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Adaptimmune to Present Data Demonstrating that its Off-the-shelf Process Produces T-cells from Stem Cells that Respond to Cancer Targets with a SPEAR TCR at ASGCT Meeting

- Data show strong progress with off-the-shelf program demonstrating T-cell differentiation from stem cells (hiPSC) in a serum-free process without the addition of mouse stromal cells -
- Lentiviral transduction of hiPSC-derived cells with a SPEAR TCR produces transduced T-cells that can respond to cancer targets in vitro -

PHILADELPHIA and OXFORDSHIRE, U.K., May 02, 2019 (GLOBE NEWSWIRE) -- Adaptimmune Therapeutics plc (Nasdaq:ADAP), a leader in T-cell therapy to treat cancer, will present new and compelling data during an oral presentation about its off-the-shelf SPEAR T-cell program at the annual American Society of Gene & Cell Therapy (ASGCT) meeting. Data indicate that T-cells can be generated from Human Induced Pluripotent Stem Cells (hiPSC) in vitro and that these T-cells respond to cancer targets via engineered SPEAR TCRs. This process will be used to investigate the ability of this off-the-shelf SPEAR T-cell product to fight cancer.

“Our three autologous SPEAR T-cell therapies are already in the clinic and have the potential to treat cancer in multiple solid tumor indications,” said Rafael Amado, Adaptimmune’s President of R&D. “Beyond the promise of our current autologous therapies, this allogeneic approach – or more simply ‘off-the-shelf’ product – could offer treatment to more patients more quickly, and provide a homogeneous and unlimited source of therapeutic cells. We are thrilled with the progress we have made, both in the gene editing space with our partners at Universal Cells and with our internal T-cell differentiation program.”

During an oral presentation scheduled for 11:30 AM ET today at the ASGCT Annual Meeting, Dr. Jo Brewer, Adaptimmune’s Vice President of Allogeneic Research, will present progress to-date with Adaptimmune’s off-the-shelf SPEAR T-cell program:

- Adaptimmune has demonstrated hiPSC differentiation in a serum-free process without the addition of mouse stromal cells, which is designed to enable scale-up and GMP manufacture of a gene-edited off-the-shelf SPEAR T-cell product
- Lentiviral transduction of T-cells derived from hiPSCs with a SPEAR TCR produces differentiated T-cells that can respond to cancer targets in vitro
- The process starts with an hiPSC line, before the cells are rendered invisible to the host immune system with a series of Recombinant Adeno-Associated Virus (rAAV)-based gene-editing steps (the editing will be performed in association with Universal Cells, an Astellas Company)

- The process has been shown to promote differentiation of cells from a pluripotent state (SSEA4⁺Oct4⁺TRA-160⁺) through various intermediate stages: CD34⁺CD45⁺ hematopoietic progenitor cells (HPC), pro-/pre-T CD7⁺CD5⁺ cells, and CD4⁺CD8⁺ double positive cells towards CD3⁺CD8⁺TCR⁺ single positive T-cells

About Adaptimmune

Adaptimmune is a clinical-stage biopharmaceutical company focused on the development of novel cancer immunotherapy products for cancer patients. The Company's unique SPEAR (Specific Peptide Enhanced Affinity Receptor) T-cell platform enables the engineering of T-cells to target and destroy cancer across multiple solid tumors. For more information, please visit <http://www.adaptimmune.com>.

Forward-Looking Statements

This release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 (PSLRA). These forward-looking statements involve certain risks and uncertainties. Such risks and uncertainties could cause our actual results to differ materially from those indicated by such forward-looking statements, and include, without limitation: the success, cost and timing of our product development activities and clinical trials and our ability to successfully advance our TCR therapeutic candidates through the regulatory and commercialization processes. For a further description of the risks and uncertainties that could cause our actual results to differ materially from those expressed in these forward-looking statements, as well as risks relating to our business in general, we refer you to our Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) on February 27, 2019, and our other SEC filings. The forward-looking statements contained in this press release speak only as of the date the statements were made and we do not undertake any obligation to update such forward-looking statements to reflect subsequent events or circumstances.

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