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Adaptimmune Announces Collaboration with MSD to Evaluate KEYTRUDA® (pembrolizumab) in Combination with NY-ESO SPEAR® T-Cell Therapy in Multiple Myeloma

PHILADELPHIA and OXFORD, United Kingdom, Oct. 27, 2016 (GLOBE NEWSWIRE) -- Adaptimmune Therapeutics plc (Nasdaq:ADAP), a leader in T-cell therapy to treat cancer, today announced that it has entered into a clinical trial collaboration agreement with Merck & Co., Inc., Kenilworth, NJ, USA (known as MSD outside the US and Canada), for the assessment of Adaptimmune's NY-ESO SPEAR® (Specific Peptide Enhanced Affinity Receptor) T-cell therapy in combination with MSD's anti-programmed death-1 (PD-1) inhibitor, KEYTRUDA® (pembrolizumab), in patients with multiple myeloma. The study will evaluate the safety, pharmacokinetics, pharmacodynamics, and preliminary efficacy of the combination, and is planned for initiation in 1H 2017.

Adaptimmune's SPEAR T-cell candidates are novel cancer immunotherapies that have been engineered to target and destroy cancer cells. Its NY-ESO SPEAR T-cell therapy has previously been evaluated in multiple myeloma in a single agent Phase I/II trial in which 20 out of 22 patients (91 percent) experienced a response at day 100 post autologous stem cell transplant. KEYTRUDA is a humanized monoclonal antibody that works by increasing the ability of the body's immune system to help detect and fight tumor cells. KEYTRUDA blocks the interaction between PD-1 and its ligands, PD-L1 and PD-L2, thereby activating T lymphocytes which may affect both tumor cells and healthy cells. Blocking this interaction is reported to enable T-cell activation and potentiates antitumor activity.

"In initial single-agent studies of our NY-ESO SPEAR T-cell therapy in patients with advanced myeloma in the context of stem cell transplantation, we have seen encouraging evidence of antitumor effect, safe administration and prolonged persistence of transduced cells," said Rafael Amado, Adaptimmune's chief medical officer. "KEYTRUDA has shown preliminary evidence of activity in multiple myeloma, and there is preclinical evidence to support the view that the combination of NY-ESO SPEAR T-cell therapy and anti-PD1 therapy may lead to meaningful anti-tumor activity. We look forward to evaluating our therapy alone and in combination with KEYTRUDA in a randomized trial of patients with multiple myeloma who are refractory or have relapsed with standard therapy. "

The agreement is between Adaptimmune and Merck & Co., Inc., Kenilworth, NJ, USA, through a subsidiary. Under the agreement, the trial will be sponsored by Adaptimmune. The agreement also includes provision for potential expansion to include Phase III registration studies in the same indication. Additional details were not disclosed.

About Multiple Myeloma

Multiple myeloma is a cancer formed by malignant plasma cells. Normal plasma cells are found in the bone marrow and are an important part of the immune system, which is made up of several types of cells that work together to fight infections and other diseases. Multiple myeloma is characterized by several features, including low blood counts, bone and calcium problems, infections, kidney problems, monoclonal gammopathy, and others; and by the proliferation of these plasma cells within bone marrow. The American Cancer Society estimates that approximately 30,300 new cases will be diagnosed in the United States in 2016. Average five-year survival rates are estimated to be approximately 45 percent with survival rates depending on factors such as age, stage of diagnosis and suitability for auto-SCT, which is used as part of the treatment for eligible patients with multiple myeloma. Despite recent therapeutic advances, multiple myeloma remains an incurable but treatable cancer. Patients are typically treated with repeat rounds of combination therapy with the time intervals to relapse becoming shorter with each successive line of therapy. The majority of patients eventually have a relapse which cannot be further treated.

About Adaptimmune's TCR Technology

Adaptimmune's proprietary SPEAR (Specific Peptide Enhanced Affinity Receptor) T-cell receptor (TCR) technology enables the company to genetically optimize TCRs, equipping them to recognize cancer antigens that are presented in small quantities on the surface of a cancer cell, whether of intracellular or extracellular origin, thus initiating cell death. The company's differentiated, proprietary technology allows it to reliably generate parental TCRs to naturally presented targets, affinity optimize its TCRs to bind cancer proteins from solid and hematologic cancers that are generally unavailable to naturally occurring TCRs, and to significantly reduce the risk of side effects resulting from off-target binding of healthy tissues.

About Adaptimmune

Adaptimmune is a clinical stage biopharmaceutical company focused on novel cancer immunotherapy products based on its SPEAR® (Specific Peptide Enhanced Affinity Receptor) T-cell 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 TCRs as a means of strengthening natural patient T-cell responses. Adaptimmune's lead program is a SPEAR T-cell therapy targeting the NY-ESO cancer antigen. Its NY-ESO SPEAR T-cell therapy has demonstrated signs of efficacy and tolerability in Phase 1/2 trials in solid tumors and in hematologic cancer types, including synovial sarcoma and multiple myeloma. Adaptimmune has a strategic collaboration and licensing agreement with GlaxoSmithKline for the development and commercialization of the NY-ESO TCR program. In addition, Adaptimmune has a number of proprietary programs. These include SPEAR T-cell therapies targeting the MAGE-A10 and AFP cancer antigens, which both have open INDs, and a further SPEAR T-cell therapy targeting the MAGE-A4 cancer antigen that is in pre-clinical phase with IND acceptance targeted for 2017. The company has identified over 30 intracellular target peptides preferentially expressed in cancer cells and is currently progressing 12 through unpartnered research programs. Adaptimmune has over 250 employees and is located in Oxfordshire, U.K. and Philadelphia, USA. For more information: <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 Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on August 8, 2016, 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.

KEYTRUDA® is a registered trademark of Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA.

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