Plus Therapeutics Initiates Cohort 3 in Phase 1/Part A of the ReSPECT-LM Trial for Leptomeningeal Metastases

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First data readout of Phase 1/Part A trial expected second half of 2023

AUSTIN, Texas, March 22, 2023 (GLOBE NEWSWIRE) -- Plus Therapeutics, Inc. (Nasdaq: PSTV) (the "Company"), a clinical-stage pharmaceutical company developing targeted radiotherapeutics with advanced platform technologies for central nervous system cancers, today announced treatment of the first patient in Cohort 3 of the ReSPECT-LM Phase 1/2a dose escalation clinical trial of rhenium (^{186}Re) obisbemeda for the treatment of leptomeningeal metastases (LM) from solid tumors.

This follows successful prior completion of Cohorts 1 and 2 as well as the recommendation of the trial's Data and Safety Monitoring Board (DSMB) to advance into Cohort 3. Thus far, no dose-limiting toxicities have been observed with administered radiation doses of up to 26.4 millicuries. This dose represents a theoretical maximum absorbed radiation dose to the cerebral spinal fluid of approximately 200 gray.

"Through Cohorts 1 and 2 and the first patient in Cohort 3, the observed safety profile and clinical signs and symptoms coupled with biological tumor cell count data of patient response, even at low, early administered doses of radiation, are encouraging," said Norman LaFrance MD, Chief Medical Officer of Plus Therapeutics. "We remain on track to meet our key 2023 milestones for LM including a U.S. Food and Drug Administration (FDA) meeting to determine the dose expansion regime, beginning with Part B of the Phase 1 trial, and presentations of the preliminary Phase 1/Part A data at medical meetings in the second half of 2023."

At the 2022 Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology (SNO), Plus Therapeutics presented Phase 1 data from the ReSPECT-LM trial demonstrating that a single administered dose of rhenium (^{186}Re) obisbemeda was feasible, safe, and well-tolerated. Across two dosages, the four patients from Cohorts 1 and 2 experienced a decreased cerebrospinal fluid tumor cell count of 46% to 92% at 48 hours following treatment.

The ReSPECT-LM trial is a multicenter, sequential cohort, open-label, single dose, dose escalation Phase 1/2a study using a modified Fibonacci 3+3 study design. It will evaluate the maximum tolerated dose, maximum feasible dose, safety and efficacy of a single administration of rhenium (^{186}Re) obisbemeda via intraventricular catheter for LM following standard surgical, radiation and/or chemotherapy treatment. The primary endpoints of the study are the incidence and severity of adverse events/serious adverse events and dose limiting toxicities. Secondary endpoints include overall response rate, duration of response, progression free survival and overall survival. Additional details about the ReSPECT-LM trial are available at ClinicalTrials.gov (NCT05034497).

The FDA has granted Fast Track designation to rhenium (^{186}Re) obisbemeda for the treatment of LM. ReSPECT-LM is funded by a 3-year, $17.6 million grant by the Cancer Prevention & Research Institute of Texas (CPRIT).

About Leptomeningeal Metastases (LM)
LM is a rare complication of cancer in which the primary cancer spreads to the cerebrospinal fluid (CSF) and leptomeninges surrounding the brain and spinal cord. All malignancies originating from solid tumors, primary brain tumors, or hematological malignancies have this LM complication potential with breast cancer is the most common cancer linked to LM, with 3-5% of breast cancer patients developing LM. Additionally, lung cancer, GI cancers and melanoma can also spread to the CSF and result in LM. LM occurs in approximately 5% of people with cancer and is usually terminal with 1-year and 2-year survival of just 7% and 3%, respectively. The incidence of LM is on the rise, partly because cancer patients are living longer and partly because many standard chemotherapies cannot reach sufficient concentrations in the spinal fluid to kill the tumor cells, yet there are no FDA-approved therapies specifically for LM patients, who often succumb to this complication within weeks to several months, if untreated.

About Rhenium (^{186}Re) obisbemeda
Rhenium (^{186}Re) obisbemeda is a novel injectable radiotherapy specifically formulated to deliver highly targeted high dose radiation in CNS tumors in a safe, effective and convenient manner to optimize patient outcomes. Rhenium (^{186}Re) obisbemeda has the potential to reduce risks and improve outcomes for CNS cancer patients, versus currently approved therapies, with a more targeted and potent radiation dose. Rhenium-186 is an ideal radioisotope for CNS therapeutic applications due to its short half-life, beta energy for destroying cancerous tissue and gamma energy for live imaging.

About Plus Therapeutics

Plus Therapeutics, Inc. is a clinical-stage pharmaceutical company developing targeted radiotherapeutics for difficult-to-treat cancers of the central nervous system with the potential to enhance clinical outcomes for patients. Combining image-guided local beta radiation and targeted drug delivery approaches, the Company is advancing a pipeline of product candidates with lead programs in recurrent glioblastoma (GBM) and leptomeningeal metastases (LM). The Company has built a robust supply chain through strategic partnerships that enable the development, manufacturing and future potential commercialization of its products. Plus Therapeutics is led by an experienced and dedicated leadership team and has operations in key cancer clinical development hubs including Austin and San Antonio, Texas. For more information, visit https://plustherapeutics.com/.

Cautionary Statement Regarding Forward-Looking Statements

This press release contains statements that may be deemed "forward-looking statements" within the meaning of U.S. securities laws. All statements in this press release other than statements of historical fact are forward-looking statements. These forward-looking statements may be identified by future verbs, as well as terms such as "designed to," "will," "can," "potential," "focus," "preparing," "next steps," "possibly," and similar expressions or the negatives thereof. Such statements are based upon certain assumptions and assessments made by management in light of their experience and

their perception of historical trends, current conditions, expected future developments and other factors they believe to be appropriate. These statements include, without limitation, statements regarding the following: the potential promise of ^{186}Re including the ability of ^{186}Re to safely and effectively deliver radiation directly to the tumor at high doses; expectations as to the Company's future performance including the next steps in developing the Company's current assets; the Company's clinical trials including statements regarding the timing and characteristics of the ReSPECT-GBM and ReSPECT-LM clinical trials; possible negative effects of ^{186}Re; the continued evaluation of ^{186}Re including through evaluations in additional patient cohorts; and the intended functions of the Company's platform and expected benefits from such functions.

The forward-looking statements included in this press release are subject to a number of risks and uncertainties that may cause actual results to differ materially from those discussed in such forward-looking statements. These risks and uncertainties include, but are not limited to: the Company's actual results may differ, including materially, from those anticipated in these forward-looking statements as a result of various factors, including, but not limited to, the following: the early stage of the Company's product candidates and therapies, the results of the Company's research and development activities, including uncertainties relating to the clinical trials of its product candidates and therapies; the Company's liquidity and capital resources and its ability to raise additional cash, the outcome of the Company's partnering/licensing efforts, risks associated with laws or regulatory requirements applicable to it, market conditions, product performance, litigation or potential litigation, and competition within the cancer diagnostics and therapeutics field, among others; and additional risks described under the heading "Risk Factors" in the Company's Securities and Exchange Commission filings, including in the Company's annual and quarterly reports. There may be events in the future that the Company is unable to predict, or over which it has no control, and its business, financial condition, results of operations and prospects may change in the future. The Company assumes no responsibility to update or revise any forward-looking statements to reflect events, trends or circumstances after the date they are made unless the Company has an obligation under U.S. federal securities laws to do so.

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