November 1, 2017

Fate Therapeutics Announces Six Presentations at the 2017 ASH Annual Meeting

Oral Presentation Unveiling Generation of CD8αβ$^+$ T Cells from Engineered Pluripotent Cell Line for Off-the-Shelf CAR T-Cell Cancer Immunotherapy

Oral Presentation Highlighting GMP Production of iPSC-derived NK Cell Product Candidate FT500 to Support 1Q18 IND Filing

Poster Presentation Releasing Day 100 Efficacy Data from PROTECT Phase 1 Study of ProTmune™

SAN DIEGO, Nov. 01, 2017 (GLOBE NEWSWIRE) -- Fate Therapeutics, Inc. (NASDAQ:FATE), a biopharmaceutical company dedicated to the development of programmed cellular immunotherapies for cancer and immune disorders, announced today that two oral and four poster presentations detailing clinical and preclinical results will be featured at the 59th American Society of Hematology (ASH) Annual Meeting and Exposition. The meeting will be held December 9-12, 2017 in Atlanta, Georgia.

An oral presentation will describe the generation of CD8αβ$^+$ T cells from an induced pluripotent stem cell (iPSC) line engineered to express a chimeric antigen receptor (CAR). This breakthrough was led by Dr. Michel Sadelain, MD, PhD, Director, Center for Cell Engineering, Memorial Sloan Kettering Cancer Center (MSK), under the Company's multi-year sponsored research collaboration with MSK. As part of the collaboration, Fate Therapeutics has created clonal iPSC master cell lines engineered to express CARs and other functional elements and are also modified to attenuate alloreactivity and enhance persistence for off-the-shelf CAR T-cell immunotherapy. The Company's first iPSC-derived CAR T-cell product candidate FT819, which is derived from a clonal iPSC master cell line engineered to express a CAR targeting CD19 and edited to remove T-cell receptor (TCR) expression, is undergoing preclinical development.

A second oral presentation will describe the production under current good manufacturing practice (cGMP) conditions of FT500, the Company's first-of-kind natural killer (NK) cell product candidate derived from a clonal iPSC master cell line. The transformative manufacturing paradigm, which will be described by Jeffrey S. Miller, MD, Deputy Director of the Masonic Cancer Center, University of Minnesota, enables the efficient production of a large clonal population of NK cells in a single production run and is capable of yielding thousands of doses of homogeneous drug product for off-the-shelf delivery to patients. Fate Therapeutics plans to file a landmark Investigational New Drug (IND) application with the U.S. Food & Drug Administration (FDA) in the first quarter of 2018 to initiate first-in-human clinical investigation of FT500 in combination with FDA-approved checkpoint inhibitors for the treatment of advanced solid tumors.

In addition, Fate Therapeutics will present clinical data from the PROTECT study of ProTmune, a next-generation hematopoietic cell graft for patients with hematologic malignancies undergoing allogeneic hematopoietic cell transplantation (HCT). Key clinical outcomes, including incidence rates of acute graft-versus-host disease, cancer relapse and survival at 100 days following HCT, for the seven subjects administered ProTmune in the Phase 1 stage of PROTECT will be released. Three other poster presentations will highlight additional iPSC-derived immuno-oncology product candidates that the Company is developing.

2017 ASH Oral Presentations

- ***FT819 iPSC-derived CAR19 T-Cell Cancer Immunotherapy***

  Title: Generation of Clonal Antigen Specific CD8αβ$^+$ Cytotoxic T Lymphocytes from Renewable Pluripotent Stem Cells for Off-the-Shelf T-Cell Therapeutics
  Last Author: Michel Sadelain, MD, PhD, Director, Center for Cell Engineering, Memorial Sloan Kettering Cancer Center
  Publication Number: 163
  Session: 703. Adoptive Immunotherapy: Immune Therapeutics for Hematologic Cancers
  Date and Time: Saturday, December 9, 2017, 12:00 PM
  Location: Building B, Level 2, B206

- ***FT500 iPSC-derived NK Cell Cancer Immunotherapy***

Title: Clinical Translation of Pluripotent Cell-Derived Off-the-Shelf Natural Killer Cell Cancer Immunotherapy
Last Author: Jeffrey S. Miller, MD, Deputy Director of the Masonic Cancer Center, University of Minnesota
Publication Number: 656
Session: 711. Cell Collection and Processing
Date and Time: Monday, December 11, 2017, 10:45 AM
Location: Building B, Level 2, B216-B217

2017 ASH Poster Presentations

- ***iPSC-derived CAR NK Cell Cancer Immunotherapy***
  Title: Engineering Human Induced Pluripotent Stem Cells with Novel Chimeric Antigen Receptors to Generate Natural Killer Cell Cancer Immunotherapies with Targeted Anti-Tumor Activity
  Last Author: Dan S. Kaufman, MD, PhD, Director of Cell Therapy, UCSD
  Publication Number: 1905
  Session: 703. Adoptive Immunotherapy: Poster I
  Date and Time: Saturday, December 9, 2017, 5:30 PM - 7:30 PM
  Location: Building A, Level 1, Hall A2

- ***iPSC-derived Cancer Immunotherapy Product Platform***
  Title: Multi-Functional Genetic Engineering of Pluripotent Cell Lines for Universal Off-the-Shelf Natural Killer Cell Cancer Immunotherapy
  Last Author: Bahram Valamehr, PhD, VP Cancer Immunotherapy, Fate Therapeutics
  Publication Number: 3187
  Session: 703. Adoptive Immunotherapy: Poster II
  Date and Time: Sunday, December 10, 2017, 6:00 PM - 8:00 PM
  Location: Building A, Level 1, Hall A2

- ***FT516 iPSC-derived hnCD16 NK Cell Cancer Immunotherapy***
  Title: Genetically Engineered Pluripotent Cell-Derived Natural Killer Cell Therapy Provides Enhanced Antibody Dependent Cellular Cytotoxicity Against Hematologic Malignancies and Solid Tumors in Combination with Monoclonal Antibody Therapy
  Last Author: Dan S. Kaufman, MD, PhD, Director of Cell Therapy, UCSD
  Session: 703. Adoptive Immunotherapy: Poster III
  Publication Number: 4452
  Date and Time: Monday, December 11, 2017, 6:00 PM - 8:00 PM
  Location: Building A, Level 1, Hall A2

- ***ProTmune***
  Title: ProTmune, the Next Generation Graft for Allogeneic Hematopoietic Cell Transplantation: Phase 1 Safety and Efficacy Data
  First Author: Richard Maziarz, MD, Principal Investigator, Oregon Health Sciences University
  Session: 722. Clinical Allogeneic Transplantation: Acute and Chronic GVHD, Immune Reconstitution
  Publication Number: 4498
  Date and Time: Monday, December 11, 2017, 6:00 PM - 8:00 PM
  Location: Building A, Level 1, Hall A2

About Fate Therapeutics' iPSC Product Platform
The Company's proprietary induced pluripotent stem cell (iPSC) product platform enables genetic engineering, high-throughput single-cell isolation and clonal selection of human iPSCs and supports long-term maintenance of human iPSCs as master pluripotent cell lines. Human iPSCs possess the unique dual properties of unlimited self-renewal and differentiation potential into all cell types of the body. Similar to master cell lines used for the manufacture of monoclonal antibodies, clonal iPSC master cell lines can serve as a renewable cell source for the consistent and repeated manufacture of homogeneous cell products with the potential to treat many different diseases and many thousands of patients in an off-the-shelf manner. Fate Therapeutics' iPSC product platform is supported by an intellectual property portfolio of over 90 issued patents and 100 pending patent applications.

About Fate Therapeutics, Inc.
Fate Therapeutics is a clinical-stage biopharmaceutical company dedicated to the development of programmed cellular immunotherapies for cancer and immune disorders. The Company's hematopoietic cell therapy pipeline is comprised of NK- and T-cell immuno-oncology programs, including off-the-shelf product candidates derived from engineered induced pluripotent cell lines, and immuno-regulatory programs, including product candidates to prevent life-threatening complications in patients undergoing hematopoietic cell transplantation and to promote immune tolerance in patients with autoimmune disease. Its adoptive cell therapy programs are based on the Company's novel *ex vivo* cell programming approach, which it applies to modulate the therapeutic function and direct the fate of immune cells. Fate Therapeutics is

headquartered in San Diego, CA. For more information, please visit www.fatetherapeutics.com.

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