Plus Therapeutics Significantly Expands Investigational Oncology Drug Pipeline

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Licenses targeted interventional radiotherapeutics platform

Worldwide exclusive rights obtained for patents and next-generation technology to deliver targeted, precision radiotherapeutics for solid organ cancers

Initial IND submission for treatment of liver cancer planned in 2022

AUSTIN, Texas, Jan. 06, 2022 (GLOBE NEWSWIRE) -- Plus Therapeutics, Inc. (Nasdaq: PSTV) (the "Company"), a clinical-stage pharmaceutical company developing innovative, targeted radiotherapeutics for rare and difficult-to-treat cancers, today announced that it has entered into an agreement with The University of Texas Health Science Center at San Antonio (also referred to as UT Health San Antonio) for a worldwide exclusive license to develop and commercialize novel interventional therapeutics for cancer.

"The future of cancer therapy is precise targeting of tumors with the most potent cancer-killing agents while minimizing damage to normal tissues," stated Marc H. Hedrick, M.D., President and Chief Executive Officer of Plus Therapeutics. "Not only does this important transaction further expand our existing Rhenium NanoLiposome technology, but it also helps realize this future. With this technology, we can target almost any solid organ tumor in the body using standard interventional means to leverage the breadth of the human vascular system and deliver a resorbable biomaterial embolic technology coupled with a highly potent radiotherapeutic isotope."

The licensed patents include composition of matter patents for biodegradable alginate microspheres (BAM) containing nanoliposomes loaded with imaging and/or therapeutic payloads. Therapeutic payloads may include radiotherapeutics, chemotherapeutics or thermotherapeutics. The BAM technology is delivered into the vascular system via standard interventional vascular catheters that are placed precisely in the vessels feeding tumors. Once injected, BAM blocks all blood flow to the tumors and simultaneously delivers very high doses of cytotoxic compounds for an extended time. Many days later, the BAM resorbs and are physiologically metabolized and excreted from the body.

"Embolization technology for many types of tumors, including liver cancer, has been used with promising results for over two decades, but substantial limitations remain, and no meaningful recent technological innovations have been made," said William Phillips, M.D., Professor of Nuclear Medicine at UT Health San Antonio. "The leading radioembolization therapies available today incorporate Yttrium-90 glass/resin microspheres which have poor imaging characteristics, require long lead times, are permanently implanted and may expose the marrow to high levels of radiation. Rhenium-188 NanoLiposome Biodegradable Alginate Microsphere (^{188}RNL-BAM) is a next generation, fully resorbable technology that solves many of the problems of existing technology. Our team at UT Health San Antonio intends to support Plus Therapeutics in bringing this technology rapidly to market."

The financial terms of the exclusive license agreement are primarily success-based with milestone and royalty payments contingent on achieving key clinical, regulatory and sales milestones.

The Company will initially focus on developing ^{188}RNL-BAM as a next-generation radioembolization therapy for liver cancer, in which BAM blocks the hepatic artery segments that supply blood to the malignant tumor while also providing ^{188}RNL radiotherapy by directly irradiating the tumor.

"This transaction is the next step in our plan to expand our pipeline using precision, targeted radiotherapeutics," said Norman LaFrance, M.D., Chief Medical Officer of Plus Therapeutics. "Next steps are to complete and compile the promising preclinical work performed thus far and prepare for an IND submission in 2022 for the treatment of liver cancer."

Liver cancer is a rare disease with an increasing annual incidence and 5-year overall survival of only 20%[1]. The global opportunity for localized embolization, chemoembolization, and radioembolization therapies for primary (hepatocellular carcinoma) and secondary (typically metastatic colorectal cancer, for example) liver cancer is $1.3 billion[2].

The initial inventions and work behind the licensed patents and technologies were developed and led by William Phillips M.D., Professor of Nuclear Medicine, Ryan Bitar, M.D., and their team at UT Health San Antonio. The ^{188}RNL-BAM technology incorporates Rhenium-188, or ^{188}Re, a very attractive isotope for use in radiotherapeutic embolization owing to its emission of a high energy electron (beta particle) with a half-life of 16.9 hours and a path length of 3.1 mm. ^{188}Re emits gamma energy that permits high quality, real-time imaging of the BAM construct delivery localization and confirmation. ^{188}RNL-BAM is straightforward and cost-effective to manufacture for on-demand availability for therapeutic applications and is versatile and can be precisely composed and manufactured to a specific size allowing optimal arterial embolization to block blood flow in most vascular beds while simultaneously delivering its isotopic payload to the tumor. BAMs are not permanent like other technology and degrade over time, allowing restoration of blood flow, decreasing radiation resistance, and allowing safer physiological and safe clearance of ^{188}Re through the kidneys, which avoids bone marrow toxicity.

[1]American Cancer Society; [2]Internal estimate

About Plus Therapeutics, Inc.

Plus Therapeutics (Nasdaq: PSTV) is a clinical-stage pharmaceutical company focused on developing innovative, targeted radiotherapeutics for adults and children worldwide with rare and difficult-to-treat cancers. Our proprietary radiotherapeutic platform uniquely uses nanoliposomes to encapsulate and deliver the radioisotope, Rhenium, into or near a tumor via a single, direct infusion. The lead radiotherapeutic in our pipeline, Rhenium-186 NanoLiposome (^{186}RNL), is being evaluated in U.S. multi-center clinical trials for the treatment of recurrent glioblastoma and leptomeningeal metastases. More information may be found at PlusTherapeutics.com and ReSPECT-Trials.com.

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 future of cancer therapy; the potential promise of 186RNL and 188RNL-BAM including the ability of 186RNL and 188RNL-BAM to safely and effectively deliver radiation directly to the tumor at high doses; the help that the Company will receive from third parties in bringing its products to market; 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-LM or the ReSPECT-PBC trials; possible negative effects of 186RNL and 188RNL-BAM.

The forward-looking statements included in this press release are subject to several 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 regenerative medicine 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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