Five Prime Therapeutics, Inc.

FPRX - BUY - 1Q14 Report; Solid Pipeline Progress, Highlighted by FP-1039 in NSCLC

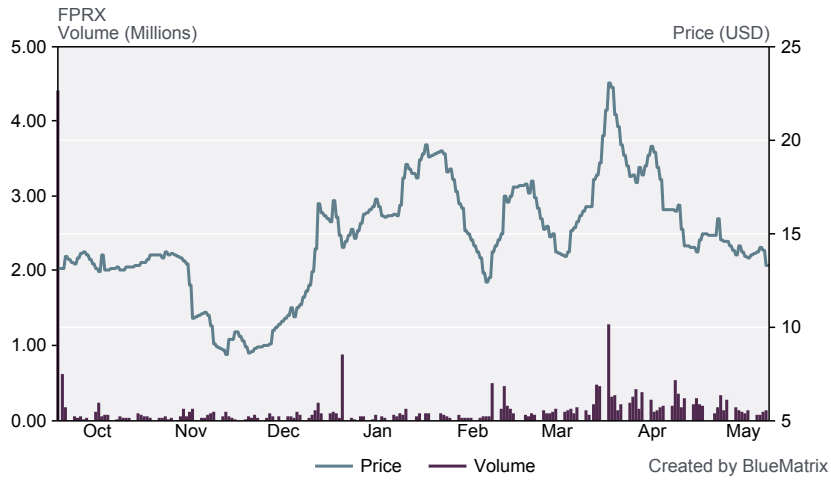
May 9, 2014

On 5/8, FPRX reported 1Q14 EPS of ($0.46) vs. our ($0.36) est. The company and partner GSK (NC, $54.68) are moving FP-1039 forward in both sqamous, FGFR1-amplified NSCLC and mesothelioma, and we continue to see a good probability of positive initial Ph.Ib NSCLC results for the drug by YE'14. Encouragingly, FPRX has now started an ascending dose (MAD) evaluation of FPA008 in healthy volunteers, which suggests to us that single doses of the drug were well tolerated. We continue to view FPRX as attractive, based on the broad potential of FP-1039/FPA008 and the company's building presence in immuno-oncology (IO).

Ph.Ib results for '1039 in NSCLC should be a 2H14 positive catalyst. FPRX/GSK plan to report initial results from the Arms A and B of the Ph.I/Ib trial of '1039 in 1st-/2nd-line, FGFR1-amplified NSCLC by YE'14. Although these initial results will be from the dose escalation of '1039 in these settings, and thus may be limited by inadequate dosing, we continue to expect '1039 to show clinical activity with doses nearing MTD. Arm C of the trial is focused on mesothelioma, and we expect initial results in '15.

FPA008 will move into Ph.Ib in RA in 2H14. FPRX will report the first Ph.I safety results for '008 in healthy volunteers in 2H14. We continue to believe these early '008 safety results are important, given our questions about potential immunosuppressive side effects of CSF1R inhibition. Encouragingly, we suspect single doses of '008 were well tolerated. FPRX should start dosing RA patients in 2H14, and we remain enthusiastic about '008's potential for robust efficacy in RA, given a strong mechanistic rationale.

FPRX's unique approach to identifying IO candidates has the potential to add significant LT value. FPRX's development agreement with BMY (NC, $50.91) suggests to us that FPRX has identified novel IO candidates, since BMY's reach in IO is already so broad. When FPRX and/or BMY can provide somewhat more specific about identity of the IO pathways that are being targeted, we expect enthusiasm regarding FPRX's IO capabilities will rise substantially.



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FPRX BUY

EARNINGS RELEASE

Investment Thesis: Growth

SHARE PRICE	$13.30
PRICE TARGET	$28.00

EPS ($) (FY Dec)	1Q	2Q	3Q	4Q	FY
2013	(0.47)	(0.47)	(2.74)	(0.43)	(5.23)
P/E					NM
2014	(0.46)	(0.35)E	(0.30)E	(0.28)E	(1.39)E
Prior	*(0.36)*	*(0.28)E*	*(0.22)E*	*(0.18)E*	*(0.98)E*
P/E					NM
2015	—	—	—	—	(0.55)E
Prior	—	—	—	—	*(0.38)E*
P/E					NM

Market Data	
52-Week Range	$8.02 - $23.33
Shares Out (M)	21.4
Market Cap (M)	$284
ADV (3 mo; 000)	215

Five Prime Therapeutics Inc.

Amounts in thousands, except per-share figures	2013A	2014 1QA	2014 Prior 1QA	2014 2QE	2014 3QE	2014 4QE	2014E	Prior 2014E	2015E	2016E	2017E
Income Statement											
Revenues:											
Collaboration Revenue	13,791	3,546	4,310	4,720	6,005	6,550	20,821	22,300	40,640	28,454	55,200
FP-1039 Revenue (2)	-	-	-	-	-	-	-	-	-	-	12,206
Total operating revenue	**13,791**	**3,546**	**4,310**	**4,720**	**6,005**	**6,550**	**20,821**	**22,300**	**40,640**	**28,454**	**67,406**
Operating expenses:											
Cost of goods	-	-	-	-	-	-	-	-	-	-	-
Research & development	32,785	8,926	8,519	9,165	9,333	9,495	36,919	35,495	40,980	45,488	48,445
Selling, general & administrative	10,427	3,280	3,008	3,310	3,505	3,595	13,690	12,532	14,717	16,924	18,447
Total operating expenses	**43,212**	**12,206**	**11,527**	**12,475**	**12,838**	**13,090**	**50,609**	**48,027**	**55,697**	**62,412**	**66,892**
Income (Loss) from operations	**(29,421)**	**(8,660)**	**(7,217)**	**(7,755)**	**(6,833)**	**(6,540)**	**(29,788)**	**(25,727)**	**(15,057)**	**(33,958)**	**514**
Other income (expense)	549	16	190	193	204	209	622	796	570	607	334
Pretax income (loss)	**(28,872)**	**(8,644)**	**(7,027)**	**(7,562)**	**(6,629)**	**(6,331)**	**(29,166)**	**(24,930)**	**(14,487)**	**(33,351)**	**848**
Income tax provision (benefit)	-	-	-	-	-	-	-	-	-	-	-
Net income (loss)	**(28,872)**	**(8,644)**	**(7,027)**	**(7,562)**	**(6,629)**	**(6,331)**	**(29,166)**	**(24,930)**	**(14,487)**	**(33,351)**	**848**
Basic & diluted net loss per share	**($5.23)**	**($0.46)**	**($0.36)**	**($0.35)**	**($0.30)**	**($0.28)**	**($1.39)**	**($0.98)**	**($0.55)**	**($1.18)**	**$0.03**
Basic & diluted common shares outstanding (1)	5,523	18,841	19,697	21,350	22,010	22,555	22,066	25,313	26,200	28,368	29,018

(1) Reflects conversion of preferred stock to common stock
(2) Probability adjusted estimates
Source: Company documents and Guggenheim Securities, LLC

Changes to our model

Based on FRPX's 1Q14 results, we have updated EPS estimates for 2Q14-4Q14, 2014, and 2015. Our new 2Q14, 3Q14, and 4Q14 estimates are ($0.35), ($0.30), and ($0.28), respectively, vs. ($0.28), ($0.22), and ($0.28), prior. Our current 2014 and 2015 estimates are ($1.39) and ($0.55) vs. ($0.98) and ($0.38), prior.

Valuation and Risks

Our $28 price target is based on a forward, 10-year DCF of probability-adjusted sales estimates for FP-1039 in NSCLC. We assign a 50% probability of clinical/commercial success for FP-1039 in FGFR1+ stage III/IV squamous NSCLC. Given positive Ph.I results for the biologic in this setting, we believe this is an appropriate, if not conservative, probability adjustment. Our valuation applies a 15.5% discount rate to reflect the relatively early stage of FPRX's lead program and a 5.25% terminal growth rate (2% prior) to reflect the company's strong collaboration profile and its proprietary drug discovery platform to continue to identify new protein therapeutic targets.

Key risks to our price target include, but are not limited to, negative clinical trial results, either related to safety or efficacy, for FPRX's drug candidates; failure to gain U.S./E.U. regulatory approval for FP-1039, FPA008, or FPA144; emerging clinical results for competitive therapies to these therapies in NSCLC/RA/GC; failure of FPRX's collaborative partners, most importantly GSK, to adequately advance development of clinical candidates; failure of FPRX to generate adequate financing; challenges to FPRX's intellectual property positions; and lower-than expected U.S./ROW sales of FP-1039.

		Terminal growth rate								
		4.25%	4.50%	4.75%	5.00%	**5.25%**	5.50%	5.75%	6.00%	6.25%
Discount rate	*14.80%*	$ 30.63	$ 31.25	$ 31.91	$ 32.60	**$ 33.33**	$ 34.10	$ 34.90	$ 35.76	$ 36.66
	15.05%	$ 29.34	$ 29.93	$ 30.54	$ 31.19	**$ 31.86**	$ 32.57	$ 33.32	$ 34.11	$ 34.95
	15.30%	$ 28.13	$ 28.68	$ 29.25	$ 29.85	**$ 30.48**	$ 31.14	$ 31.84	$ 32.57	$ 33.34
	15.55%	$ 26.98	$ 27.49	$ 28.02	$ 28.58	**$ 29.17**	$ 29.79	$ 30.43	$ 31.12	$ 31.83
	15.80%	**$ 25.89**	**$ 26.36**	**$ 26.86**	**$ 27.39**	**$ 27.93**	**$ 28.51**	**$ 29.11**	**$ 29.75**	**$ 30.41**
	16.05%	$ 24.85	$ 25.29	$ 25.76	$ 26.25	**$ 26.76**	$ 27.30	$ 27.86	$ 28.45	$ 29.07
	16.30%	$ 23.86	$ 24.28	$ 24.72	$ 25.18	**$ 25.66**	$ 26.16	$ 26.68	$ 27.23	$ 27.81
	16.55%	$ 22.92	$ 23.31	$ 23.73	$ 24.15	**$ 24.60**	$ 25.07	$ 25.56	$ 26.08	$ 26.61
	16.80%	$ 22.02	$ 22.40	$ 22.78	$ 23.18	**$ 23.60**	$ 24.04	$ 24.50	$ 24.98	$ 25.48
	17.05%	$ 21.17	$ 21.52	$ 21.88	$ 22.26	**$ 22.66**	$ 23.07	$ 23.50	$ 23.95	$ 24.42

Source:Guggenheim Securities, LLC

SECTOR: **BIOTECHNOLOGY** **May 9, 2014**

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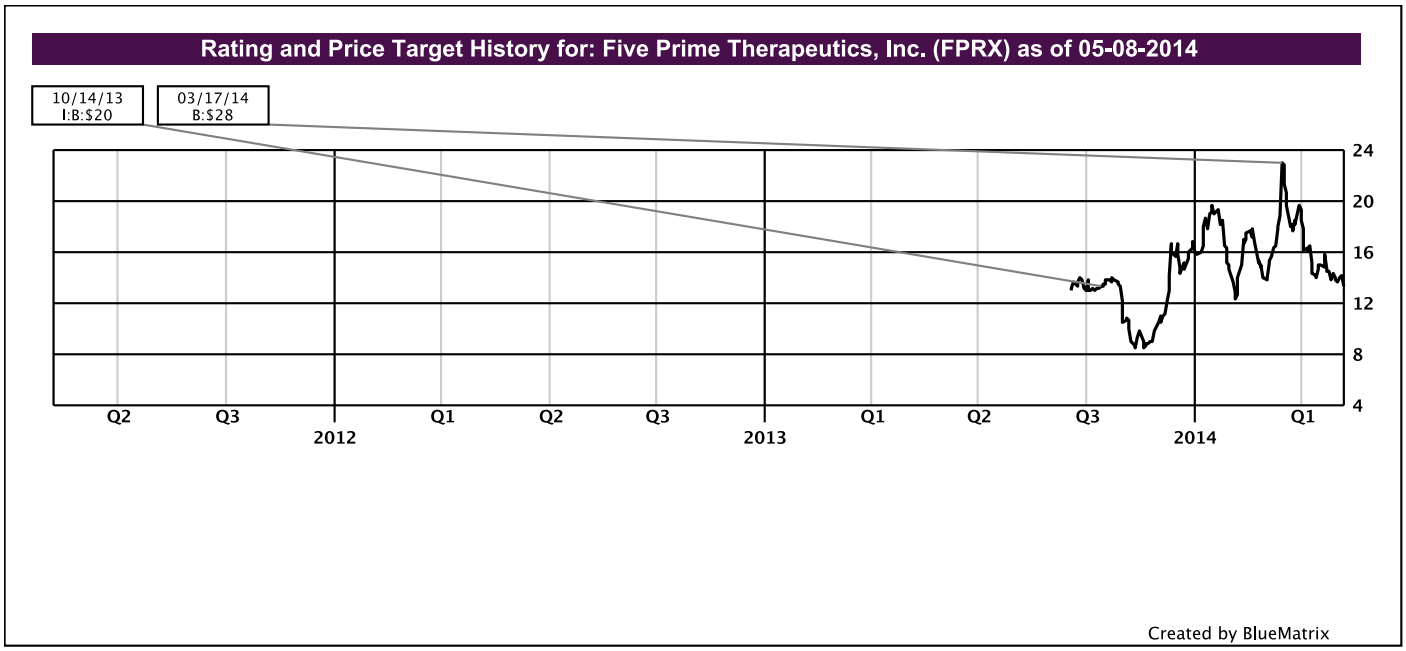

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