Autolus Therapeutics Announces an Additional Nature Publication for AUTO1

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- Data suggest that long term durability of response in acute lymphoblastic leukemia patients treated with AUTO1 is due to an enrichment of Stem Cell Memory T cells -

LONDON, May 25, 2021 (GLOBE NEWSWIRE) -- Autolus Therapeutics plc (Nasdaq: AUTL), a clinical-stage biopharmaceutical company developing next-generation programmed T cell therapies, today announced a publication in Nature Cancer that gives new insight into the mechanism of long-term durability of effect in acute lymphoblastic leukemia (ALL) patients treated with AUTO1.

AUTO1 CAR T cells from pediatric ALL patients who still had CAR T cells detectable in the blood more than two years after their treatment were compared with patients who had lost their AUTO1 CAR T cells one to two months post treatment. The study shows that a subset of AUTO1 CAR T cells called Stem Cell Memory T-cells (T_{SCM}) appear critical in both the initial anti-leukemic response and for long term immune surveillance. This suggests that this sub-group of AUTO1 CAR T cells contribute to the long-term durability of effect that AUTO1 has in these patients.

“AUTO1 has been designed to have an optimized interaction between its chimeric antigen receptor and the CD19 target on cancer cells,” said Dr Martin Pule, Founder and Chief Scientific Officer of Autolus. “This means AUTO1 can efficiently deliver a kill and disengage rapidly like a normal T cell, leading to less exhaustion and less T cell differentiation. This unique property of AUTO1 potentially contributes to the enrichment and maintenance of this stem cell memory subset that appears to be critical to the long-term durability observed in pediatric ALL patients treated with AUTO1.”

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.

About T Cell Subsets
Effector memory T (T_{EM}) cells are terminally differentiated and acquire effector or cell killing function immediately after re-stimulation, whereas central memory T (T_{CM}) cells have a longer lifespan and can differentiate into T_{EM} cells following challenge with their target antigen. T memory stem cells (T_{SCM}), exhibits stem cell properties, are self-renewing, and have an improved and long-term therapeutic potential compared with T_{CM} and T_{EM} cells.

About AUTO1
AUTO1 is a CD19 CAR T cell investigational therapy designed to overcome the limitations in clinical activity and safety compared to current CD19 CAR T cell therapies. Designed to have a fast target binding off-rate to minimize excessive activation of the programmed T cells, AUTO1 may reduce toxicity and be less prone to T cell exhaustion, which could enhance persistence and improve the ability of the programmed T cells to engage in serial killing of target cancer cells. In collaboration with our academic partner, UCL, AUTO1 is currently being evaluated in a Phase 1 clinical trial in adult ALL and B-NHL. The company has also progressed AUTO1 to the FELIX study, a potential pivotal study.

Forward-Looking Statements
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 the future clinical development, efficacy, safety and therapeutic potential of AUTO1, including progress, expectations as to the reporting of data, conduct and timing and potential future clinical activity and milestones; expectations regarding the initiation, design and reporting of data from clinical trials. 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. These risks and uncertainties include, but are not limited to, the risks that Autolus’ preclinical or clinical programs do not advance or result in approved products on a timely or cost effective basis or at all; the results of early clinical trials are not always being predictive of future results; the cost, timing and results of clinical trials; that many product candidates do not become approved drugs on a timely or cost effective basis or at all; the ability to enroll patients in clinical trials; possible safety and efficacy concerns; and the impact of the ongoing COVID-19 pandemic on Autolus’ business. For a discussion of other risks and uncertainties, and other important factors, any of which could cause Autolus’ 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 with the Securities and Exchange Commission on March 4, 2021, as well as discussions of potential risks, uncertainties, and other important factors in Autolus' subsequent filings with the Securities and Exchange Commission. All information in this press release is as of the date of the release, and Autolus 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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