February 21, 2016

Fate Therapeutics to Present Preclinical Data for ProTmune™ at 2016 BMT Tandem Meetings

Poster Presentation to Highlight Anti-Tumor Properties of Ex Vivo Programmed Donor T Cells

Phase 1/2 Clinical Trial of ProTmune in Mobilized Peripheral Blood HCT to Commence Enrollment in Mid-2016

SAN DIEGO, Feb. 21, 2016 (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 it will present preclinical anti-tumor data for ProTmune™, its lead product candidate for the prevention of acute graft-versus-host-disease (GvHD) and cytomegalovirus (CMV) infection in patients undergoing mobilized peripheral blood (mPB) hematopoietic cell transplantation (HCT), at the BMT Tandem Meetings in Honolulu, Hawaii. The Company's investigational new drug application for ProTmune was cleared by the U.S. Food and Drug Administration in January 2016, and Fate Therapeutics plans to initiate enrollment of a multi-center, randomized, controlled Phase 1/2 clinical trial in adult patients with hematologic malignancies in mid-2016.

"Acute GvHD is a leading cause of morbidity and mortality in immunocompromised patients undergoing allogeneic HCT. Therapeutic strategies aimed at addressing GvHD, including the use of systemic agents that suppress or deplete the immune system, can compromise or eliminate T cells, often leading to severe infections and disease relapse," said Scott Wolchko, President and Chief Executive Officer of Fate Therapeutics. "These encouraging new preclinical data, which demonstrate that the cancer-fighting properties of *ex vivo* programmed donor T cells are maintained following adoptive transfer, continue to underscore the multi-dimensional therapeutic value proposition that we aim to deliver to HCT patients with ProTmune."

ProTmune is a programmed cellular immunotherapy undergoing clinical development for use as an allogeneic hematopoietic cell source for HCT. The cell therapy is produced by modulating mPB with two small molecules (FT1050 and FT4145) *ex vivo* to enhance the biological properties and therapeutic function of immune cells, and the resulting programmed mPB cells are adoptively transferred to a patient through a single administration. Fate Therapeutics plans to initiate enrollment in mid-2016 of a Phase 1/2 clinical trial of ProTmune to evaluate safety and tolerability and to assess its potential to prevent acute GvHD and CMV infection.

Since the anti-tumor, or graft-versus-leukemia (GvL), activity of donor T cells is a major component of the overall beneficial effects of allogeneic HCT for hematologic malignancies, scientists at Fate Therapeutics defined the impact of FT1050-FT4145 modulation on the anti-tumor effector properties of donor T cells in a murine model of leukemia. New preclinical data being presented today demonstrate that *ex vivo* programmed donor T cells retain GvL activity, which is critical to eradicating residual cancer and realizing the curative potential of allogeneic HCT. In December 2015, the Company presented data at the American Society of Hematology 2015 Annual Meeting demonstrating that the adoptive transfer of FT1050-FT4145 programmed mPB cells results in a statistically-significant reduction in GvHD score and improvement in survival in a murine model of allogeneic HCT, as compared to vehicle-treated cells. Taken together, these preclinical data suggest that *ex vivo* small molecule programming of donor immune cells is a highly-differentiated therapeutic strategy to suppress the GvHD response and maintain the GvL activity of donor T cells. The full data presentation will be held today at 6:45 p.m. HST (11:45 p.m. EST) at the Hawaii Convention Center in Honolulu, Hawaii.

According to the Center for International Blood and Marrow Transplant Research, there are approximately 30,000 allogeneic HCT procedures performed globally each year, of which approximately 65% utilize mPB as the donor cell source. GvHD and severe infections are life-threatening complications that significantly impair the quality of life and that often compromise the curative potential of HCT, with 35-50% of patients developing acute GvHD and 70-80% of patients experiencing at least one severe infection. There are currently no approved therapies for the prevention of GvHD or CMV infection in patients undergoing allogeneic HCT, giving rise to a significant unmet medical need.

About Fate Therapeutics, Inc.

Fate Therapeutics is a biopharmaceutical company dedicated to the development of programmed cellular immunotherapies for cancer and immune disorders. The Company's cell-based product pipeline is comprised of off-the-shelf immuno-oncology therapies, including NK- and T-cell-based candidates derived from induced pluripotent cells, and immuno-

regulatory therapies, including hematopoietic cell-based candidates for protecting the immune system of patients undergoing hematopoietic cell transplantation and for suppressing autoimmunity. Its adoptive cell therapy candidates 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.

Forward-Looking Statements

This release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the Company's intention to initiate a clinical trial for ProTmune during 2016, the therapeutic potential of ProTmune, and the Company's plans and ability to develop programmed cellular immunotherapies, including ProTmune. These and any other forward-looking statements in this release are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to, the risk of cessation or delay of planned development and clinical activities for a variety of reasons (including any adverse events or other results that may be observed during development), any inability to develop programmed cellular immunotherapies which are suitable for therapeutic applications, the risk that results observed in prior preclinical studies of ProTmune may not be replicated in subsequent studies or clinical trials, and the risk that ProTmune or programmed cellular immunotherapies that the Company may develop may not produce therapeutic benefits or may cause other unanticipated adverse effects. For a discussion of other risks and uncertainties, and other important factors, any of which could cause the Company's actual results to differ from those contained in the forward-looking statements, see the risks and uncertainties detailed in the Company's periodic filings with the Securities and Exchange Commission, including but not limited to the Company's Form 10-Q for the quarter ended September 30, 2015, and from time to time the Company's other investor communications. The Company is providing the information in this release as of this date and does not undertake any obligation to update any forward-looking statements contained in this release as a result of new information, future events or otherwise.

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