

Equity Research

Five Prime Therapeutics, Inc.

FPRX: Q1--Progressing Immune-Oncology Programs On Track

• **Summary:** On 5/8, FPRX reported Q1 2014 results. The company reported steady progress with all of their clinical programs on track. '1039 is continuing to enroll patients in two NSCLC arms and a recently added mesothelioma study arm; the '008 ph.I study is in the MAD phase in healthy subjects and RA patient dosing is expected to start by the end of this year; and '144, an anti-FGFR2b antibody, is undergoing pre-IND preparation with end-2014 as the target ph.I timeline. In light of the recently announced transaction of GSK divesting their commercial stage oncology franchise to Novartis, FPRX expressed confidence that the ongoing studies of '1039 will proceed without interruptions--as the divestiture only relates to GSK's commercial products and not the development pipeline. However, it may be prudent to keep an eye on any further developments in this regard going forward. We continue to believe FPRX is well-positioned to leverage its differentiated platform--coupling its high-throughput novel ligand/receptor discovery platform with immune-oncology/biology validation system (likely to be bolstered by BMS collaboration)--to be on the forefront of immune-oncology field and continue to generate investor enthusiasm as the early clinical programs continue to mature. Adjusting 2014E EPS to (\$0.75) from (\$0.58) and 2015E to (\$1.15) from (\$0.98), and valuation range to \$19-21 from \$20-22, based on model adjustments.

• **Financials:** The company reported Q1 2014 revenue of \$3.5MM and Opex of \$12.2MM. The BMS collaboration deal related upfront payment of \$20MM was made in April and was not reflected in Q1 revenues. With the capital raise of \$43.1MM during Q1, the company ended the quarter with \$128.9MM.

Valuation Range: \$19.00 to \$21.00 from \$20.00 to \$22.00

Our valuation range is based on applying a 30x multiple to our 2023 estimated EPS and discounting at 15%, blended with 2.5x multiple of 2023 estimated sales, and discounting 10-12%, plus \$6 for technology/pipeline value. Key risks, in our view, are clinical and regulatory failure of its programs, competition, and financing.

Investment Thesis:

We believe Five Prime's technology platform and biologics stemming from it will drive long-term value.

Outperform / V

Sector: Biotechnology

Market Weight

Earnings Estimate Revised Down

EPS	2013A	2014E		2015E	
		Curr.	Prior	Curr.	Prior
Q1 (Mar.)	NE	(\$0.46) A	0.57	NE	
Q2 (June)	NE	0.47	(0.37)	NE	
Q3 (Sep.)	(2.74)	(0.42)	(0.38)	NE	
Q4 (Dec.)	(0.43)	(0.42)	(0.38)	NE	
FY	(\$5.26)	(\$0.75)	(0.58)	(\$1.15)	(0.98)
CY	(\$5.26)	(\$0.75)		(\$1.15)	
FY P/E	NM	NM		NM	
Rev.(MM)	\$14	\$34		\$27	

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters
NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful
V = Volatile, * = Company is on the Priority Stock List

Sum of 2014 quarterly EPS do not match 2014 annual EPS due to the shares (basic vs. diluted) we use to calculate EPS

Ticker	FPRX
Price (05/08/2014)	\$13.30
52-Week Range:	\$8-24
Shares Outstanding: (MM)	16.8
Market Cap.: (MM)	\$223.4
S&P 500:	1,875.63
Avg. Daily Vol.:	193,202
Dividend/Yield:	\$0.00/0.0%
LT Debt: (MM)	\$0.0
LT Debt/Total Cap.:	0.0%
ROE:	NM
3-5 Yr. Est. Growth Rate:	NM
CY 2014 Est. P/E-to-Growth:	NM
Last Reporting Date:	05/08/2014
	After Close

Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters

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Please see page 4 for rating definitions, important disclosures and required analyst certifications

All estimates/forecasts are as of 05/09/14 unless otherwise stated.

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Together we'll go far



Biotechnology

Company Description:

Five Prime Therapeutics (FPRX), Inc., headquartered in South San Francisco, California, is a biotechnology company focused on discovering and developing protein therapeutic candidates based on its extensive library of 5,600+ extracellular proteins, including ligands and receptors. Its lead development candidate is FP-1039 [ph.I(b)], an FGFR1-targeted ligand trap in development for solid tumors and partnered with GlaxoSmithKline. Behind '1039, its unpartnered pipeline includes FPA008 (ph.I) a monoclonal antibody in development for inflammatory diseases (e.g., rheumatoid arthritis), and FPA144 (preclinical), an antibody for gastric cancer. Beyond its three lead programs, Five Prime has discovery collaborations with GSK for muscle diseases (sarcopenia and cachexia) and respiratory diseases (refractory asthma and COPD) and UCB Pharma for fibrotic-related immunologic and CNS diseases.

Upcoming Milestones

Product	Event	Timeline
FP-1039	Top-line results from ph.Ib study	end-2014
	Potential pre-ph.IIb study meeting with FDA	2H14/1H15
	Consider initiating ph.II/III randomized study of SOC+/-'1039 in NSCLC	2015
	Explore studies in other cancer indications (GIST, mesothelioma, GBM, RCC, HCC)	2014/2015
FPA008	Ph.I top-line PK and safety results	end-2014
	Expand ph.I study to include RA patients	2H14
	Introduce SC formulation	2H14/2015
	File IND, initiate ph.II study likely in biologics failures	2015
FPA144	Explore other inflammatory diseases (IPF, lupus nephritis, etc.)	2015
	File IND	4q14
	Initiate ph.I study	end-2014
	Top-line ph.I results	2015

Source: Company reports and Wells Fargo Securities, LLC estimates

Product Pipeline

Product (partner)	Indication/mechanism	Status
FP-1039 (GSK)	Oncology (multiple solid tumors); FGF Ligand Trap	Phase Ib
FPA008	Autoimmune disease; CSF1R antibody	Entering phase I
FPA144	Gastric cancer; FGFR2b antibody	Pre-IND
GSK	Muscle wasting (sarcopenia and cachexia), respiratory (refractory asthma and COPD)	Discovery
UCB	Fibrosis, immunologic, and CNS diseases	Discovery
Multiple candidates	Antibodies and ligand traps vs. cancer, immunotherapy, steroid resistant asthma	Discovery

Source: Company reports and Wells Fargo Securities, LLC

Five Prime Therapeutics, Inc.

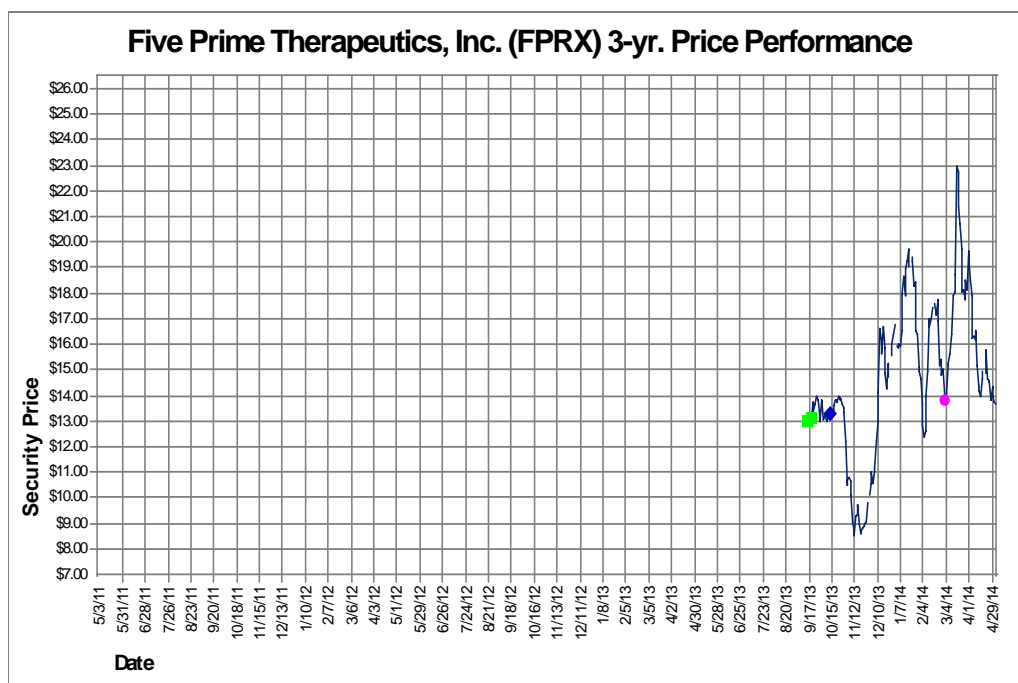
Five Prime Therapeutics (FPRX)
Statement of Operations (Income Statement)

(In thousands except per share amounts)

	2010A	2011A	2012A	2013E	1QA	2QE	3QE	4QE	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
Revenues																		
Total Global FP-1039 sales (15-35% prob-weighted by tumor type)																		
Total Global FPA008 sales (20% prob-weighted)																		
Collaborative revenue	\$23,740	\$64,916	\$9,983	\$13,791	\$3,546	\$23,500	\$3,550	\$3,600	\$34,196	\$26,800	\$97,800	\$21,500	\$34,916	\$23,329	\$41,598	\$64,953	\$64,343	\$99,623
FP-1039 (royalties; probability weighted by tumor type)																		
FPA008 (royalties; probability weighted)																		
Total revenues, net	\$23,740	\$64,916	\$9,983	\$13,791	\$3,546	\$23,500	\$3,550	\$3,600	\$34,196	\$26,800	\$97,800	\$21,500	\$34,916	\$23,329	\$41,598	\$64,953	\$64,343	\$99,623
Expenses																		
Research and development	\$29,417	\$34,039	\$28,778	\$32,785	\$8,926	\$9,105	\$9,287	\$9,472	\$36,789	\$38,629	\$40,560	\$42,183	\$43,870	\$45,186	\$46,542	\$47,938	\$49,376	\$50,857
Selling, general and administrative	\$8,338	\$11,216	\$9,009	\$10,427	\$3,280	\$3,313	\$3,346	\$3,379	\$13,318	\$13,851	\$14,405	\$14,981	\$15,580	\$16,204	\$16,852	\$17,526	\$18,227	\$18,956
Total operating expenses	\$37,755	\$45,255	\$37,787	\$43,212	\$12,206	\$12,417	\$12,633	\$12,852	\$50,108	\$52,480	\$54,965	\$57,164	\$59,450	\$61,390	\$63,393	\$65,464	\$67,603	\$69,813
Operating income	(\$14,015)	\$19,661	(\$27,804)	(\$29,421)	(\$8,660)	\$11,083	(\$9,083)	(\$9,252)	(\$15,912)	(\$25,680)	\$42,835	(\$35,664)	(\$24,535)	(\$38,060)	(\$21,795)	(\$510)	(\$3,260)	\$29,809
Interest income	\$58	\$114	\$88	\$129	\$16	\$20	\$20	\$19	\$75	\$109	\$118	\$121	\$91	\$60	\$30	\$19	\$17	\$31
Other income (expense) net	\$491	(\$65)	\$121	\$420	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
(Loss) income before benefit from income taxes	(\$13,466)	\$19,710	(\$27,595)	(\$28,872)	(\$8,644)	\$11,103	(\$9,062)	(\$9,233)	(\$15,836)	(\$25,571)	\$42,952	(\$35,543)	(\$24,443)	(\$38,000)	(\$21,765)	(\$491)	(\$3,242)	\$29,840
Benefit (expense) from income taxes	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$298
Net (loss) income	(\$13,461)	\$19,710	(\$27,595)	(\$28,872)	(\$8,644)	\$11,103	(\$9,062)	(\$9,233)	(\$15,836)	(\$25,571)	\$42,952	(\$35,543)	(\$24,443)	(\$38,000)	(\$21,765)	(\$491)	(\$3,242)	\$30,138
Earnings Per Share (GAAP)	(\$12.22)	\$10.35	(\$23.05)	(\$5.26)	(\$0.46)	\$0.47	(\$0.42)	(\$0.42)	(\$0.75)	(\$1.15)	\$7.73	(\$1.54)	(\$1.04)	(\$1.59)	(\$0.90)	(\$0.02)	(\$0.13)	\$1.09
Shares Outstanding (Basic)	1,102	1,152	1,197	5,488	18,841	21,641	21,741	21,841	21,016	22,241	22,641	23,041	23,441	23,841	24,241	24,641	25,041	25,441
Shares Outstanding (Diluted)	1,102	1,904	1,197	6,588	21,041	23,841	23,941	24,041	23,216	24,441	24,841	25,241	25,641	26,041	26,441	26,841	27,241	27,641

Source: Company reports and Wells Fargo Securities, LLC estimates

Required Disclosures



	Date	Publication Price (\$)	Rating Code	Val. Rng. Low	Val. Rng. High	Close Price (\$)
□	9/18/2013		IPO at \$13.00			
	10/14/2013		Abrahams, M.D.			
◆	10/14/2013	13.19	1	17.00	19.00	13.25
◆	3/3/2014	13.96	1	20.00	22.00	13.78

Source: Wells Fargo Securities, LLC estimates and Reuters data

Symbol Key

▼	Rating Downgrade	◆	Initiation, Resumption, Drop or Suspend
▲	Rating Upgrade	■	Analyst Change
●	Valuation Range Change	□	Split Adjustment

Rating Code Key

1	Outperform/Buy	SR	Suspended
2	Market Perform/Hold	NR	Not Rated
3	Underperform/Sell	NE	No Estimate

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FPRX: Key risks, in our view, are clinical and regulatory failure of its programs, competition, and financing.

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As of: May 8, 2014

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