Medicenna's Immunotherapy Phase 2b Trial Underway Using Brainlab Drug Delivery Technology

Glioblastoma patients receive a novel, minimally invasive treatment directly into brain tumor

MUNICH, Germany, and TORONTO, Canada, June 8, 2017 — Brainlab and Medicenna Therapeutics Corp (the "Company" or "Medicenna"; TSXV "MDNA") jointly announced today that recurrent Glioblastoma (rGB) patients in a Phase 2b clinical trial of MDNA55, a targeted immunotherapy agent, have been treated at three clinical centers in the United States using innovative drug delivery technology from Brainlab. The investigators used convection enhanced delivery (CED) to inject MDNA55, together with an imaging agent, directly into the tumor. When combined with real-time image guided MRI, CED allows delivery of MDNA55 at high concentrations into the tumor tissue while avoiding exposure to the rest of the body. The current Phase 2b clinical trial plans to enroll 43 adult patients with rGB at leading brain cancer centers in the United States.

Precise targeting is an integral part in the treatment of brain tumors to achieve significant coverage. iPlan® Flow planning software from Brainlab helps determine trajectories for drug infusions while VarioGuide®, a universal instrument holder, is then used to guide the drug delivery device into place for treatment.

"Brainlab brings advanced tools for planned and controlled delivery to this trial. Standardization of the surgical workflow is a critical component of consistent patient treatment and for obtaining optimal clinical trial data," commented Rowena Thomson, Drug Delivery Manager at Brainlab. "With Medicenna, we have found one of the most experienced teams for targeted drug delivery as a key partner in the development of therapies for brain tumors. Using iPlan Flow and VarioGuide, neurosurgeons will be able to plan treatments and catheter placement for delivery and distribution of MDNA55."

Designed specifically for planning drug delivery procedures, iPlan Flow software determines trajectories and infusion parameters based on patient-specific image data. The combination of this technology with clinical trial support services allows Brainlab to offer a comprehensive drug delivery solution to pharmaceutical companies.

"We are very pleased to include Brainlab drug delivery technologies in our clinical trial and see this as an important step in the commercial development of MDNA55 for the treatment of brain cancer," said Ms. Rosemina Merchant, Chief Development Officer of Medicenna. "Treatment with MDNA55, a drug that simultaneously targets interleukin-4 receptors (IL4R) expressed by brain cancer cells and the immunosuppressive cells of the tumor micro-environment (TME), may further improve selectivity in patients suffering from this terrible disease," added Dr Martin Bexon, Head of Clinical Development at Medicenna.

Background info on iPlan Flow, read the flyer here.

See ClinicalTrials.gov identifier NCT02858895 for more study information.

About Brainlab

Brainlab develops, manufactures and markets software-driven medical technology, enabling access to advanced, less invasive patient treatments.

Brainlab technology powers treatments in radiosurgery as well as numerous surgical fields including neurosurgery, orthopedic, ENT, CMF, spine and trauma. Founded in Munich in 1989, Brainlab has over 11,700 systems installed in over 100 countries.

About MDNA55
MDNA55 is a targeted dual-action immunotherapeutic agent designed to purge tumor cells and adjacent immunosuppressive cells in the tumor microenvironment that over-express the interleukin-4 receptor (IL4R), which is frequently expressed in a majority of patients with glioblastoma and common in other aggressive forms of cancer. By directly eliminating tumor cells and boosting a therapeutic immune response, MDNA55 provides a two-pronged approach to treat cancer. MDNA55 has received Fast Track Designation from the FDA and Orphan Drug Status from both the FDA and EMA. Earlier results from three Phase 1 and 2a clinical trials in 66 patients with recurrent glioblastoma showed potent anti-tumor effects without drug-related systemic toxicity in the majority of patients.

A summary of clinical data from earlier Phase 1 and 2 clinical trials can be found on Medicenna Therapeutics Corp.'s website at http://www.medicenna.com/Our-Lead-Program/Clinical-Trials/default.aspx.

Forward Looking Statements

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 regarding the progress in our Phase 2b clinical trial, that using iPlan Flow and Varioguide, neurosurgeons will be able to better plan treatments and catheter placement for delivery and distribution of MDNA55, that we plan to enroll 43 patients in the Phase 2b clinical study, future plans and objectives of the Company and others 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 filing statement of the Company dated February 27, 2017 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.

Further Information

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