Pfenex Inc. (PFNX)

Biosimilar Progress Continues to Drive Value

MARKET DATA

Price	$13.00
52-Week Range:	$5.28 - $19.95
Shares Out. (M):	23.1
Market Cap ($M):	$300.3
Average Daily Vol. (000):	310.0
Cash (M):	$129
Cash/Share:	$5.59
Enterprise Value (M):	$182
LT Debt (M):	$4

Source: Thomson Reuters and JMP Securities LLC

FY DEC		2014A	2015E	2016E
Revenue ($M)	1Q	$2.6	$2.0A	--
	2Q	$3.3	$2.0	--
	3Q	$2.8	$2.0	--
	4Q	$2.0	$2.0	--
	FY	**$10.6**	**$8.0**	**$8.0**
EPS	1Q	($0.18)	($0.29)A	--
	2Q	($1.67)	($0.38)	--
	3Q	($0.16)	($0.51)	--
	4Q	($0.18)	($0.70)	--
	FY	**($2.19)**	**($1.91)**	**($1.96)**
	P/E	NM	NM	NM
	Previous FY	NC	($1.24)	($1.24)

Source: Company reports and JMP Securities LLC

STOCK PRICE PERFORMANCE

MARKET OUTPERFORM | Price: $13.00 | Target Price: $15.00

INVESTMENT HIGHLIGHTS

Continued progress with biosimilar programs; reiterate our Market Outperform rating and $15 price target on Pfenex. Pfenex reported 1Q15 earnings results largely in line with our and consensus estimates. Pfenex ended the quarter with cash of $92M, not including the $37M from the follow-on offering in April. We believe the company is continuing to make solid progress with its pipeline of biosimilar and high value generic candidates and also look to clinical progress with the vaccine programs in 2015. Furthermore, we continue to believe that the Hospira partnership for PF582 provided transformation validation of both the company's protein production platform as well as its ability to substantially de-risk development programs at an early stage through industry leading bioanalytical capabilities. Our $15 price target is derived through an NPV analysis of global PF582 sales, with pipeline programs and the platform representing upside potential.

PF582 on track. Pfenex is continuing to assist in the technology transfer process for PF582 to Hospira following the announcement of the collaboration agreement in February. We believe the program remains on track to enter Phase 3 development in 2016.

Pipeline advancements anticipated in 2015. The company has initiated a Phase 1 trial for PF530, a biosimilar candidate to Betaseron, and results are expected in 2H15. Additionally, progress remains on track to initiate a bioequivalence trial in 2H15 for PF708, a generic candidate of Forteo. Lastly, we expect the recombinant anthrax vaccine will enter Phase 1 trials in 2H15.

Continued success across the biosimilar landscape highlights sustained, long-term value for Pfenex's platform technologies and bioanalytical capabilities. The first quarter represented an important inflection point for biosimilars with the FDA's approval of the first biosimilar in the U.S., Zarxio, a biosimilar to Amgen's Neupogen (filgrastim). There are at least four additional biosimilar applications currently under review by the FDA. We also expect to see continued increases in visibility regarding the intellectual property landscape for key biosimilar targets. We believe the news flow supports the significant opportunity for biosimilars broadly, and specifically for Pfenex, in terms of the regulatory clarity, as well as legal and reimbursement landscapes. We believe this opportunity remains undervalued in PFNX shares.

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1Q15 FINANCIAL SUMMARY

Pfenex reported 1Q15 EPS of ($0.29) slightly below our and consensus estimates of ($0.23) and ($0.24), respectively, due to ramping expenses funding the company's development pipeline. Total revenues were in line at $2.0MM vs. $1.8MM/$2.1MM JMPe/consensus. Total operating expenses were $6.7MM, higher than our estimate of $5.2MM, with both R&D and SG&A spending above our expectations. R&D expenses were $2.8MM, compared to our estimate of $2.1MM, and SG&A expenses were 3.9MM, vs. $3.1MM JMPe.

We expect both R&D and SG&A expenses to increase as the company accelerates development of its biosimilar pipeline and as such we are raising our expense estimates for 2015 and beyond. A summary of 1Q15 financial results and of changes to our model is provided in Figure 1.

FIGURE 1. 1Q15 Financial Summary

PFNX	1Q15			2015 est			2016 est		
	JMP old	Cons	Actual	JMP old	Cons	JMP new	JMP old	Cons	JMP new
Revenue	**1.8**	**2.1**	**2.0**	**7.0**	**8.7**	**8.0**	**6.0**	**8.2**	**8.0**
R&D	2.1		2.8	15.0		29.5	25.4		50.1
SG&A	3.1		3.9	12.8		18.1	15.3		21.7
Total operating expense	5.2		6.7	27.7		47.6	40.7		71.8
Net income (loss)	**(4.7)**	**(5.1)**	**(6.0)**	**(26.0)**	**(23.9)**	**(43.4)**	**(39.2)**	**(36.8)**	**(67.0)**
Shares outstanding (diluted)	20.6		20.5	20.9		22.8	31.6		34.2
EPS (diluted)	**($0.23)**	**($0.24)**	**($0.29)**	**($1.24)**	**($1.19)**	**($1.91)**	**($1.24)**	**($1.45)**	**($1.96)**

Source: Company Reports and JMP Securities LLC

Company Description

Pfenex is a clinical-stage biotechnology company engaged in the development of difficult-tomanufacture and high-value proteins, focused on biosimilars. The company's lead product candidate is PF582, a biosimilar candidate to Lucentis (ranibizumab). Lucentis, marketed by Roche Ltd. and Novartis AG, for the treatment of retinal diseases, achieved approximately $4.3 billion in global product sales in 2013. PF582 is currently undergoing a Phase 1b/2a trial in patients with wet-AMD (age-related macular degeneration), with data expected in 4Q14. Initiation of a Phase 3 trial is anticipated in mid- 2015 with data expected in 2017. Additional pipeline candidates include PF530, a biosimilar candidate to Betaseron (interferon beta-1b, multiple sclerosis), vaccine development programs for anthrax and malaria, and next-generation biologics further leveraging the protein production platform.

Investment Risks

Potential risks to our price target include, but are not limited to, clinical, regulatory, commercial and competitive factors.

Clinical risk. Pfenex may not be successful in the full development and launch of its product candidates. There may be enrollment, dosing, efficacy, or safety issues that would preclude development. It is a possibility that the drug candidates may fail to reach endpoints in their respective clinical trials or an improved version of the reference drugs, Lucentis or Betaseron, may be developed. Any of the aforementioned issues would cause a delay, or discontinuation of development. If the product candidates do make it through clinical trials, the company may yet encounter manufacturing issues, including challenges with the scale-up to commercial quantities. All of the above circumstances should be taken into consideration when assessing clinical risk.

Regulatory risk. To date, there have been no FDA approved biosimilars; however, we expect the 351(k) regulatory pathway to be validated prior to the review of PF582. The company's drug candidates still may not receive approval from the FDA or from ex-U.S. agencies. They may request additional preclinical or clinical trials to provide validation for approval, which would delay approval timelines and increase expenses. If approval is granted, the regulatory agency may impose restrictions on the label, or require a REMS program for a drug candidate. This may limit commercial uptake and delay commercial progress.

Market risk. We assume that the market dynamic and share for Lucentis remains stable vs. current conditions. We note that this could be impacted by changes in the competitive landscape with drugs available today (e.g., Eyelea, Avastin) or those in development. The market opportunity for products may not accurately reflect current estimates and there may be challenges with market adoption. This would impact the ability to reach revenue and profitability projections. The company must obtain and protect its intellectual property rights in order to effectively compete in the marketplace. Pfenex could get involved in patent lawsuits, which would be time consuming and expensive.

Financial risk. Pfenex has no commercial products generating revenue, thus it has not been and is not yet profitable. It has incurred losses each year since inception due to research and development expenses. These expenses are expected to increase in the near future as product candidates advance through the pipeline. The company will likely need to raise additional capital to fund these trials and continue operations. If there are any issues with acquiring needed financing, commercializing its product candidates, and achieving sales revenue, the company may not reach profitability, which may jeopardize the business.

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JMP Securities expects to receive OR intends to seek compensation for investment banking services from Pfenex Inc. in the next 3 months.

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Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.
Market Perform (MP): JMP Securities expects the stock price to perform in line with relevant market indices over the next 12 months.
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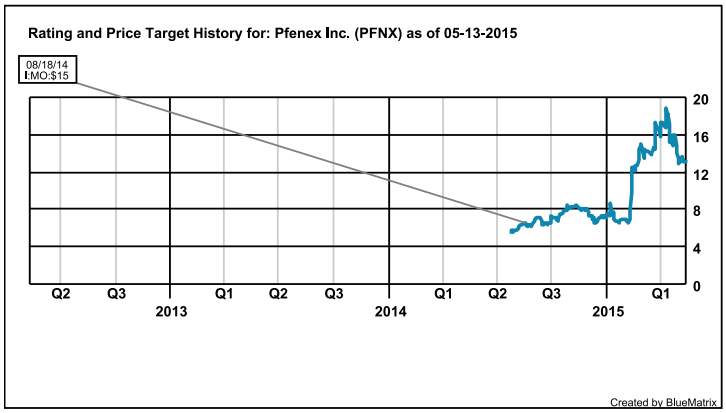
JMP Rating	Regulatory Equivalent	# Co's Under Coverage	*% of Total*	Regulatory Equivalent	# Co's Under Coverage	*% of Total*	# Co's Receiving IB Services in Past 12 Months	*% of Co's With This Rating*
MARKET OUTPERFORM	Buy	279	*62.00%*	Buy	279	*62.00%*	95	*34.05%*
MARKET PERFORM	Hold	140	*31.11%*	Hold	140	*31.11%*	17	*12.14%*
MARKET UNDERPERFORM	Sell	9	*2.00%*	Sell	9	*2.00%*	0	*0%*
COVERAGE IN TRANSITION		21	*4.67%*		21	*4.67%*	4	*19.05%*
TOTAL:		450	*100%*		450	*100%*	116	*25.78%*

Stock Price Chart of Rating and Target Price Changes:

Note: First annotation denotes initiation of coverage or 3 years, whichever is shorter. If no target price is listed, then the target price is N/A. In accordance with NASD Rule 2711, the chart(s) below reflect(s) price range and any changes to the rating or price target as of the end of the most recent calendar quarter. The action reflected in this note is not annotated in the stock price chart. Source: JMP Securities.



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