May 7, 2015

Fate Therapeutics Reports First Quarter 2015 Financial Results

Strategic Research Collaboration Established with Juno Therapeutics to Apply Small Molecule Modulators for Programming CAR and TCR Immunotherapies

Additional Data from Ongoing Phase 2 PUMA Study of PROHEMA® Continue to Demonstrate Acceleration of, and Increased Incidence of Early, Neutrophil Engraftment

Newly-Reported Immunoprotection Data from Ongoing Phase 2 PUMA Study of PROHEMA® Show Reduced Incidence of Viral Reactivation and Serious Infections

First Patient Treated in Phase 1b PROMPT Study of PROHEMA® with Clinical Data From PUMA and PROVIDE Studies Expected in 2H15

SAN DIEGO, May 7, 2015 (GLOBE NEWSWIRE) -- Fate Therapeutics, Inc. (Nasdaq:FATE), a biopharmaceutical company engaged in the development of programmed cellular therapeutics for the treatment of severe, life-threatening diseases, today announced its financial results for the first quarter ended March 31, 2015, and recent corporate and clinical highlights.

"We have made significant progress on both a clinical and strategic front during the first several months of 2015. To date, the data from our ongoing Phase 2 PUMA study underscore the therapeutic potential of our innovative *ex vivo* small molecule modulation approach to cell therapy - we continue to observe acceleration of, and increased incidence of early, neutrophil engraftment in subjects administered PROHEMA. Additionally, the data also suggest that modulation may meaningfully affect the T cell compartment and may convey protective immunity against viral and bacterial infections," said Christian Weyer, M.D., M.A.S., President and Chief Executive Officer of Fate Therapeutics. "We are also very pleased to have entered into a significant strategic partnership with Juno Therapeutics to apply our cell programming platform to CAR T and TCR immunotherapies. By bringing together Juno's scientific leadership in immunotherapy and our expertise in optimizing the properties of hematopoietic cells, we believe we have formed a formidable team to maximize the *in vivo* biological activity and therapeutic potential of T cells and to enable the development of best-in-class CAR T and TCR immunotherapies."

Recent Corporate & Clinical Highlights

- **Strategic Collaboration with Juno Therapeutics to Leverage Cell Programming Platform for CAR T and TCR Immunotherapies.** On May 4, 2015, the Company entered into an exclusive research collaboration and license agreement with Juno Therapeutics, Inc. (Juno), a leading biopharmaceutical company focused on re-engaging the body's immune system to revolutionize the treatment of cancer, to identify and apply small molecule modulators for programming genetically-engineered chimeric antigen receptor (CAR) T cell and T cell receptor (TCR) immunotherapies. Under the collaboration, Juno will pay Fate an upfront payment of $5.0 million and purchase one million shares of Fate's common stock at $8.00 per share for an aggregate purchase price of $8.0 million. Juno has agreed to fund all of the Company's collaboration activities for an initial four-year research term and is responsible for the development and commercialization of genetically-engineered T cell immunotherapies incorporating the Company's small molecule modulators. For each CAR and TCR immunotherapy that is developed by Juno which incorporates modulators identified through the collaboration, the Company is eligible to receive approximately $50.0 million in target selection fees and clinical, regulatory and commercial milestones, plus low single-digit royalties on net sales. The Company has retained exclusive rights to its intellectual property, including its intellectual property arising under the collaboration, for all purposes other than in connection with genetically-engineered CAR and TCR immunotherapies against tumor-associated antigen targets selected by Juno.
- **Encouraging Reconstitution and Immunoprotection Data in Ongoing Phase 2 PUMA Study of PROHEMA Observed.** On May 6, 2015, the Company reported additional results from its ongoing Phase 2 PUMA study of PROHEMA, an *ex vivo* programmed hematopoietic cellular therapeutic derived from umbilical cord blood. The clinical update included data from 18 subjects in the PROHEMA cohort and 12 subjects in the concurrent control cohort. Based on an analysis of the currently available data:
    - Subjects administered PROHEMA had both an increased incidence of early neutrophil engraftment and a reduction in median time of neutrophil engraftment, as compared to a historical control group as well as to subjects in the concurrent control cohort. Specifically, 14 subjects administered PROHEMA achieved neutrophil engraftment, nine of which engrafted prior to both the applicable historical control median and median of the concurrent control cohort (64%). Additionally, engrafting subjects administered PROHEMA had a six-day reduction and a five-day reduction in median time of neutrophil engraftment as compared to the historical control medians and the concurrent control medians, respectively. Neutrophil engraftment is an early and essential clinical milestone for

patients undergoing hematopoietic stem cell transplantation (HSCT), and delay in or failure of engraftment leaves a patient severely immunocompromised and exposed to high risk of early morbidity and mortality.
    - CMV sero-positive subjects administered PROHEMA had both a reduced incidence of CMV reactivation and a reduction in the proportion of tests that were positive for CMV during the first 100 days post-transplant, as compared to CMV sero-positive subjects in the concurrent control group. Specifically, CMV reactivation was observed in seven of the 11 PROHEMA subjects (64%) who tested sero-positive for CMV at baseline, as compared to 11 of 11 concurrent control subjects (100%) who tested sero-positive for CMV at baseline. Additionally, among CMV sero-positive subjects who had reached at least 100 days post-transplant, 14% of tests (14 of 101) were positive for CMV reactivation in subjects administered PROHEMA (n=8), as compared to 23% of tests (29 of 125) that were positive for CMV reactivation in the concurrent control cohort (n=9). CMV infection and CMV disease are significant complications following HSCT, and prevention of CMV reactivation may reduce the medical and economic burden of HSCT by avoiding the toxicity and high cost of pre-emptive treatment with anti-viral agents.
    - Subjects administered PROHEMA had both a reduced incidence, and a reduction in the number, of infection-related adverse events, as compared to the concurrent control cohort. Specifically, 10 of 18 subjects administered PROHEMA (56%) experienced at least one infection-related adverse event, and these 10 subjects experienced a total of 13 infection-related adverse events (1.3 per subject). By comparison, eight of 12 concurrent control subjects (67%) experienced at least one infection-related adverse event, and these eight subjects experienced a total of 19 infection-related adverse events (2.4 per subject). Among all 18 subjects administered PROHEMA, no adverse events of CMV infection (0%) and six adverse events of bacterial infection (33%) have been reported. Among all 12 concurrent control subjects, four adverse events of CMV infection (33%) and seven adverse events of bacterial infection (58%) have been reported.

The Company expects to report data on the primary efficacy endpoint from the Phase 2 PUMA study in the second half of 2015.

- **First Patient in Pediatric Phase 1b PROMPT Study Treated with PROHEMA.** The first subject has been treated in the Company's Phase 1b PROMPT study, an open-label clinical trial of PROHEMA designed to enroll 18 pediatric subjects undergoing single umbilical cord blood transplantation for the treatment of blood cancers. The Company expects to report engraftment data from the PROMPT study in the second half of 2015.

Financial Results

- **Cash Position:** Cash and cash equivalents as of March 31, 2015 were $42.3 million, compared to $49.1 million as of December 31, 2014. The decrease is primarily driven by the Company's use of cash to fund operating activities of $6.4 million during the first quarter of 2015. Cash and cash equivalents as of March 31, 2015 did not include the $5.0 million upfront payment from, and the $8.0 million in proceeds from the purchase of one million shares of common stock by, Juno in connection with entering into the strategic research collaboration.
- **Total Operating Expenses:** Total operating expenses were $7.3 million for the first quarter of 2015, compared to $6.9 million for the first quarter of 2014. Operating expenses for the first quarter of 2015 include $0.6 million of stock compensation expense, compared to $0.9 million for the first quarter of 2014.
- **R&D Expenses:** Research and development expenses were $4.6 million for the first quarter of 2015, compared to $4.5 million for the first quarter of 2014. The increase in R&D expenses is primarily related to additional headcount and costs associated with the Company's conduct of its PUMA study, offset by a $0.4 million charge during the first quarter of 2014 related to the achievement of a pre-clinical milestone pursuant to Fate's April 2010 asset acquisition agreement with Verio Therapeutics.
- **G&A Expenses:** General and administrative expenses were $2.8 million for the first quarter of 2015, compared to $2.4 million during the first quarter of 2014. The increase in G&A expenses is largely due to incremental expenses across the Company's operations.
- **Common Shares Outstanding:**Common shares outstanding as of March 31, 2015 and December 31, 2014 were 20.6 million. Common shares outstanding as of March 31, 2015 did not include the one million shares of common stock sold to Juno in connection with entering into the strategic research collaboration.

Today's Conference Call and Webcast

The Company will conduct a conference call on Thursday, May 7th, 2015 at 5:00 p.m. EDT to report on the Company's financial and operating results for the quarter ended March 31st, 2015 and provide a corporate update. In order to participate in the conference call, please dial 1-877-303-6235 (domestic) or 1-631-291-4837 (international) and refer to conference ID 39285561. The live webcast can be accessed under "Events & Presentations" in the Investors and Media section of the Company's website at www.fatetherapeutics.com. The archived webcast will be available on the Company's website beginning approximately two hours after the event.

About The PUMA Study

The PUMA (PROHEMA® in UMbilical cord blood transplant in Adults) study is an ongoing, randomized, open-label Phase 2 clinical trial of PROHEMA in adult subjects undergoing double umbilical cord blood transplantation for the treatment of

hematologic malignancies. The PUMA study is designed to enroll approximately 60 subjects, randomized at a ratio of 2:1, with approximately 40 subjects intended to receive PROHEMA plus an unmanipulated cord blood unit (PROHEMA cohort), and approximately 20 subjects intended to receive two unmanipulated cord blood units (concurrent control cohort). The primary endpoint of the PUMA study is based on a categorical analysis of neutrophil engraftment, and the clinical trial is powered to show with statistical significance that 70% of subjects with neutrophil engraftment in the PROHEMA treatment arm engraft prior to the pre-specified historical control day of neutrophil engraftment (which have been established as 26 days for subjects receiving myeloablative conditioning and 21 days for subjects receiving reduced-intensity conditioning). Multiple exploratory clinical endpoints are being investigated in the PUMA study to inform and support potential registrational strategies including key measures of hematopoietic reconstitution and the immunotherapeutic potential of PROHEMA, such as time to and incidence of neutrophil and platelet engraftment, bacterial infections, viral reactivation, graft versus host disease, engraftment failure, relapse of underlying disease, and overall and disease-free survival.

About Fate Therapeutics, Inc.

Fate Therapeutics is a clinical-stage biopharmaceutical company engaged in the development of programmed cellular therapeutics for the treatment of severe, life-threatening diseases. The Company's approach utilizes established pharmacologic modalities, such as small molecules, to program the fate and function of cells *ex vivo*. The Company's lead product candidate, PROHEMA®, is an *ex vivo* programmed hematopoietic cellular therapeutic, which is currently in clinical development for the treatment of hematologic malignancies and rare genetic disorders in patients undergoing hematopoietic stem cell transplantation (HSCT). The Company is also using its proprietary induced pluripotent stem cell platform to develop *ex vivo* reprogrammed hematopoietic and myogenic cellular therapeutics. 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 therapeutic potential of PROHEMA® and any product candidates that may arise from the Company's strategic collaboration with Juno Therapeutics, Inc., the Company's clinical development plans for PROHEMA, the timing of availability of data from the Company's ongoing Phase 2 PUMA study and its recently initiated PROMPT study, and the amount and timing of potential milestone payments and royalties that the Company is eligible to receive under its strategic collaboration with Juno. 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 risks that: the results of PROHEMA observed in prior preclinical and clinical development may not be replicated in the ongoing PUMA study or subsequent clinical trials of PROHEMA, the results observed in the PUMA study to date represent only interim results for a limited number of patients and final results may differ materially, the Company may cease or delay clinical development activities for a variety of reasons (including additional requirements that may be imposed by regulatory authorities, changes in regulatory approval pathways, difficulties or delays in patient enrollment in current and planned clinical trials, and any adverse events or other negative results that may be observed during clinical development), or the Company's strategic collaboration with Juno may not be successful or may be terminated for a variety of reasons. For a discussion of other risks and uncertainties, and other important factors, any of which could cause our 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 March 31st, 2015, and from time to time the Company's other investor communications. Fate Therapeutics 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.

Availability of Other Information about Fate Therapeutics, Inc.

Investors and others should note that we routinely communicate with our investors and the public using our company website (www.fatetherapeutics.com) and our investor relations website (ir.fatetherapeutics.com), including without limitation, through the posting of investor presentations, Securities and Exchange Commission filings, press releases, public conference calls and webcasts on our websites. The information that we post on these websites could be deemed to be material information. As a result, we encourage investors, the media, and others interested in Fate Therapeutics to review the information that we post on these websites on a regular basis. The contents of our website, or any other website that may be accessed from our website, shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

Condensed Consolidated Statements of Operations and Comprehensive Loss

(in thousands, except share and per share data)

	For the Three Months Ended

	March 31,	
	2015	2014
	(unaudited)	
Operating expenses:		
Research and development	$ 4,568	$ 4,522
General and administrative	2,756	2,415
Total operating expenses	7,324	6,937
Loss from operations	(7,324)	(6,937)
Other income (expense):		
Interest income	1	-
Interest expense	(558)	(43)
Total other income (expense)	(557)	(43)
Net loss and comprehensive loss	$ (7,881)	$ (6,980)
Net loss per common share, basic and diluted	$ (0.38)	$ (0.34)
Weighted-average shares used to compute basic and diluted net loss per share	20,554,478	20,346,856

Condensed Consolidated Balance Sheets
(in thousands)

	March 31, 2015	December 31, 2014
	(unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 42,349	$ 49,101
Prepaid expenses and other assets	443	771
Total current assets	42,792	49,872
Long-term assets	1,698	1,332
Total assets	$ 44,490	$ 51,204
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 3,098	$ 2,905
Long-term debt, current portion	3,256	1,546
Other current liabilities	59	130
Total current liabilities	6,413	4,581
Long-term debt, less current portion	16,414	18,083
Other long-term liabilities	412	200
Stockholders' equity	21,251	28,340
Total liabilities and stockholders' equity	$ 44,490	$ 51,204

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