Fate Therapeutics (FATE)

Q2:14, Interim PUMA Review Shows Improved ProHema Formulation is Safe, Reiterate OUTPERFORM

- **Following the first of two planned interim reviews, an independent DMC supported continuation of the Phase II PUMA study evaluating ProHema in adults undergoing hematopoietic stem cell transplant (HSCT) for the treatment of hematological malignancies.** The review included data from 10 patients, including seven that received ProHema plus an untreated cord blood unit (CBU) and three that received two untreated CBUs.
- **No safety signals were identified in the review, which we view as a positive signal of likely improved engraftment with ProHema.** The next interim review will occur after an additional five patients are treated with ProHema, which we expect in late 2014/early 2015 based on current enrollment rates, or possibly sooner if the positive safety signal spurs enrollment. A clinical update from PUMA will be available in Q4:14, and full data from the 60-patient study is expected in mid-2015.
- **PROMPT and PROVIDE will demonstrate the viability of ProHema in the pediatric patient population, where typically only a single CBU is used during transplants.** Importantly, PROVIDE will examine the utility of ProHema in rare inherited disorders. The Phase Ib studies will assess the benefit of ProHema in pediatric patients (1-18 years of age) undergoing HSCT for hematological malignancies (PROMPT) and rare inherited metabolic disorders (PROVIDE).
- **Data from the PROMPT and PUMA trials are expected in mid-2015, and positive results from both could support a single Phase III registrational study enrolling both adult and pediatric patients.**
- **The company reported a net loss of ($0.30) per share, above our ($0.36) estimate and consensus ($0.37).** Cash balance at Q2 end was $42.0M, which we expect will be sufficient to fund operations through to H2:15. During the quarter, FATE secured a $20M debt facility, of which $10M has been accessed and the remainder will become available subject to the outcome of the second interim review of the PUMA study.
- **Reiterate OUTPERFORM and $14 price target.** We arrive at our $14 PT by applying a 6x multiple to 2019 revenues discounted by 35% annually.

FYE Dec	2013A	2014E			2015E		
REV	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	--	0.0A		$0.0A	0.0E		$0.0E
Q2 Jun	0.8A	0.0A		0.0A	0.0E		0.0E
Q3 Sep	0.2A	0.0E		0.0E	0.0E		0.0E
Q4 Dec	0.0A	0.0E		0.0E	0.0E		0.0E
Year*	**1.0A**	**0.0E**		**$0.0E**	**0.0E**		**$16.7E**
Change	--	-100%			--		
	2013A	**2014E**			**2015E**		
EPS	**ACTUAL**	**CURR.**	**PREV.**	**CONS.**	**CURR.**	**PREV.**	**CONS.**
Q1 Mar	--	($0.34)A		($0.34)A	($0.25)E	($0.33)E	($0.33)E
Q2 Jun	($7.41)A	($0.30)A	($0.36)A	($0.30)A	($0.26)E	($0.34)E	($0.34)E
Q3 Sep	($4.81)A	($0.29)E	($0.37)E	($0.36)E	($0.27)E	($0.34)E	($0.34)E
Q4 Dec	($0.29)A	($0.26)E	($0.33)E	($0.36)E	($0.23)E	($0.29)E	($0.34)E
Year*	**($12.50)A**	**($1.18)E**	**($1.40)E**	**($1.37)E**	**($1.00)E**	**($1.30)E**	**($0.88)E**
P/E	--	--			--		
Change	--	91%			15%		

Consensus estimates are from Thomson First Call.
** Numbers may not add up due to rounding.*

August 18, 2014

Price
$5.41

Rating
OUTPERFORM

12-Month Price Target
$14

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Company Information

Shares Outst (M)	20.6
Market Cap (M)	$111.2
52-Wk Range	$4.30 - $13.55
Book Value/sh	$N/A
Cash/sh	$2.04
Enterprise Value (M)	$69.2
LT Debt/Cap %	--
Cash Burn (M)	$27.0

Company Description

Fate Therapeutics, Inc., is based in San Diego, California, and is focused on modulating the activity of adult stem cells used in stem cell transplants for the treatment of hematological cancers, rare diseases and muscular dystrophies.

Source: Thomson Reuters

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Risks to the achievement of our price target include failure to gain approval for ProHema, failure to achieve sales estimates for ProHema and failure to achieve earnings estimates.

- **PROMPT will begin in Q3:14 and enroll up to 18 patients across three age cohorts, with the primary endpoint being safety as assessed by neutrophil engraftment.** PROVIDE will begin in Q4:14 and will enroll up to 12 patients with various lysosomal and peroxisomal storage disorders (like Hunter and Hurler syndrome, Krabbe disease and certain other leukodystrophies) characterized by progressive neurocognitive deterioration.

- **Separately, FATE's muscle regeneration program continues to develop.** The company said it has begun development of an induced pluripotent stem cell (iPSC) derived myogenic progenitor cell (iMPC) therapeutic. iMPCs are precursor cells that can help with muscle fiber regeneration and repair, and FATE is evaluating their potential in models of degenerative muscle disease. The company also plans to identify a lead product from their Wnt7a program to advance into late-stage preclinical testing for muscle regeneration.

Milestones

Q3:14	Start of Phase Ib PROMPT study of ProHema in pediatric patients undergoing HSCT for hematologic malignancies
Q4:14	Start of Phase Ib PROVIDE study of ProHema in pediatric patients undergoing HSCT for rare inherited metabolic disorders
Q4:14	Clinical update from Phase II PUMA trial of ProHema in adults undergoing HSCT for hematologic malignancies
Late '14/Early '15	Second interim review of PUMA trial
Mid:15	Full data from Phase II PUMA trial of ProHema

Financial Model

8/18/2014
Ticker: (FATE:Nasdaq)
Fate Therapeutics, Inc

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	2012A	2013A	Q1	Q2	Q3	Q4	2014E	2015E	2016E	2017E	2018E	2019E
Revenues:												
US Product Sales	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$43,180	$181,224
ex-US Product Sales	0	0	0	0	0	0	0	0	0	0	27,896	195,124
Licensing and Other Revenues	2,670	971	0	0	0	0	0	0	0	0	0	0
Total Revenues	**2,670**	**971**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**71,076**	**376,348**
Cost and Expenses:												
Cost of Sales	0	0	0	0	0	0	0	0	0	0	4,318	18,122
R&D	11,999	12,007	4,522	3,968	4,166	4,375	17,031	18,391	21,430	24,198	26,192	28,352
SG&A	4,228	6,639	2,415	2,072	2,113	2,156	8,756	8,995	9,383	10,009	35,007	53,594
Total Operating Expenses	**16,227**	**18,646**	**6,937**	**6,040**	**6,280**	**6,530**	**25,787**	**27,386**	**30,813**	**34,207**	**65,517**	**100,068**
Operating Income (Loss)	(13,557)	(17,675)	(6,937)	(6,040)	(6,280)	(6,530)	(25,787)	(27,386)	(30,813)	(34,207)	5,559	276,280
Net Interest Income (Expense)	(486)	(562)	(43)	(27)	347	222	498	1,615	3,078	2,117	3,073	6,039
Other non-operating Income (Expense)	(196)	0	0	0	0	0	0	0	0	0	0	0
Income Before Income Taxes	(14,239)	(18,237)	(6,980)	(6,067)	(5,933)	(6,309)	(25,289)	(25,771)	(27,735)	(32,090)	8,633	282,319
Provision for Income Taxes	0	0	0	0	0	0	0	0	0	0	1,688	45,910
Net Income (Loss)	(14,239)	(18,237)	(6,980)	(6,067)	(5,933)	(6,309)	(25,289)	(25,771)	(27,735)	(32,090)	6,945	236,409
Non-GAAP EPS	**(13.21)**	**(1.05)**	**(0.34)**	**(0.30)**	**(0.29)**	**(0.26)**	**(1.05)**	**(0.90)**	**(0.96)**	**(1.01)**	**0.18**	**7.11**
GAAP EPS	**(13.06)**	**(12.50)**	**(0.34)**	**(0.30)**	**(0.29)**	**(0.26)**	**(1.18)**	**(1.00)**	**(0.94)**	**(1.06)**	**0.20**	**7.14**
Total Shares Outstanding	1,090	20,425	20,450	20,561	20,586	24,586	24,586	29,626	29,646	32,661	33,119	33,119
Cash Burn	(13,274)	(17,834)	(6,950)	(6,433)	(7,222)	(6,397)	(27,002)	(27,255)	(30,531)	(33,928)	985	256,270
Cash Balance	9,087	54,036	47,881	42,012	45,031	76,565	76,565	121,325	93,977	124,104	126,260	342,319

Analyst Biography

David Nierengarten, Ph.D.

David is an Analyst covering stocks in the Biotechnology/Biopharmaceuticals/BioDefense sector. His prior sell-side research experience at Robert W. Baird & Co. covered biotechnology companies of all market capitalizations, with a focus on oncology and rare diseases.

David received his B.S. (Biochemistry) from the University of Wisconsin-Madison and Ph.D. (Molecular and Cell Biology) from the University of California-Berkeley.

David's Edge: David's early stage venture capital investing experience gives him a balanced perspective on developmental-stage biotechnology companies and their ultimate risk/reward potential. His experience on the other side of that equation in a clinical-stage, venture backed biotechnology company provides him with insights into corporate operations. The combination of experiences creates a focus on value creation in this event-driven space.

Analyst Certification
I, David M. Nierengarten, Ph.D., Dilip Joseph, certify that the views expressed in this report accurately reflect my personal opinion and that I have not and will not, directly or indirectly, receive compensation or other payments in connection with my specific recommendations or views contained in this report.

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Company	Disclosure
Fate Therapeutics	1,3,4,5

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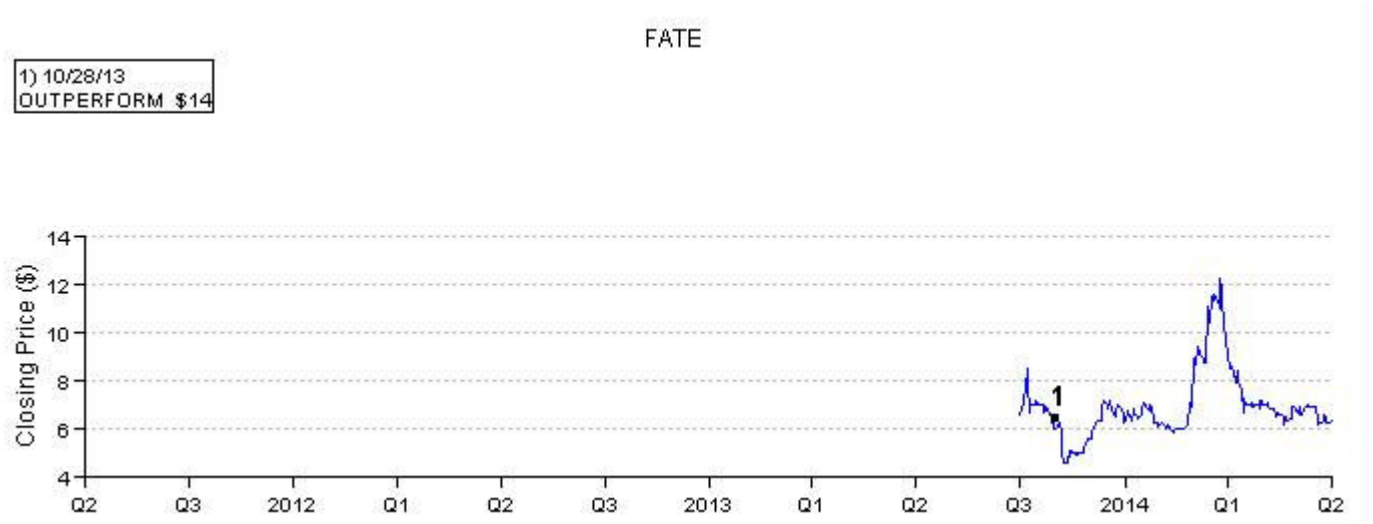

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