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Pfenex Inc.

First-Quarter Results Highlighted by Strategic Shift to Focus on Company's Proprietary Compounds

Before the markets opened on Thursday, May 14, Pfenex reported its first-quarter financial results and provided an update on clinical programs. Management reported a net loss of $0.29 per share, compared with our estimate of EPS of $2.16. The difference was due to the accounting treatment of the $51 million upfront payment from Hospira (HSP $88.10). Exhibit 1 provides a detailed variance analysis of the company's operating results compared to our financial estimates. In addition, we modified our financial projections to come more in line with current operating trends following the partnership agreement with Hospira (exhibit 2).

- **We believe the partnership agreement with Hospira is transformative and improves our long-term outlook for Pfenex.** On the call, management indicated that the $51 million upfront payment from Hospira and the recent follow-on public offering of $37 million in net proceeds enable the company to simultaneously make progress on multiple compounds. In particular, management outlined its plan to advance four compounds into clinical testing this year. PF530 (biosimilar candidate to Betaseron) is currently in Phase I clinical testing with results expected in the second half of this year. In addition, we anticipate PF708 (peptide generic to Forteo) to enter a bioequivalence study by the end of the year. Lastly, through a collaboration with the U.S. government, Pfenex expects to initiate a Phase I trial for Px563L, a recombinant anthrax vaccine in the second half. A detailed time-and-events table is provided in exhibit 3.

- **In light of the strategic shift from partnered compounds to focus on proprietary biosimilar candidates, we have modified our financial model, which is summarized below.**

  - *We now include projected PF708 sales in our financial estimates.* We assume PF708 will be commercialized after Forteo's method-of-use patent's expiration in August 2019. By our estimation in 2021, the penetration rate will be roughly 13% in the United States and 11% in geographies outside of the United States. In addition, we assume the cost of sales of roughly 20% of total PF708 sales.

  - *Following the collaboration deal with Hospira, we adjusted PF582's revenue contribution to include a royalty rate on global sales.* We conservatively assume a 10% royalty rate based on our previously projected global sales of PF582. Accordingly, we also removed cost of sales related to the production of PF582.

  - *We modified SG&A to reflect the commercialization build up in anticipation of PF708's launch in the fourth quarter of 2019.* Given the generic nature of PF708, we believe the company's sales infrastructure will be modest compared with traditional drug launches. As a result of the smaller commercial investment of PF708 versus PF582 (which requires a specialized sales force to target retina specialists) and the difference in timing of the launch, we see an increase in SG&A in 2019 and a decrease in SG&A in 2020 and 2021 with respect to our previous assumptions.

Stock Rating:	**Outperform**
Company Profile:	**Aggressive Growth**

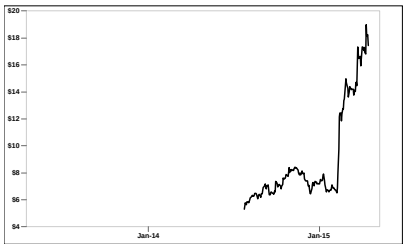
Symbol:	PFNX (NYSE)
Price:	$13.70 (52-Wk.: $5-$20)
Market Value (mil.):	$301
Fiscal Year End:	December
Long-Term EPS Growth Rate:	
Dividend/Yield:	None

		2014A	2015E	2016E
Estimates				
EPS	Q1	$-1.28	A$-0.29	$-0.40
	Q2	$-1.67	$-0.41	$-0.39
	Q3	$-0.16	$-0.41	$-0.39
	Q4	$-0.18	$-0.40	$-0.38
	FY	$-3.29	$-1.51	$-1.55
	CY		$-1.51	$-1.55
Sales (mil.)		11	8	8
Valuation				
FY P/E		NM	NM	NM
CY P/E			NM	NM

Trading Data (FactSet)	
Shares Outstanding (mil.)	20
Float (mil.)	13
Average Daily Volume	184,429

Financial Data (FactSet)	
Book Value Per Share (MRQ)	2.9
Return on Equity (TTM)	-24.9

Two-Year Price Performance Chart



Sources: FactSet, William Blair & Company estimates

Pfenex is a San Diego–based biotechnology company focused on biosimilars and difficult-to-manufacture protein-based therapeutics.

- *We anticipate continued and sustained R&D effort by the company.* Pfenex's biosimilar business model allows for a cost-effective means of progressing drug candidates in the clinic. Therefore, we project the growth of R&D spending to grow at a minimal rate going forward.

- **Pfenex has roughly $92 million in capital, coupled with the recent follow-on public offering of $37 million; we believe the current cash level will sustain the company for at least two years based on current burn rate estimates.** With an estimated enterprise value of about $172 million and numerous upcoming catalysts that stand to increase value, we believe that current price levels represent an attractive entry point for investors. We therefore maintain our Outperform rating on Pfenex.

Exhibit 1
Pfenex Inc.
First Quarter 2015 Variance Analysis
(dollars in millions except EPS)

	PFNX Q1 2015A	WB Q1 2015E
Total Revenues	$2	$53
COGS	$1	$2
SG&A	$4	$3
R&D	$3	$4
Net Gain (Loss)	($6)	$44
EPS	($0.29)	$2.16

Sources: Pfenex reports and William Blair & Company, L.L.C. estimates.

Exhibit 2
Pfnex Inc.
Guidance and Estimates
(dollars in millions except EPS)

	WB Previous 2015E	WB Revised 2015E	WB Previous 2016E	WB Revised 2016E	WB Previous 2017E	WB Revised 2017E
Total Revenues	$59	$8	$8	$8	$8	$8
COGS	$8	$5	$9	$4	$10	$4
SG&A	$12	$17	$13	$17	$14	$18
R&D	$16	$21	$20	$24	$22	$24
Net Loss	$23	($34)	($33)	($37)	($37)	($38)
EPS	$1.16	($1.51)	($1.22)	($1.55)	($1.31)	($1.51)

Sources: Pfenex reports and William Blair & Company, L.L.C. estimates.

Exhibit 3
Pfenex Inc.
Timeline

Date	Product	Event
2015	PF530 (biosimilar Betaseron)	Phase I trial results in relapsing forms of multiple sclerosis (2H).
	PF582* (biosimilar Lucentis)	Phase Ib/IIa trial interim results in wet age-related macular degeneration (1Q).
	PF708 (generic Forteo)	ANDA-enabling pharmacokinetic bioequivalence trial initiation in osteoporosis (2H).
	Recombinant Anthrax Vaccine	Phase I trial initiation in anthrax.
	Recombinant Malaria Vaccine	Phase I trial initiation in malaria.
2016	PF582* (biosimilar Lucentis)	Phase III equivalence trial initiation in wet age-related macular degeneration.
	PF688 (biosimilar Cimzia)	Phase I trial initiation in Crohn's disease and rheumatoid arthritis.
	Recombinant Anthrax Vaccine	Phase I trial results in anthrax (3Q).
	Recombinant Malaria Vaccine	Phase I trial results in malaria.
2017	PF582* (biosimilar Lucentis)	Phase III trial results in age-related macular degeneration.

ANDA = abbreviated new drug application.
*Partnered with Hospira.
Sources: Pfenex reports.

Valuation

Pfenex is trading at $13.70 with a market cap of $301 million, and we believe the stock represents an attractive value at current price levels. Given the breadth of the clinical pipeline and an active news calendar in the next two years, we see significant room for upside potential in Pfenex shares.

Risks

While we view Pfenex as a well-capitalized company with a modest clinical risk profile, given that the company's product candidates are biosimilars of commercialized drugs, numerous risks remain, including clinical, capital, and regulatory risk. The clinical risk is the emergence of unexpected adverse events from compounds generated from Pfenex's proprietary manufacturing platform. The major capital risk is that additional infusions of funding are needed before the company can reach profitability, which may include further equity fundraising. The major regulatory risk is that PF708 and PF530 could face scrutiny before approval. However, given the comprehensive bioanalytical testing completed by Pfenex, we believe the asset is de-risked and remain optimistic about the compound's path forward.

Our earnings model is shown in exhibit 4 on the following page.

Exhibit 4
Pfenex Inc.
Income Statement
(dollars in thousands except EPS and shares in thousands)

	2014A	Q1A	Q2E	Q3E	Q4E	2015E	2016E	2017E	2018E	2019E	2020E	2021E
Revenue	10,644	1,975	2,000	2,100	2,200	8,275	8,200	8,200	8,200	8,200	9,150	9,550
PF582 royalty	0	0	0	0	0	0	0	0	633	4,681	14,084	37,395
PF708 sales	0	0	0	0	0	0	0	0	0	3,300	65,550	155,250
Total revenues	**$10,644**	**$1,975**	**$2,000**	**$2,100**	**$2,200**	**$8,275**	**$8,200**	**$8,200**	**$8,833**	**$16,181**	**$88,784**	**$202,195**
Cost of revenue	7,233	1,308	1,300	1,300	1,300	5,208	4,000	4,000	4,000	3,660	13,110	31,050
Gross profit	3,411	667	700	800	900	3,067	4,200	4,200	4,833	12,521	75,674	171,145
SG&A	9,003	3,891	4,300	4,325	4,325	16,841	17,450	17,650	17,850	26,000	32,250	32,450
R&D	4,125	2,809	5,900	5,925	5,950	20,584	24,050	24,350	24,550	24,750	24,950	25,150
Total operating expenses	13,128	6,700	10,200	10,250	10,275	37,425	41,500	42,000	42,400	50,750	57,200	57,600
Loss from operations	**($9,717)**	**($6,033)**	**($9,500)**	**($9,450)**	**($9,375)**	**($34,358)**	**($37,300)**	**($37,800)**	**($37,567)**	**($38,229)**	**$18,474**	**$113,545**
Other expense, net	(77.0)	80.0	(18.0)	(17.0)	(17.0)	28.0	(62.0)	(54.0)	(48.0)	(44.0)	(40.0)	(36.0)
Net loss before income taxes	(9,794)	($5,953)	($9,518)	($9,467)	($9,392)	(34,330)	(37,362)	(37,854)	(37,615)	(38,273)	18,434	113,509
Income tax benefit	0	(19)	0	0	0	(19)	0	0	0	0	(3,352)	(17,026)
Net loss	($9,794)	($5,972)	($9,518)	($9,467)	($9,392)	($34,349)	($37,362)	($37,854)	($37,615)	($38,273)	$15,082	$96,483
Net loss attributable to common stockholders	**(10,676)**	**(5,972)**	**(9,518)**	**(9,467)**	**(9,392)**	**(34,349)**	**(37,362)**	**(37,854)**	**(37,615)**	**(38,273)**	**15,082**	**96,483**
Net loss per common share basic and diluted	**($3.29)**	**($0.29)**	**($0.41)**	**($0.41)**	**($0.40)**	**($1.51)**	**($1.55)**	**($1.51)**	**($1.45)**	**($1.42)**	**$0.53**	**$3.29**
Weighted-average common shares basic and diluted	9,707	20,474	23,000	23,227	23,455	22,539	24,039	25,000	25,999	27,039	28,120	29,245

PFNX
Sources: Roche and Pfenex reports.

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William Blair or an affiliate expects to receive or intends to seek compensation for investment banking services from Pfenex Inc. within the next three months.

William Blair or an affiliate received compensation for investment banking services from Pfenex Inc. within the last 12 months. Pfenex Inc. is or was, within the last 12 months, an investment banking client of William Blair & Company and/or one or more of its affiliates.

Additional information is available upon request.

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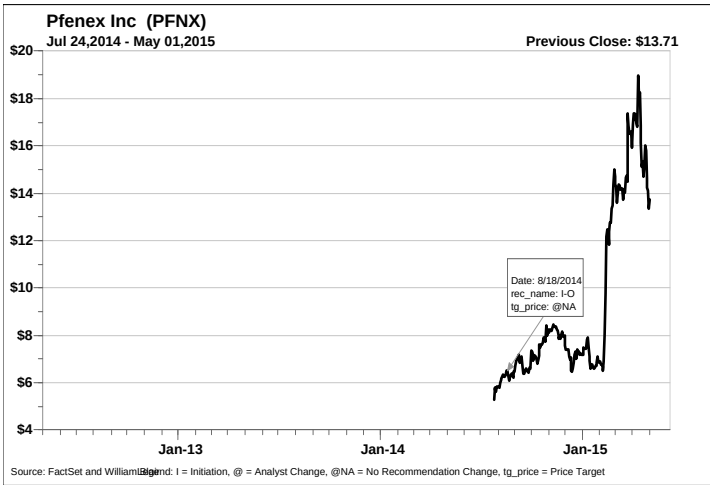
DOW JONES: 18,252.24
S&P 500: 2,121.10
NASDAQ: 5,050.80



Current Rating Distribution (as of 04/30/15)

Coverage Universe	Percent	Inv. Banking Relationships*	Percent
Outperform (Buy)	65	Outperform (Buy)	14
Market Perform (Hold)	32	Market Perform (Hold)	2
Underperform (Sell)	2	Underperform (Sell)	0

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