UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of September 2022

Commission File Number: **001-39458**

Medicenna Therapeutics Corp.
(Translation of registrant's name into English)

2 Bloor St. W., 7th Floor
Toronto, Ontario M4W 3E2, Canada
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.
Form 20-F [X] Form 40-F [ ]

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): [ ]

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): [ ]

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MEDICENNA THERAPEUTICS CORP.

Date: September 22, 2022

By: /s/ Elizabeth Williams
Name: Elizabeth Williams
Title: Chief Financial Officer

EXHIBIT INDEX

Exhibit	Description
99.1	Press Release dated September 22, 2022

Medicenna Presents Preclinical Data Demonstrating Anti-Tumor Activity of its Anti-PD1-IL-2 BiSKIT and Long-Acting IL-4/IL-13 Super-antagonist at Cytokines 2022

-- Single agent Anti-PD1-IL-2 BiSKIT™ showed superior efficacy compared to a combination of an anti-PD1 antibody with an IL-2 Superkine in murine models of colon, skin, and breast cancer

--IL-4/IL-13 Super-antagonist displayed monotherapy activity in multiple cancer models and in synergy with an IL-2 Superkine, highlighting its potential to treat immunologically "cold" tumors

TORONTO and HOUSTON, Sept. 22, 2022 (GLOBE NEWSWIRE) -- Medicenna Therapeutics Corp. ("Medicenna" or "the Company") (NASDAQ: MDNA TSX: MDNA), a clinical stage immunotherapy company, today announced presentation of data from two preclinical programs that demonstrate the anti-tumor activity of the Company's anti-PD1-IL-2 (aka MDNA223) BiSKIT (***Bi**-functional **S**uper**K**ines for **I**mmuno**T**herapy*) and long-acting IL-4/IL-13 super-antagonist (aka MDNA413). The data are featured in two separate poster presentations at the 10th Annual Meeting of the International Cytokine & Interferon Society (Cytokines 2022), which is taking place both virtually and in-person at the Hilton Waikoloa Village, in Big Island, Hawaii.

"Our presentations highlight the versatility of our Superkine platform in designing novel, highly selective immune modulators to treat cancer," said Fahar Merchant, PhD, President and CEO of Medicenna. "We believe these programs complement our lead MDNA11 program, expand our pipeline of therapies and potentially drive collaborations given the increasing interest recently displayed in the cytokine space. Data from the MDNA223 program show that proliferation of cancer fighting immune cells with the IL-2 Superkine while simultaneously preventing their exhaustion with PD1 inhibition on the same immune cell leads to superior efficacy. In addition, data on our long-acting MDNA413 Superkine demonstrated its potential to reverse the immunosuppressive tumor microenvironment that are known to limit the efficacy of cancer immunotherapies."

Poster P110: A Next Generation Bifunctional Superkine for Immunotherapy (BiSKIT) Encompassing the Combined Therapeutic Potency of IL-2 Super-Agonist and Anti-PD1

Poster P110 includes preclinical data from *in vitro* and *in vivo* studies of MDNA223, a next generation BiSKIT consisting of an anti-PD1 antibody linked to an IL-2 super-agonist (MDNA109FEAA). Anti-PD1 drugs, such as Keytruda® (pembrolizumab), have been approved for a number of cancer indications.

In vitro data presented at the meeting demonstrated MDNA223's potency against the PD1/PDL1 checkpoint was similar to that of a control anti-PD1 antibody while displaying increased affinity for IL-2 receptor beta (IL-2Rβ) and no binding to IL-2 receptor alpha (IL-2Rα). This enhanced IL-2Rβ selectivity resulted in potent and preferential stimulation of anti-cancer $CD8^+$ T cells over pro-tumor Treg cells. *In vivo* murine data showed MDNA223 exhibiting a prolonged pharmacodynamic response extending beyond the duration of pharmacokinetic exposure. In addition, the murine surrogate of MDNA223 showed superior efficacy compared to co-administration of anti-PD1 and long acting MDNA109FEAA in murine models of colon, skin, and breast cancer. These data demonstrate the therapeutic synergy resulting from the BiSKIT's ability to concurrently target PD1 and the IL-2 receptor on the same immune cells (*cis*-binding approach).

Poster P69: Fc-MDNA413 is a Novel Long-Acting IL-4/IL-13 Super-Antagonist that Suppresses M2a TAM Skewing and In Vivo Tumor Growth Including Synergy with an IL-2 Super-Agonist.

Poster P69 includes preclinical data from *in vitro* and *in vivo* studies of Fc-MDNA413, a novel, long-acting IL-4/IL-13 Superkine. Fc-MDNA413 is designed to reverse the immunosuppressive tumor microenvironments (TMEs) of immunologically "cold" tumors by selectively binding to the IL-13 receptor alpha-1 (IL-13Rα1) with high affinity and blocking signaling via the Type II IL-4 receptor (IL-4Rα/IL-13Rα1) expressed on tumor associated macrophages (TAMs) and myeloid derived suppressor cells (MDSCs). It consists of an IL-4/IL-13 super-antagonist fused to the Fc domain for half-life extension.

Data presented at Cytokines 2022 showed Fc-MDNA413 blocking the pathways that induce M2a TAMs and MDSCs to promote cancer growth and demonstrated its potential to treat cold tumors. *In vitro* analyses showed that the Superkine is 300-times more selective for IL-13Rα1 over IL-13Rα2 (a decoy receptor) compared to a fusion protein consisting of Fc domain linked to wild type IL-13. This superior binding profile enabled Fc-MDNA413 to potently inhibit IL-4/IL-13 mediated functions as measured by pSTAT6 signaling, TF-1 cell proliferation, and M2a polarization of macrophages. In murine studies, Fc-MDNA413 demonstrated sustainable serum exposure at a dose that was well tolerated and inhibited tumor growth as a single agent in melanoma and colon cancer models. In addition, Fc-MDNA413 synergized with an IL-2 agonist in a murine melanoma model, highlighting the advantages of co-targeting suppressive and effector immune cells within an otherwise cold TME.

Copies of the two posters are available on Cytokines 2022's virtual platform. They will also be posted to the "Events and Presentations" page of Medicenna's website following the conclusion of the meeting.

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. Medicenna's long-acting IL-2 Superkine, MDNA11, is a next-generation IL-2 with superior CD122 (IL-2 receptor beta) binding without CD25 (IL-2 receptor alpha) affinity thereby preferentially stimulating cancer killing effector T cells and NK cells. Medicenna's early-stage BiSKITs™ program, (**Bi**functional **S**uper**K**ine **I**mmuno**T**herapie**s**) is designed to enhance the ability of Superkines to treat immunologically "cold" tumors. Medicenna's IL-4 Empowered Superkine, MDNA55, has been studied in 5 clinical trials including a Phase 2b trial for

recurrent GBM, the most common and uniformly fatal form of brain cancer. MDNA55 has obtained Fast-Track and Orphan Drug status from the FDA and FDA/EMA, respectively.

Forward Looking Statements

This news release contains forward-looking statements within the meaning of applicable securities laws that relate to the future operations of the Company and other statements that are not historical facts including, but not limited to, statements related to the clinical potential, development and potential value of MDNA223 and MDNA413,pipeline expansion and potential collaborations. Forward-looking statements are often identified by terms such as "will", "may", "should", "anticipate", "expect", "believe", "seek", "potentially" and similar expressions. All statements other than statements of historical fact, included in this release, including statements on 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 20-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. The forward-looking statements contained in this news release are made as of the date hereof and 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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