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 October 2023

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 [ ]

Other Events

On October 25, 2023, Medicenna Therapeutics Corp. (“Medicenna” or the “Company”) issued a press release announcing the dosing of the first patient in the Phase 2 monotherapy dose expansion portion of the Phase 1/2 ABILITY (A Beta-only IL-2 ImmunoTherapY) study evaluating MDNA11, a long-acting, beta-only recombinant interleukin-2 super-agonist, in patients with advanced melanoma, non-melanoma skin cancer or microsatellite instability-high or mismatch repair deficient cancers. Medicenna expects to report initial results from the monotherapy dose expansion during the first half of 2024.

Additionally, Medicenna announced that follow up data from the Phase 1 monotherapy dose escalation portion of the ABILITY study will be presented in a poster session at the 38th Annual Meeting of the Society of ImmunoTherapy for Cancer on November 4, 2023.

Forward Looking Statements

This Form 6-K contains forward-looking statements within the meaning of applicable securities laws that relate to the future operations of the Company, plans and projections and other statements, including statements on the clinical development and potential of MDNA11; and the timeline for reporting results and additional data. Forward-looking statements are often identified by terms such as “will”, “may”, “should”, “anticipate”, “expect”, “believe”, “seek”, “potentially” and similar expressions. and 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 latest Annual Information Form and Annual Report on 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.

The information set forth above in this Form 6-K shall be deemed to be incorporated by reference into the registration statement on Form F-3 (File Number 333-269868) and Form S-8 (File Number 333-240225), and related prospectuses, as such registration statements and prospectuses may be amended from time to time, and to be a part thereof from the date on which this report is filed, to the extent not superseded by documents or reports subsequently filed or furnished.

The information in the attached Exhibit 99.1 is being furnished and shall not be deemed “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference in any filing made by the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as otherwise set forth herein or as shall be expressly set forth by specific reference in such a filing.

EXHIBIT INDEX

Exhibit Number	Description
99.1	Press Release dated October 25, 2023

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: October 25, 2023

By: /s/ Fahar Merchant, PhD
Name: Fahar Merchant, PhD
Title: Chief Executive Officer

EXHIBIT 99.1

Medicenna Therapeutics Doses First Patient in Phase 2 Monotherapy Dose Expansion Portion of the ABILITY Study Evaluating MDNA11 in Select Types of Solid Tumors

New data from the Phase 1 dose-escalation and evaluation portion of the trial will be presented at the Society of Immunotherapy for Cancer (SITC) Annual Meeting on November 4, 2023

Company expects to report initial results from both the monotherapy and combination arms of the Phase 2 dose expansion study in H1 2024

TORONTO and HOUSTON, Oct. 25, 2023 (GLOBE NEWSWIRE) -- Medicenna Therapeutics Corp. ("Medicenna" or the "Company") (Nasdaq: MDNA TSX: MDNA), a clinical-stage immunotherapy company focused on the development of novel Superkines, today announced dosing of the first patient in the Phase 2 monotherapy dose expansion portion of the Phase 1/2 ABILITY (**A B**eta-only **IL**-2 **I**mmuno**T**herap**Y**) study evaluating MDNA11, a long-acting, beta-only interleukin-2 (IL-2) super-agonist.

"We are excited to dose our first patient in Phase 2 clinical trial as we build critical momentum for MDNA11, a potentially best-in-class, next-generation IL-2 super-agonist for the treatment of advanced solid tumors," said Fahar Merchant, Ph.D., President and CEO of Medicenna. "Dosing the first patient in the Phase 2 monotherapy dose expansion portion of the ABILITY study is an important milestone that follows encouraging therapeutic activity and tolerability observed during the Phase 1 dose escalation study. Having established the optimal dosing regimen, we look forward to reporting initial results from the monotherapy and combination arms of the Phase 2 dose expansion portion of the study in the first half of 2024. The combination arm of the trial evaluating MDNA11 with pembrolizumab is expected to commence by the end of this year."

In the Phase 1 monotherapy dose escalation portion of the study, which evaluated 20 patients, MDNA11 was well tolerated with promising single-agent activity. As of the data cutoff date of June 20, 2023, responses included one confirmed durable (> one year) partial response in a heavily pretreated patient with metastatic pancreatic cancer who continues on treatment with MDNA11 and six patients with stable disease. Of note, one patient with melanoma experienced prolonged stable disease, which lasted over 1.5 years.

The ABILITY-1 study (NCT05086692) is a global, multi-center, open-label study that assesses the safety, tolerability, pharmacokinetics, pharmacodynamics and anti-tumor activity of MDNA11 as monotherapy or in combination with pembrolizumab (Keytruda®). In the monotherapy dose expansion of the Phase 2 study, up to 40 patients are expected to be enrolled and administered MDNA11 (90µg/kg) intravenously once every two weeks. The expansion cohorts in the monotherapy arm of the study include advanced melanoma, non-melanoma skin cancer or microsatellite instability (MSI)-high or mismatch repair (MMR) deficient cancers.

About MDNA11
MDNA11 is an intravenously administered, long-acting "beta-only" recombinant interleukin-2 (rIL-2) specifically engineered to overcome the shortcomings of rhIL-2 (aldesleukin) by preferentially activating immune effector cells (CD8+ T and NK cells) responsible for killing cancer cells, with minimal or no stimulation of immunosuppressive Tregs. These unique proprietary features of the IL-2 Superkine have been achieved by incorporating seven specific mutations and genetically fusing it to a recombinant human albumin scaffold to improve the pharmacokinetic (PK) profile and pharmacological activity of MDNA11 due to albumin's natural propensity to accumulate in highly vascularized sites and tumor draining lymph nodes. MDNA11 is currently being evaluated in the Phase 1/2 ABILITY-1 study as both a monotherapy and in combination with pembrolizumab (Keytruda®).

About Medicenna Therapeutics
Medicenna Therapeutics is a clinical-stage immunotherapy company developing engineered cytokines, called Superkines, designed to improve the specificity, function, and safety profile of unmodified interleukins. Medicenna owns diverse platforms licensed from Stanford University to develop a pipeline of Superkine candidates: interleukin-2 (IL-2), IL-4 and IL-13 super-agonists and antagonists. MDNA11, a potential best-in-class, next-generation IL-2 super agonist targeting solid tumors, is currently in a Phase 2 monotherapy dose expansion trial and expected to begin a Phase 2 pembrolizumab combination trial in the fourth quarter of 2023. Medicenna's IL-4-empowered Superkine, bizaxofusp (MDNA55), has completed a Phase 2b trial for recurrent glioblastoma and holds FastTrack and Orphan Drug status from the U.S. Food and Drug Administration (FDA) and FDA/European Medicines Agency, respectively. Medicenna also creates Bifunctional SuperKine Immunotherapies (BiSKITs), which have demonstrated superior anti-tumor activity in preclinical studies, even in hard-to-treat 'cold' tumors. For more information, please visit https://www.medicenna.com/.

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