Medicenna Reports Promising Efficacy in Phase 2b MDNA55 Clinical Trial at the Society for Neuro-Oncology Annual Meeting

- **Tumor control rate of 82% in recurrent glioblastoma following one treatment with MDNA55**
- **Median overall survival of 15 months in patients over-expressing the IL4R**
- **Meetings with regulatory agencies planned for early 2020**

TORONTO and HOUSTON, Nov 25, 2019 /CNW/ - Medicenna Therapeutics Corp. ("Medicenna" or "the Company") (TSX: MDNA, OTCQB: MDNAF), a clinical stage immuno-oncology company, has 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. John Sampson, MD, PhD, a Robert H. and Gloria Wilkins Distinguished Professor and Chair of Neurosurgery at Duke University School of Medicine at the 24th Society for Neuro-Oncology (SNO) annual meeting on November 24th, 2019 at the JW Marriott Desert Ridge Resort in Phoenix, Arizona. Dr. Sampson discussed updated efficacy results from the Phase 2b clinical trial of MDNA55 in rGBM patients using the interleukin 4 receptor (IL4R) as an immunotherapy target. IL4R is a biomarker for a more aggressive form of GBM which is overexpressed in 75% of glioblastoma patients, as well as in cells that make up the brain tumor microenvironment (TME).

"In this trial, particularly for patients with IL4R over-expression, a prognostic factor that is known to contribute to poor survival, it is gratifying to see that a single treatment with MDNA55 is able to produce impressive survival and tumor control." stated Dr. Sampson. "By combining precise drug delivery and a targeted therapy, MDNA55 could potentially provide new hope to a large majority of brain cancer patients expressing an important immunotherapeutic biomarker."

"We are delighted with the results of the Phase 2b trial thus far. We believe these results are evidence of the opportunity for MDNA55 to become a leading treatment option for a sizeable patient population with this devastating disease," said Dr. Fahar Merchant, President and CEO of Medicenna. "Results from 112 rGBM patients enrolled in this and earlier clinical trials show substantial improvements in tumor control and survival rates when compared to approved therapies for rGBM, and provide a comprehensive data package for our planned meetings with regulatory agencies early next year."

Highlights from the presentation include:

- With a single treatment with MDNA55, a therapy designed to target the IL4R, the median overall survival (mOS) in $IL4R^{High}$ subjects (n=21) is 15 months. This shows a survival advantage of up to nine months when compared to approved therapies (mOS of 5.4 to 9.2 months with Temozolomide, Avastin and Lomustine).
- Among the 38 evaluable subjects, irrespective of IL4R expression, 82% of the subjects experienced tumor shrinkage or stabilization from nadir. The mOS of patients showing tumor control (n=31) was significantly longer when compared to patients with progressive disease (mOS of 15 months vs 8.4 months, respectively; p-value of 0.0112)
- Updated analysis include the first 40 subjects treated with MDNA55 continues to show an impressive overall survival rate at 12 months (OS-12) of 45%, irrespective of IL4R expression, and OS-12 of 58% in patients showing a treatment response (n=32). This is

an improvement of up to 150% when compared to approved therapies for rGBM (OS-12 is 18-34%).
- Safety data continue to show a better safety profile when compared to previous MDNA55 trials with no systemic toxicities or drug related deaths.

"The consistent and extremely encouraging results presented by Key Opinion Leaders at the SNO conference continues to add an impressive data set for the safety and efficacy of MDNA55," added Dr. Merchant. "We look forward to presenting additional analysis and results at various conferences over the coming months."

"We now have readout from 87% of our trial population which continue to show very promising outcomes with MDNA55," added Dr. Martin Bexon, MD, Head of Clinical Development at Medicenna. "A median survival of 15 months in IL4R patients and a tumor control rate of 82% from nadir is especially promising considering that patients in this study have a worse prognosis than most due to the absence of IDH mutations, *de novo* GBM at initial diagnosis and ineligibility for resection, with more than half of the patients harbouring tumors with an unmethylated MGMT promoter."

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 MDNA55 could potentially provide new hope to a large majority of brain cancer patients expressing an important immunotherapeutic biomarker, that MDNA55 may become a leading treatment option for a sizeable patient population, that MDNA55 has shown substantial improvements in tumor control and survival rates when compared to approved therapies for rGBM, that we will meet with regulatory agencies early next year and statements related to the Phase 2b clinical trial of MDNA55 for the treatment of rGBM 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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