Autolus Therapeutics Presents Preclinical Data on AUT06NG at the SITC Annual Meeting

November 9, 2019

Preclinical data presented regarding feasibility and efficacy for AUTO6NG in solid tumor indication

LONDON, Nov. 09, 2019 (GLOBE NEWSWIRE) -- Autolus Therapeutics plc (Nasdaq: AUTL), a clinical-stage biopharmaceutical company developing next-generation programmed T cell therapies for the treatment of cancer, today presented pre-clinical data on AUTO6NG, the company's next generation GD2-targeting CAR (chimeric antigen receptor) T cell therapy, at the 34th Annual Meeting of the Society for Immunotherapy of Cancer (SITC) being held November 6-10, 2019, in Washington, D.C.

"Autolus' growing set of programming modules addresses a range of inhibitory factors within the highly complex and dynamic solid tumor microenvironment. This presentation demonstrates the utility of three modules added to the clinically active and validated AUTO6 GD-2 targeting CAR that not only improve CAR T persistence but also combat the immunosuppressive environment," said Dr. Christian Itin, chairman and chief executive officer of Autolus. "Based on these encouraging pre-clinical results, which demonstrate the activity of AUTO6NG, we plan on initiating a clinical study in patients with GD2 positive tumors including refractory/relapsed neuroblastoma in the second half of next year."

AUTO6NG: Next generation GD2-targeting CAR T-cell therapy with improved persistence and insensitivity to TGFBeta and checkpoint inhibition for relapsed/refractory neuroblastoma, Achkova, D., et al. (Abstract number P146, poster presentation, 7:00 am – 8:30 pm Eastern Time on Saturday, November 9)

AUTO6 had previously shown clinical responses without inducing neurotoxicity in pediatric patients with r/r neuroblastoma (Straathof et al., AACR 2018). Building on AUTO6, additional programming modules were introduced forming AUTO6NG to help the CAR T cells persist in and withstand the hostile tumor microenvironment. AUTO6NG is a GD2-targeted CAR T transduced with modules encoding either an IL7 chimeric cytokine receptor (IL7R_CCR) to increase persistence, or a dominant negative TGFβRII (dnTGFbRII) protein to block inhibitor signals from TGFβ and a truncated SHP2 (dSHP2) protein designed to block inhibitor signals from PD1. Both single and dual transduced CAR T cells were evaluated in vitro for anti-tumor activity, cytokine secretion, T cell proliferation, survival and resistance to immunosuppressive pathways. The addition of IL7R_CCR, dnTGFbRII and dSHP2 modules to the AUTO6NG product augment its functions by extending T-cell persistence and rendering modified T-cells resistant to TGFβ- and PD1/PDL1-driven immune inhibition in vitro. Additionally, intravenous delivery of AUTO6NG in NSG mice with established tumor burden exhibited potent anti-tumor activity and extended survival, whereas AUTO6 showed no activity in that model.

About AUTO6NG

AUTO6NG is a next generation programmed T cell product candidate in pre-clinical development. AUTO6NG builds on preliminary proof of concept data from AUTO6, a CAR in clinical development for the treatment of neuroblastoma, which can target GD2-expressing cancers with a chimeric antigen receptor (CAR). AUTO6NG incorporates additional cell programming modules to augment its functions by extending persistence and rendering modified T-cells resistant to immune inhibition. With the enhanced properties of AUTO6NG, it may be suitable for the treatment of GD2-expressing solid tumors, including neuroblastoma, osteosarcoma, melanoma, small cell lung cancer, and soft tissue sarcoma.

About Autolus Therapeutics plc

Autolus is a clinical-stage biopharmaceutical company developing next-generation, programmed T cell therapies for the treatment of cancer. Using a broad suite of proprietary and modular T cell programming technologies, the company is engineering precisely targeted, controlled and highly active T cell therapies that are designed to better recognize cancer cells, break down their defense mechanisms and eliminate these cells. Autolus has a pipeline of product candidates in development for the treatment of hematological malignancies and solid tumors. For more information please visit www.autolus.com.

Forward-Looking Statement

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts, and in some cases can be identified by terms such as "may," "will," "could," "expects," "plans," "anticipates," and "believes." These statements include, but are not limited to, statements regarding Autolus' financial condition and results of operations, as well as statements regarding the anticipated development of Autolus' product candidates, including its intentions regarding the timing for providing further updates on the development of its product candidates, and the sufficiency of its cash resources. Any forward-looking statements are based on management's current views and assumptions and involve risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our actual results to differ from those contained in the forward-looking statements, see the section titled "Risk Factors" in Autolus' Annual Report on Form 20-F filed on November 23, 2018 as well as discussions of potential risks, uncertainties, and other important factors in Autolus' future filings with the Securities and Exchange Commission from time to time. All information in this press release is as of the date of the release, and the company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise, except as required by law.

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