



## Medicenna Presented Promising Preclinical Results from its IL-2 Superkine Platform at the 5th Annual International Cancer Immunotherapy Conference

September 30, 2019

TORONTO, Sept. 30, 2019 /CNW/ - Medicenna Therapeutics Corp. ("**Medicenna**" or "the **Company**") (TSX: MDNA, OTCQB: MDNAF), a clinical stage immunotherapy company developing first-in-class Superkines and Empowered Cytokines, announces the presentation of new pre-clinical data from its IL-2 Superkine program. The data was presented as a poster entitled "Long-acting MDNA109: Emerging IL-2 Superkines displaying potent anti-tumoral responses" this past weekend on September 27<sup>th</sup>, 2019 at the International Cancer Immunotherapy Conference held in Paris, France.

The presentation by Dr. Minh To, Director of Pre-clinical Development at Medicenna, reported additional preclinical data to support the differentiating characteristics of long-acting MDNA109 variants and their potency *in vitro* and *in vivo* from other long-acting IL2 programs.

"In preclinical studies, we have combined MDNA109 variants with checkpoint inhibitors and we see very dramatic cure rates in mice," states Dr. Minh To. "In addition, when you re-challenge these mice on the opposite flank with more tumor, these tumors simply don't grow, showing long-term protection against tumor development and prevention of relapse."

"We have an exciting pre-clinical program being built around the IL-2 Superkine platform, where we just announced our lead clinical candidate, MDNA19," states Rosemina Merchant, Chief Development Officer of Medicenna. "By engineering a potent CD122 directed Superkine with a superior safety and PK profile, we believe that MDNA19 could emerge as a best-in-class IL-2 with its unique ability to preferentially stimulate cancer killing T cells as reported by an independent study published last month in *Nature Communications*."

Highlights from the presentation are summarized below:

- **High potency towards naïve effector T cells but diminished potency on unwanted regulatory T cells (Tregs).** Of the long-acting MDNA109 variants, MDNA19 is superior in having decreased binding to CD25 and increased affinity to CD122, therefore selectively activating cancer killing CD8 T cells instead of tumor protecting Tregs.
- **Potent effects as monotherapy with improved PK characteristics.** In CT26 (mouse colon cancer) and B16F10 (mouse melanoma) models, treatment with long acting variants of MDNA109 (bi-weekly for 2 weeks or once weekly for 2 or 3 weeks) potently inhibited tumor growth. These data suggest that long-acting MDN109 variants could lead to potent therapeutic effects with a dosing schedule similar to that used for immune checkpoint inhibitors (CPI). In addition, the results also confirm that different protein scaffolds may be used to extend the half life of MDNA109 and can provide similar tumor control as MDNA19.
- **Compelling preclinical synergism with immune checkpoint inhibition:** In a pre-established colon cancer CT26 model, long-acting MDNA109 variants co-administered with the immune-checkpoint blocker anti-cytotoxic T-Lymphocyte-Associated Protein (CTLA)4, showed significant tumor growth inhibition with as many as 89% of animals remaining tumor-free for over 175 days.
- **Strong Memory Response.** Furthermore, tumor free animals receiving a second and third re-challenge of the tumor without further treatment remained tumor free in up to 100% of mice, demonstrating development of a strong memory response with the ability to prevent tumor relapses.

### About MDNA109

Developed by scientists at Stanford University, MDNA109 is an engineered version of IL-2 that binds up to 200 times more effectively to IL-2R $\beta$  (CD122), thus greatly increasing its ability to activate and proliferate the immune cells needed to fight cancer. MDNA109 is an IL-2 Superkine that preferentially drives the expansion and responses of effector T cells and Natural Killer (NK) cells over Treg cells. It is the only IL-2 in development with a distinct mechanism by virtue of its high affinity towards CD122 allowing it to effectively combat NK cell anergy (exhaustion) which occurs frequently after cancer immunotherapy. MDNA19 is a long-acting version of MDNA109 with diminished binding to Tregs.

### 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](http://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, statements that MDNA19 could emerge as a best-in-class IL-2 with its unique ability to preferentially stimulate cancer killing T cells, the future development plans and timelines related to the program 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 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 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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