Unum Therapeutics Provides Updates to its Phase 1 Trial of ACTR707 for HER2+ Solid Tumor Cancers

January 29, 2020

-Cohort 1 enrollment is complete with no dose-limiting toxicities observed-

-Cohort 2 patient screening underway-

-Safety and efficacy data from multiple dose cohorts expected during 2020-

CAMBRIDGE, Mass., Jan. 29, 2020 (GLOBE NEWSWIRE) -- Unum Therapeutics Inc. (NASDAQ: UMRX), a clinical-stage biopharmaceutical company focused on developing curative cell therapies for cancer, today announced it has completed Cohort 1 enrollment with no dose-limiting toxicities (DLT) observed in the ATTCK-34-01 Phase 1 trial evaluating Unum's novel Antibody-Coupled T cell Receptor investigational therapy, ACTR707, together with trastuzumab for the treatment of patients with HER2+ advanced cancers.

Patient enrollment—defined as patients who have signed informed consent forms and met all eligibility criteria—is complete with five patients in this first cohort in the ATTCK-34-01 Phase 1 trial, a multicenter, open-label, single-arm, dose-escalation trial. Of the five patients enrolled, three patients received treatment with trastuzumab (1.0 mg/kg weekly) followed by administration of ACTR707 (25 million ACTR707+ T cells) and completed the DLT review period—defined as approximately six weeks post-ACTR707 administration—with no DLTs observed. Two patients enrolled but discontinued from the trial prior to receiving treatment with trastuzumab and ACTR707. In addition to safety and clinical response assessments, data on ACTR707+ T cell expansion and persistence, trastuzumab pharmacokinetics, and post-treatment biopsy analyses are being collected and are expected to inform subsequent dose escalation. Unum continues to plan to submit data from this Cohort for presentation at a scientific conference in 2020. Investigators have begun screening patients for Cohort 2 that includes treatment with trastuzumab (1.0 mg/kg weekly) followed by administration of ACTR707 (50 million ACTR707+ T cells).

"Understanding the significant unmet need in advanced HER2+ malignancies, ACTR707 was engineered to potentially avoid the on-target, off-tumor toxicity that has hindered the development of traditional CAR T cells for solid tumor cancers," said Jessica Sachs, M.D., Chief Medical Officer of Unum Therapeutics. "We are excited to continue this dose-escalation trial, having passed the DLT safety thresholds in this first, low-dose Cohort and we look forward to reporting additional data from multiple dose cohorts during 2020."

Additional details about the ATTCK-34-01 Phase 1 trial can be found here.

About ACTR707 and the ATTCK-34-01 Phase 1 trial for HER2+ solid tumor cancers
ACTR707 is derived from Unum's novel proprietary Antibody-Coupled T cell Receptor (ACTR) platform. ACTR is designed to develop autologous engineered T-cell therapies that combine the cell-killing ability of T cells and the tumor-targeting ability of co-administered antibodies to exert potent antitumor immune responses. ACTR707 was engineered for properties that potentially optimize its function in solid tumors including increased proliferation, cytokine secretion, and persistence. Preclinical data demonstrate that, unlike traditional trastuzumab-based CAR-T cells that target HER2, ACTR707+ T cells administered with trastuzumab are highly selective for HER2-overexpressing tumor cells and discriminate against cells from normal tissues that express low levels of HER2. In addition, the preclinical activity of ACTR707+ T cells has been shown to be dose-dependent demonstrating control of ACTR707 activity by modulation of trastuzumab concentration.

While some patients with metastatic breast cancer and gastric cancer receive durable benefit from approved HER2-targeted therapies, many are refractory to or relapse from treatment. Additionally, there are other solid tumors that overexpress HER2 for whom existing HER2-targeted therapies are not approved. ACTR707 used in combination with trastuzumab is being developed in this trial to potentially serve patients whose treatment needs are not met by available HER2-targeted therapies.

About Unum Therapeutics
Unum Therapeutics is a clinical-stage biopharmaceutical company focused on developing curative cell therapies to treat a broad range of cancer patients. Unum's novel proprietary technologies include Antibody-Coupled T cell Receptor (ACTR), an autologous engineered T-cell therapy that combines the cell-killing ability of T cells and the tumor-targeting ability of co-administered antibodies to exert potent antitumor immune responses, and Bolt-On Chimeric Receptor (BOXR), designed to improve the functionality of engineered T cells by incorporating a "bolt-on" transgene to overcome resistance of the solid tumor microenvironment to T cell attack. Unum has multiple programs in Phase 1 clinical and preclinical testing, including: ACTR707 used in combination with trastuzumab in adult patients with HER2+ advanced cancer and used in combination with rituximab in adult patients with r/r NHL; and BOXR1030 expressing the GOT2 transgene and targeting GPC3+ solid tumor cancers. The Company is headquartered in Cambridge, MA.

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Forward looking Statements

This press release contains forward-looking statements including, without limitation, statements regarding our future expectations, plans and prospects, including projections regarding our long-term growth, enrollment and results for our preclinical and clinical activities, the development of our product candidates, including the ACTR product candidates and the BOXR platform and product candidates, and the anticipated timing and success of any of our preclinical studies, clinical trials and regulatory filings, as well as other statements containing the words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "plan," "potential," "predict," "project," "should," "target," "will," or "would" and similar

expressions, constitute forward-looking statements within the meaning of the safe harbor provisions of The Private Securities Litigation Reform Act of 1995, as amended. We may not actually achieve the forecasts disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results could differ materially from the projections disclosed in the forward-looking statements we make as a result of a variety of risks and uncertainties, including risks related to the accuracy of our estimates regarding expenses, future revenues, capital requirements, and the need for additional financing, the success, cost and timing of our product development activities and clinical trials, our ability to obtain and maintain regulatory approval for our product candidates, and the other risks and uncertainties described in the "Risk Factors" sections of our public filings with the Securities and Exchange Commission. In addition, the forward-looking statements included in this press release represent our views as of the date hereof. We anticipate that subsequent events and developments may cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date hereof.

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