Medicenna Presents Additional Encouraging Phase 2b Clinical Data at the Inaugural Glioblastoma Drug Development Annual Summit

- ***MDNA55 achieves up to 5 fold increase in 12 month survival rate in aggressive, chemotherapy resistant glioblastoma when compared to approved therapies***

TORONTO and HOUSTON, December 12, 2019/CNW/ - Medicenna Therapeutics Corp. ("Medicenna" or "the Company") (TSX: MDNA, OTCQB: MDNAF), a clinical stage immuno-oncology company, presented updated clinical results from its Phase 2b trial of MDNA55, in patients with recurrent glioblastoma (rGBM), the most common and uniformly fatal form of brain cancer. The results were presented by Dr. Fahar Merchant, PhD, President and CEO of Medicenna Therapeutics, at the Inaugural Glioblastoma Drug Development Annual Summit on December 11 at the Westin Boston Waterfront Hotel in Boston, Massachusetts.

The presentation reported subgroup analysis from the first 40 patients treated with MDNA55 in a Phase 2b clinical trial for patients with rGBM. MDNA55 targets the interleukin 4 receptor (IL4R) known to be over-expressed in GBM, and a biomarker for more aggressive disease. Furthermore, unlike other trials, the MDNA55 study only enrolled patients with rGBM that have genetic features which make the tumor the most aggressive and resilient type of rGBM.

“We are very encouraged to see that by being the only oncology company to target the IL4R, which is over-expressed in 76% of patients with glioblastoma, we are achieving meaningful survival benefits with MDNA55 in a population where the majority of patients have the worst form of rGBM,” said Dr. Fahar Merchant, President and CEO of Medicenna. “Our full data set will be complete early in the new year, allowing us to submit our package to the U.S. Food and Drug Administration in Q1, 2020 prior to an End of Phase 2 Meeting enabling us to reach a major milestone on the path to securing key partnerships.”

The presentation highlighted that the patient characteristics in the clinical study excluded patients that are known to have a much better prognosis, such as patients that were, (a) eligible for surgery to remove the tumor, (b) had a lower grade of brain cancer at initial diagnosis (only *de novo* GBM patients were enrolled), and (c) had a known mutation associated with better prognosis (IDH mutation). Furthermore, the presentation emphasized that despite enrolling only patients known to have a very poor prognosis, patients actually did much better and were surviving significantly longer following only one treatment with MDNA55, particularly in patients with high expression of the IL4R target.

Of particular interest, subjects receiving lower doses of steroids (≤ 4mg of concurrent steroid per day) showed a trend towards improved survival, particularly in the IL4R High group, with a median overall survival (mOS) of 16.5 months with 88% of patients being still alive at 12 months. In patients resistant to approved chemotherapy Temodar (rGBM with unmethylated MGMT promoter), MDNA55 treatment in IL4R High patients had a median overall survival of 15.2 months and a 12 month survival rate of 69% versus 22% for Lomustine and less than 19% for Avastin.

Additional data comparing the various prognostic factors on MDNA55 outcome measures are provided in the slide presentation available on-line at https://ir.medicenna.com/events-and-presentations.

About Medicenna Therapeutics Corp.

Medicenna is a clinical stage immunotherapy company focused on oncology and the development and commercialization 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. Supported by a US$14.1M non-dilutive grant from CPRIT (Cancer Prevention and Research Institute of Texas), Medicenna's lead IL4-EC, MDNA55, has completed enrolling patients in a Phase 2b clinical trial for rGBM, the most common and uniformly fatal form of brain cancer, at top-ranked brain cancer centres in the US. 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. For more information, please visit www.medicenna.com.

This news release contains forward-looking statements relating 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" and similar expressions. All statements other than statements of historical fact, included in this release, including, without limitation, that we are achieving meaningful survival benefits with MDNA55 in a population where the majority of patients have the worst form of rGBM, that our full data set will be complete early in the new year, that this will allow us to submit our package to the U.S. Food and Drug Administration in Q1, 2020 prior to an End of Phase 2 Meeting enabling us to reach a major milestone on the path to securing key partnerships 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 June 24, 2019 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 (including, without limitation, the ability of the Company to fully replicate these interim data results) 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 Canadian securities law.

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