0-10%), and a PFS-12 of 27% (expected 2-10%).
- In Medicenna's proposed patient population, mOS was 14.0 months (comparable to mOS of 15 months reported earlier), OS-24 was 20%, and PFS-12 was 24%. 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.
- Unmethylated *MGMT* promoter affects more than 50% of GBM patients and is associated with treatment resistance and poorer survival outcomes. However, MGMT status did not negatively affect MDNA55 treatment. In the proposed population (N=17), mOS was 14.9 months with an OS-24 of 22%.
- Following MDNA55 treatment, transient (median of 3 cycles) low dose (5 mg/Kg q2w or 7.5 mg/Kg q3w) administration of Avastin®, used for symptom control and steroid sparring in patients receiving high concentrations of MDNA55, further improved patient survival. Amongst all comers (N=9) and the proposed population (N=8), mOS was 21.8 months and 18.6 months and OS-24 was of 44% and 38%, respectively.

The electronic ENA poster, titled "*MDNA55, a Locally Administered IL4 Guided Toxin for Targeted Treatment of Recurrent Glioblastoma Shows Long Term Survival Benefit*", was presented by Dr. John Sampson, MD, PhD, MHSc, MBA, Robert H. and Gloria Wilkins Distinguished Professor of Neurosurgery at Duke University School of Medicine. The poster was part of the ENA Meeting's Late Breaking Poster session. A copy of the electronic poster will be posted to the "Events and Presentations" page of Medicenna's website following the conference.

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 IL2 Superkine asset, MDNA11, is a 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. 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. For more information, please visit www.medicenna.com.

Forward-Looking Statement
This news release contains forward-looking statements under applicable securities laws and relate to the future operations of the Company and other statements that are not historical facts. 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 the that FDA's provided

groundbreaking support, that the registration trial design could further bolster our efforts to execute on a partnership strategy and expedite MDNA55's potential to address an urgent unmet medical need and 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 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 and that study results could change over time as the study is continuing to follow up all subjects and new data are continually being received which could materially change study results. 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 Canadian and United States securities law.

Further Information

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