



Fate Therapeutics

Guiding cells to improve life

ABOUT FATE THERAPEUTICS

Fate Therapeutics is interrogating adult stem cell biology and applying induced pluripotent stem cell (iPSC) technology to develop Stem Cell Modulators (SCMs) – small molecules and biologics that guide cell fate *in vivo* for therapeutic purposes. The Company's drug discovery engine utilizes the most advanced rare cell isolation and cell state characterization technologies to elucidate disease biology and identify selective targets for intervention.

The first drug candidate from Fate Therapeutics is FT1050, a small molecule drug that is currently undergoing Phase 1b testing for hematopoietic stem cell (HSC) support. Administered *ex vivo* during the standard course of a HSC transplant, FT1050 is designed to improve the overall efficiency of treatment by enhancing HSC proliferation and homing *in vivo*.

LEADERSHIP IN STEM CELL BIOLOGY

The modulation of endogenous populations of stem and progenitor cells can be achieved in a cell-type and context-specific manner. Founded in 2007, Fate Therapeutics united six of the leading academic investigators in stem cell and developmental biology to discover and develop conventional pharmaceuticals that selectively target and coax adult stem cells within the body to proliferate and differentiate. The Company has established a robust stem cell biology discovery platform that can be leveraged across a broad therapeutic spectrum of drug discovery and development opportunities to address diseases that currently have limited to no treatment options.

- **Models of Stem Cell Biology and Physiology** – Fate Therapeutics has created powerful phenotypic assays and *in vivo* model systems to elucidate the biology and role of adult stem cell modulation in human physiology and disease.
- **Innovative Cell State Characterization Technologies** – The Company has deployed the most advanced quantitative molecular biology systems, including genomic, proteomic and epigenetic expression technologies, to exquisitely identify and characterize cell state and uncover cell-specific biological mechanisms to modulate cell fate.
- **Award Winning iPSC Technology** – Fate Therapeutics utilizes industry-leading cellular reprogramming and differentiation technologies for generating cell types of interest for target discovery and high-throughput screening. The Company's protein-based reprogramming platform in combination with its novel small molecule conditions offers a highly efficient, non-viral, non-DNA based method to recapitulate human physiology for commercial scale drug discovery.

MANAGEMENT

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Sr. Dir. Stem Cell Biology

Peter Flynn, Ph.D.

Sr. Dir. Protein Discovery

Francine Farouz, Ph.D.

Sr. Dir. Medicinal Chemistry

INVESTORS

Fate Therapeutics has completed two rounds of private financing and is backed by top-tier life sciences venture investors and a syndicate of strategic investors.

\$15mm Series A

April 2008

\$32mm Series B

November 2009



SCIENTIFIC FOUNDERS

Philip Beachy, Ph.D.

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STEM CELL MODULATOR PROGRAMS

FT1050: Fate Therapeutics is developing its lead SCM, FT1050, to enhance HSC proliferation and homing. The small molecule is currently in a Phase 1b clinical trial at the Dana-Farber Cancer Institute and Massachusetts General Hospital in adult patients with hematologic malignancies, such as leukemia and lymphoma, who have undergone reduced intensity chemotherapy and are in need of HSC support.

FT1334: Fate is in preclinical development of new osteogenic small molecules with increased specificity and enhanced pharmacologic and pharmacoeconomic properties. With confirmed *in vitro* and *in vivo* osteogenic activity, FT1334 is a novel small molecule that can activate the Hedgehog pathway to promote osteoblast differentiation and may be used to promote positive bone growth for osteo-regenerative medicine.

DISCOVERY: Fate is developing SCMs of Wnt, Hedgehog and other developmental biology pathways with therapeutic applications in hearing loss, fibrosis, metabolic diseases and oncology.

AWARD-WINNING iPSC TECHNOLOGY PLATFORM

Fate Therapeutics has forged a first-mover advantage in cellular reprogramming and differentiation and is pioneering the development of a "pharmaceutical" grade iPSC to support commercial scale drug discovery. Under a research collaboration between Fate and TSRI, Dr. Ding became the first to accomplish the extraordinary feat of iPSC generation without genetic manipulation using protein-induced reprogramming technologies. Additionally, the collaborators identified a cocktail of three small molecules for generating iPSCs in a manner that is 200 times more efficient than and twice as fast as conventional methods for reprogramming adult human cells.

The protein-based reprogramming breakthrough was honored as the Top Technology of 2009 by The Scientist, and the Company's iPSC technology received the 2009 North American Technology Innovation Award from Frost & Sullivan. Fate Therapeutics was also named one of the 50 most innovative companies in the world by Technology Review.



Generation of Induced Pluripotent Stem Cells Using Recombinant Proteins

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