

# Five Prime Therapeutics

(FPRX-NASDAQ)

**Stock Rating:** Outperform  
**Stock Price:** US\$12.00  
**Target Price:** US\$28.00

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Biotechnology

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## Increasing Visibility on Immuno-Oncology Strategy

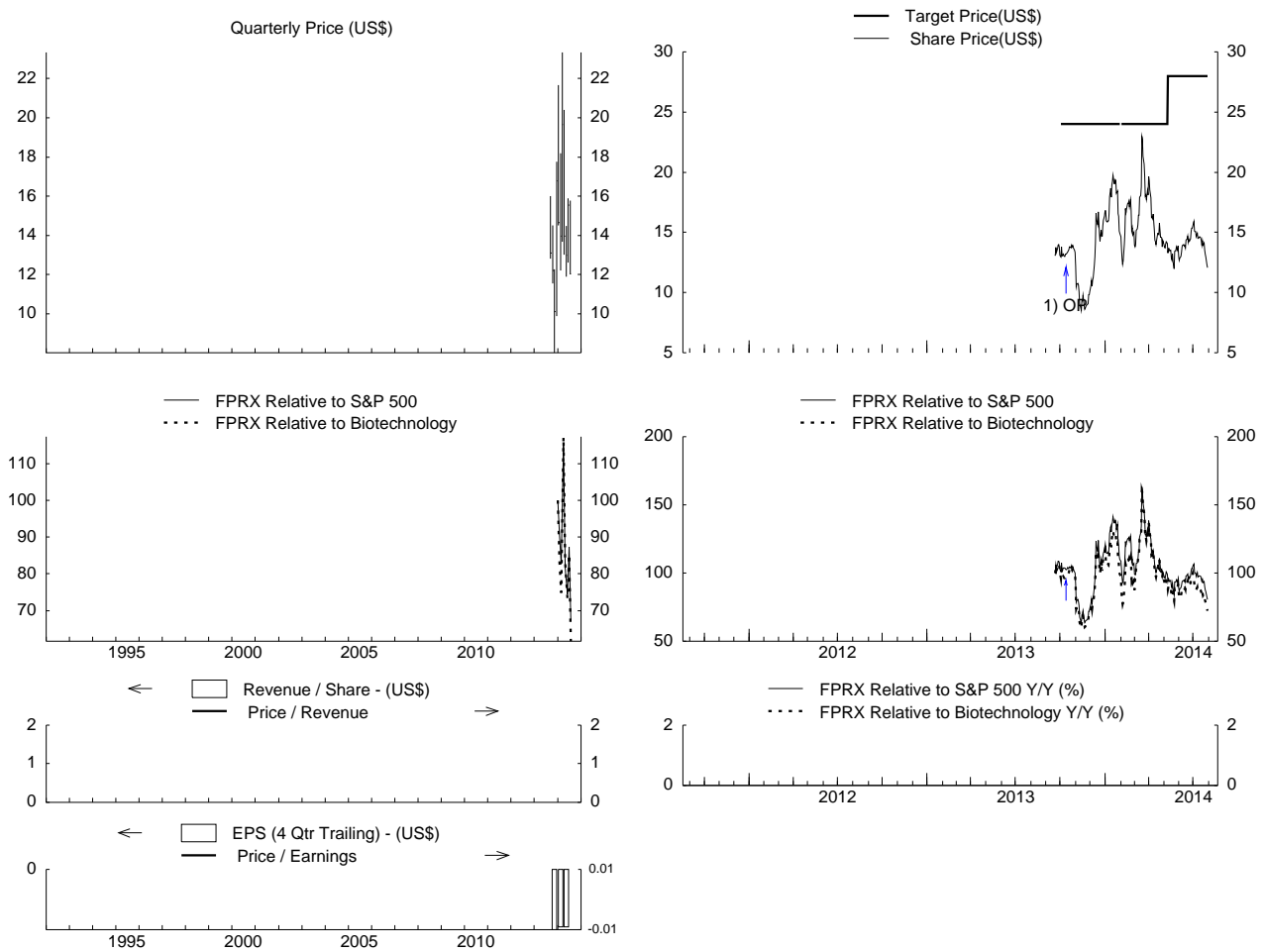
The BMO Capital Markets U.S. biotech team met with Fiveprime Therapeutics management at our Corporate Access Conference in San Francisco earlier today. The focus of the meeting was on progress with the clinical pipeline and immuno-oncology assets. FPRX has enhanced preclinical capabilities in immuno-oncology in order to optimize identification and characterization of novel pathways. By ranking ligand and receptor pairs, FPRX believes it can gain novel IP for both single agent and combination approaches. FPRX is using this enhanced capability to further both the Bristol-Myers Squibb (BMY, \$50.62, Market Perform, by Alex Arfaei) collaboration and identify internal candidates. Moving to the GSK FP-1039, collaboration for FGFR1 over expressing tumors, FPRX noted that as the only FGFR biologic agent in development, 1039 has intrinsic advantages over the small molecule approaches. While 1039 blocks all 12 ligands, including FGF2, binding to FGFR1, the small molecule inhibitors inhibit signaling of 10 additional FGF ligands, which leads to toxicity with retinal and renal toxicity notable. FPRX believes that overlapping toxicity likely prevents combination of small molecule inhibitors with chemotherapy. FPRX noted that GSK has increased resource allocation to the 1039 program and that arm C, mesothelioma of the ongoing 3- cohort chemotherapy combination trial is enrolling well; recall arms 1 and 2 are enrolling 1st line and 2nd line squamous cell NSCLC, respectively. On the anti-CSFR1 program targeting macrophages, FPRX has submitted an abstract to the ACR meeting for the healthy volunteer data from the ongoing phase 1 FPA008 trial that includes an active RA cohort that will begin enrolling shortly. Before YE14, FPRX will identify a second indication with FPRX noting that data at ASCO establishing macrophages as contributing to the immune-dysregulation in cancer adds cancer to the potential list of second indications, which still includes fibrotic disease, specifically IPF. Finally, FPRX remains on track to move FPA144 into the clinic by YE14. Following dose escalation in solid tumors, an expansion cohort in FGFR2 over-expressing gastric cancer cohort will open in late 2015.

### Our View:

- FPRX is optimally positioned in the area of immune oncology with a protein library encompassing all extracellular proteins and allowing for identification of multiple novel pathways of cancer cell-immune cell interaction.
- We expect FPRX to make progress in development and identification of novel antibody checkpoint inhibitors in the near term, which should drive incremental value beyond its BMY collaboration.
- Targeted development of 1039, 144, and 008 are all rationally developed and should drive value in 2H14 and FY15.

Please refer to pages 2 to 6 for Important Disclosures, including the Analyst's Certification.

## Five Prime Therapeutics (FPRX)



FYE (Dec.)	EPS US\$	P/E Hi - Lo	DPS US\$	Yield% Hi - Lo	Payout %	BV US\$	P/B Hi - Lo	ROE %
2013	-4.27	na na	0.00	0.0 0.0	0	3.5	5.1 2.3	
Range*		na na		0.0 0.0			5.1 2.3	
Current*	-4.09	na	0.00	0.0	0	3.8	4.0	na

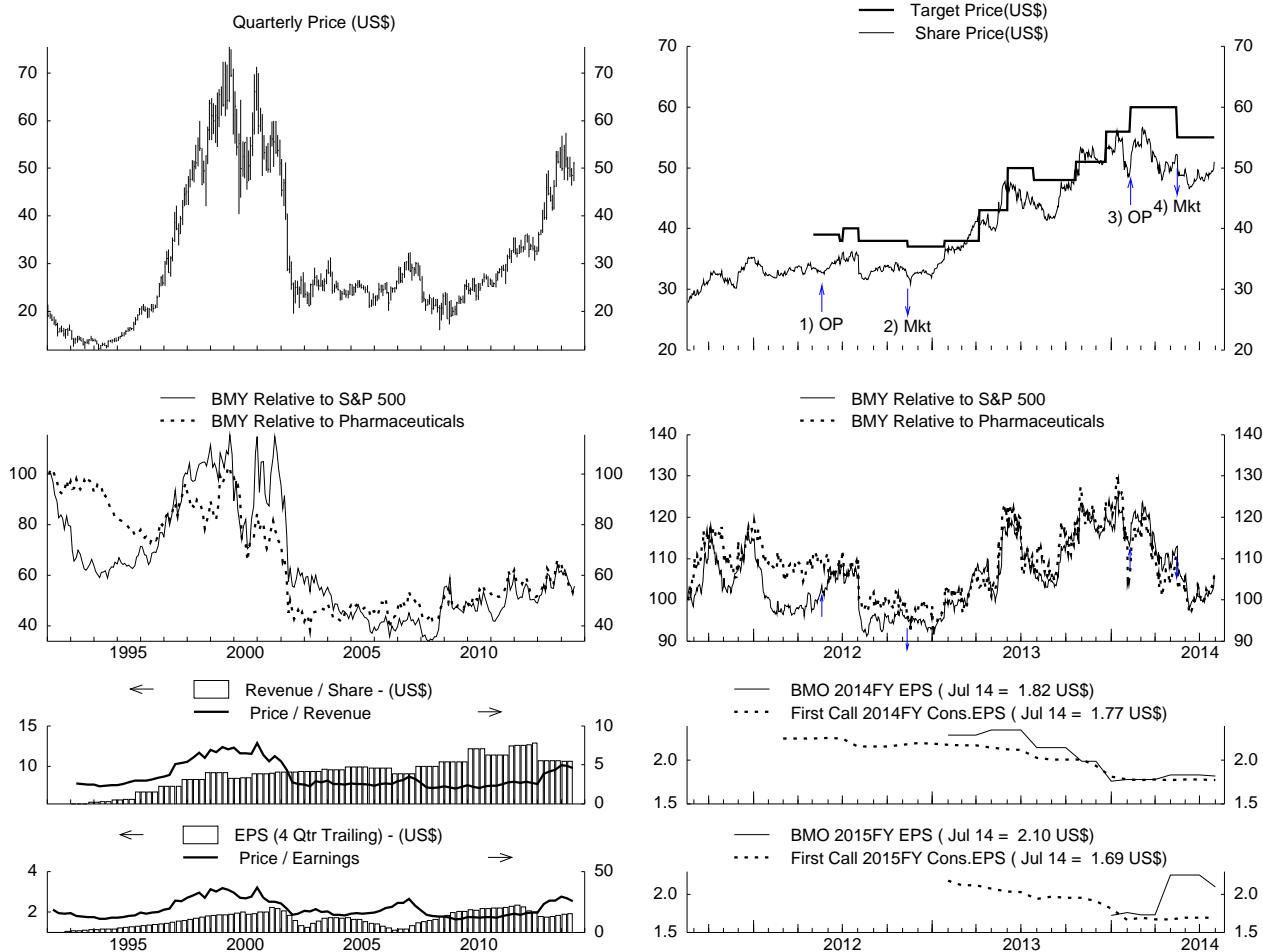
FPRX - Rating as of 17-Sep-13 = NR

Date	Rating Change	Share Price
1 11-Oct-13	NR to OP	\$13.19

\* Current EPS is the 4 Quarter Trailing to Q1/2014.  
 \* Valuation metrics are based on high and low for the fiscal year.  
 \* Range indicates the valuation range for the period presented above.

Last Price ( July 29, 2014): \$12.04  
 Sources: IHS Global Insight, Thomson Reuters, BMO Capital Markets.

## Bristol-Myers Squibb Company (BMY)



FYE (Dec.)	EPS US\$	P/E Hi - Lo	DPS US\$	Yield% Hi - Lo	Payout %	BV US\$	P/B Hi - Lo	ROE %
1992	1.02	21.0 14.0	0.49	3.5 2.3	48	2.9	7.4 4.9	
1993	1.10	15.7 11.0	0.70	5.7 4.0	63	2.9	5.9 4.2	38
1994	1.15	12.6 10.3	0.70	5.9 4.9	61	2.8	5.2 4.2	40
1995	1.28	16.2 10.6	0.71	5.3 3.4	56	2.9	7.2 4.7	45
1996	1.40	19.8 13.3	0.72	3.9 2.6	52	3.3	8.4 5.7	45
1997	1.57	29.8 16.1	0.74	2.9 1.6	47	3.6	12.9 7.0	45
1998	1.79	36.0 23.5	0.82	1.9 1.3	46	3.8	>15 11.0	48
1999	1.87	40.4 29.2	0.93	1.7 1.2	50	4.4	>15 12.5	46
2000	1.92	37.1 21.0	1.05	2.6 1.5	55	4.7	>15 8.6	42
2001	2.17	32.9 22.3	1.12	2.3 1.6	52	5.6	12.8 8.7	42
2002	1.33	42.1 14.7	1.12	5.7 2.0	84	4.6	12.1 4.2	26
2003	1.68	17.4 12.5	1.12	5.3 3.8	67	5.0	5.8 4.2	35
2004	1.70	18.4 13.1	1.12	5.0 3.6	66	5.2	6.0 4.2	33
2005	1.43	18.6 14.5	1.12	5.4 4.2	78	5.7	4.6 3.6	26
2006	1.09	24.2 18.4	1.12	5.6 4.2	>100	5.1	5.2 3.9	20
2007	1.46	22.2 16.8	1.24	5.0 3.8	85	5.4	6.0 4.6	28
2008	1.77	16.7 9.0	1.24	7.8 4.2	70	6.2	4.8 2.6	31
2009	2.03	13.1 8.5	1.28	7.4 4.8	63	8.7	3.1 2.0	27
2010	2.16	13.0 10.3	1.32	5.9 4.7	61	9.3	3.0 2.4	24
2011	2.28	15.5 11.0	1.36	5.4 3.8	60	9.5	3.7 2.6	24
2012	1.99	18.3 15.4	1.40	4.6 3.9	70	8.4	4.3 3.7	22
2013	1.82	29.9 17.5	1.44	4.5 2.6	79	9.2	5.9 3.5	21
Range*		42.1 8.5		7.8 1.2			>15 2.0	
Current*	1.91	25.4	1.44	3.0	75	8.7	5.6	22
Growth(%):								
5 Year:	-0.5		3.0			7.2		
10 Year:	1.1		2.5			5.6		
20 Year:	2.6		3.7			5.7		

\* Current EPS is the 4 Quarter Trailing to Q2/2014.

\* Valuation metrics are based on high and low for the fiscal year.

\* Range indicates the valuation range for the period presented above.

BMY - Rating as of 18-Aug-11 = NR

Date	Rating Change	Share Price
1 18-May-12	NR to OP	\$32.72
2 9-Nov-12	OP to Mkt	\$32.23
3 7-Feb-14	Mkt to OP	\$50.33
4 14-May-14	OP to Mkt	\$52.12

Last Price ( July 29, 2014): \$51.01

Sources: IHS Global Insight, Thomson Reuters, BMO Capital Markets.

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**Methodology and Risks to Price Target/Valuation**

**Methodology:** We arrive at our price target by applying a 20x multiple to 2020 EPS estimate of \$5.65 and discounting at 35%.

**Risks:** There are a number of risks associated with investment in biotechnology companies. These risks include, but are not limited to, risk of clinical trial delay or failure, adverse regulatory decisions including product non-approval, unanticipated adverse effects of drugs which may result in removal from market, risk of manufacturing difficulties, capital market risk which may impair the ability to fund product discovery, research, regulatory filing, manufacture and/or commercialization, risk in attaining and retaining appropriate development or commercial partners, lower-than-expected product adoption, difficulties in gaining appropriate reimbursement for products from payors, unforeseen generic and branded competition, risk to patents being invalidated, and failure to meet earnings and revenue expectations.

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**Methodology and Risks to Our Price Target**

**Methodology:** DCF: Free Cash Flow To Equity.

**Risks:** Uncertainty of Phase 3 Pipeline.

**Distribution of Ratings (June 30, 2014)**

Rating Category	BMO Rating	BMOCM US Universe*	BMOCM US IB Clients**	BMOCM US IB Clients***	BMOCM Universe****	BMOCM IB Clients*****	Starmine Universe
Buy	Outperform	44.1%	21.1%	67.5%	43.3%	58.6%	55.4%
Hold	Market Perform	50.9%	8.4%	31.3%	51.2%	39.9%	39.5%
Sell	Underperform	5.0%	3.4%	1.3%	5.5%	1.5%	5.1%

\* Reflects rating distribution of all companies covered by BMO Capital Markets Corp. equity research analysts.

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OP = Outperform - Forecast to outperform the analyst's coverage universe on a total return basis

Mkt = Market Perform - Forecast to perform roughly in line with the analyst's coverage universe on a total return basis

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(S) = speculative investment;

NR = No rating at this time;

R = Restricted – Dissemination of research is currently restricted.

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