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Adaptimmune Announces Data From Clinical Studies of NY-ESO-1 Specific T-Cells in Multiple Cancers at the 2015 Annual American Society of Clinical Oncology (ASCO) Meeting

OXFORD, England and PHILADELPHIA, May 30, 2015 (GLOBE NEWSWIRE) -- Adaptimmune Therapeutics plc (Nasdaq:ADAP), a clinical stage biopharmaceutical company focused on the use of TCR engineered T-cell therapy to treat cancer, today announced a poster presentation of data on its lead clinical program, an affinity enhanced T-cell receptor (TCR) therapeutic targeting the NY-ESO-1 cancer antigen, in both solid and hematologic cancers. Eighty-two (82) patients have been treated to date with NY-ESO-T; 44 under Adaptimmune's IND, and 38 under a National Cancer Institute IND (Robbins et al., CCR, 2014). The data from Adaptimmune's clinical studies in synovial sarcoma, multiple myeloma and ovarian cancer were presented at the 2015 Annual American Society of Clinical Oncology (ASCO) Meeting.

In this poster presentation, entitled: "Genetically Engineered NY-ESO-1 Specific T-Cells in HLA-A201+ Patients with Advanced Cancers," Melinda Merchant, M.D., Ph.D., Clinical Director of the Pediatric Oncology Branch of the National Cancer Institute, National Institutes of Health, in Bethesda, MD described the early clinical experience of the NY-ESO TCR therapeutic (NY-ESO-T) in 44 patients across indications.

The authors of the poster concluded:

- NY-ESO-T demonstrated robust clinical responses in solid and hematologic tumors, including a 60 percent (6/10) confirmed response rate in synovial sarcoma, and a 59 percent (13/22) response rate (Complete Response + near Complete Response, per International Myeloma Working Group guidelines) in myeloma in the context of autologous stem cell transplant. Approximately 62 percent (8/13) of responders had tumors with abnormal cytogenetics; 4/8 of these abnormalities are associated with high risk disease.
- In addition, a response was seen in an initial ovarian patient and patient's tumor markers were observed to be falling during this period of response. The response was abrogated by the use of systemic steroids to treat cytokine release syndrome. Reduction in pre-conditioning chemotherapy intensity in the subsequent four ovarian patients was associated with short T-cell persistence and lack of a meaningful antitumor effect. New studies are being conducted to identify the optimal dosage of pre-conditioning chemotherapy for NY-ESO-1 T-cell function.
- Durability of response ranged from 2 to 9 months, and from 3 months to ongoing response at 2.5 years in the sarcoma and myeloma studies respectively.

- NY-ESO-T has been generally well-tolerated with no long term side-effects detected to date. In the 44 patients treated under the Adaptimmune IND, the most common adverse events include diarrhea, pyrexia, and fatigue. Grade 3 cytokine release syndrome was observed in two patients, which was manageable with supportive care measures and resolved without sequelae.
- Importantly, NY-ESO-1 T-cells exhibited durable persistence without the requirement for IL-2 support in vivo, and cells were detectable for up to three years in peripheral blood by PCR. Additionally, the data show continued expression of the NY-ESO TCR for up to two years and continued NY-ESO-T function in a subset of patients, without accumulation of multiple exhaustion markers. NY-ESO-T memory phenotype is generated in persisting cells suggesting the programming of immunological memory for NY-ESO-T.

Dr. Rafael Amado, Adaptimmune's Chief Medical Officer, said, "These results - in particular the response rate in a solid tumor setting and the immune correlates of NY-ESO-T persistence, function, and the absence of T-cell exhaustion - represent important fundamental findings heretofore not observed in the field of T-cell receptor gene therapy for cancer. The data support the promise of our engineered T-cell platform as a means of augmenting a patient's immune system to fight cancer, and provide a rationale for the clinical development of additional TCR specificities across a spectrum of tumor types. We look forward to building on these findings to develop TCR-based therapeutics which may one day offer an important treatment option to patients with diverse solid and hematologic malignancies."

Data from the multiple myeloma and synovial sarcoma clinical studies were initially presented on April 21 at the 2015 annual meeting of the American Association for Cancer Research (AACR) in Philadelphia, PA by lead principal investigators, Aaron Rapoport, M.D., Professor of Medicine and Director of Lymphoma Gene Medicine, Marlene and Stewart Greenebaum Cancer Center (AACR abstract number 4701), and Dr. Merchant (AACR abstract number 4707).

Adaptimmune's NY-ESO TCR therapeutic candidate is a novel cancer immunotherapy that has been engineered to target and destroy cancer cells by strengthening a patient's natural T-cell response. T-cells are a type of white blood cell that play a central role in a person's immune response. Adaptimmune's goal is to harness the power of the T-cell and, through its NY-ESO TCR therapeutic candidate, significantly impact cancer treatment and clinical outcomes of patients with cancers, including synovial sarcoma, multiple myeloma, melanoma, ovarian cancer, lung cancer and esophageal cancer.

About Adaptimmune

Adaptimmune is a clinical stage biopharmaceutical company focused on novel cancer immunotherapy products based on its T-cell receptor platform. Established in 2008, the company aims to utilize the body's own machinery – the T-cell – to target and destroy cancer cells by using engineered, increased affinity T-cell receptors (TCRs) as a means of strengthening natural patient T-cell responses. Adaptimmune's lead program is an affinity enhanced TCR therapeutic targeting the NY-ESO cancer antigen. Its NY-ESO TCR therapeutic candidate has demonstrated signs of efficacy and tolerability in Phase 1/2 trials in solid tumors and in hematologic cancer types. In June 2014, Adaptimmune announced that it had entered into a strategic collaboration and licensing agreement with

GlaxoSmithKline (GSK) for the development and commercialization of the NY-ESO TCR program in partnership with GSK. In addition, Adaptimmune has a number of proprietary programs and its next TCR therapeutic candidate, directed at MAGE A-10, is scheduled to enter the clinic in late 2015. The company has identified over 30 intracellular target peptides preferentially expressed in cancer cells and is currently progressing eight of these through unpartnered research programs. Adaptimmune has over 100 employees and is located in Oxfordshire, UK and Philadelphia, USA. For more information: http://www.adaptimmune.com

Forward-Looking Statements

This press release contains "forward-looking statements," as that term is defined under the Private Securities Litigation Reform Act of 1995 (PSLRA), which statements may be identified by words such as "believe," "may", "will," "estimate," "continue," "anticipate," "intend," "expect" and other words of similar meaning. 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; our ability to submit an IND and successfully advance our technology platform to improve the safety and effectiveness of our existing TCR therapeutic candidates; the rate and degree of market acceptance of T-cell therapy generally and of our TCR therapeutic candidates; government regulation and approval, including, but not limited to, the expected regulatory approval timelines for TCR therapeutic candidates; and our ability to protect our proprietary technology and enforce our intellectual property rights; amongst others. 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 final Prospectus filed with the Securities and Exchange Commission on May 7, 2015. We urge you to consider these factors carefully in evaluating the forward-looking statements herein and are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by this cautionary statement. 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. We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA.

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