Autolus Therapeutics announces publication in Cancer Immunology Research

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LONDON, June 27, 2023 (GLOBE NEWSWIRE) -- Autolus Therapeutics plc (Nasdaq: AUTL), a clinical-stage biopharmaceutical company developing next-generation programmed T cell therapies, today announced a publication in *Cancer Immunology Research*[1] entitled: 'Enhancing CAR T cell therapy using Fab-Based Constitutively Heterodimeric Cytokine Receptors.'

For CAR T cells to be effective, they must engraft in the patient, expand to sufficient numbers and persist at the site of disease. Often this can involve intervals in the absence of cognate antigen, for instance during trafficking, or in the face of a hostile tumor microenvironment. T cells in a physiological immune response are supported by a network of immune cells which provide cytokine signals to stimulate proliferation and survival. CAR T cells must survive in the absence of such networks.

To address this, Righi et al describe dFabCCR, a constitutive cytokine receptor architecture. dFabCCR is a highly versatile T cell engineering component which can transmit arbitrary cytokine signals to a CAR T cell: cytokine signals normally associated with T cells such as IL2 and IL7 can be transmitted, these maintain T cells as IL2/7 exposure would do. When screening a library of different cytokine dFabCCRs, other cytokine signals such as that from IL18 or even GM-CSF had distinct functional effects on CAR T cell biology which may have therapeutic advantages in some settings.

"Achieving sufficient CAR T cell expansion and persistence can be difficult when targeting solid cancer antigens," said **Dr Martin Pule, Chief Scientific Officer and Founder of Autolus.** "Development of the dFabCCR architecture allows us to supply CAR T cells with versatile constitutive cytokine signals overcoming a barrier to effective CAR T cell therapies for solid cancer and is another powerful entry in our toolkit of T cell engineering components."

1. Righi et al, doi, link

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 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 potential applications of the dFabCCR architecture. 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 7, 2023, 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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