

Vitae Pharmaceuticals, Inc. (VTAE)

Multiple Partnership Announcements for Programs Targeting RORγ Highlight Asset Value of VTP-43742

MARKET DATA

Price	\$13.70
52-Week Range:	\$5.41 - \$23.35
Shares Out. (M):	21.4
Market Cap (\$M):	\$293.2
Average Daily Vol. (000):	148.0
Cash (M):	\$68
Cash/Share:	\$3.17
Enterprise Value (M):	\$250
Float (M):	19.3
LT Debt (M):	\$1

Source: Thomson Reuters and JMP Securities LLC

MARKET OUTPERFORM | Price: \$13.70 | Target Price: \$21.00

INVESTMENT HIGHLIGHTS

Several recently announced pre-clinical and discovery partnerships in the development of RORγ inhibitors increase our confidence in the value of Vitae Pharmaceuticals' lead candidate expected to enter clinical development in 1H2015; reiterate our Market Outperform rating and \$21 price target based on discounted cash flow and sum-of-the-parts methodology. As we have previously noted, VTAE is developing lead compounds, derived from the company's wholly-owned RORγ program, which we believe are potentially best-in-class inhibitors for autoimmune disease. Recently both AstraZeneca and Sanofi have entered into research and development collaborations to discover and advance lead compounds inhibiting RORγ for the treatment of immune disorders. Few details of the collaborations have been disclosed, but the early nature of the programs suggest VTAE has a significant head-start (Figure 1). We anticipate VTAE will submit an IND during 1H15 with a subsequent trial initiation, specifically in psoriasis- a Th17 driven condition- with initial results expected in mid-2015. To our knowledge, no clinical data on any RORγ program have been announced by any company to date. We currently consider this indication upside to our valuation, with the potential for outsized returns for VTAE and its shareholders on this wholly owned asset.

Vitae is an early-stage drug discovery and development company that uses its proprietary CONTOUR structure-based drug design platform for the development of therapeutic candidates directed against validated targets. While Vitae's programs are early, they are potentially first- or best-in-class for multi-blockbuster opportunities in Alzheimer's disease and type II diabetes. These programs, designated VTP-37948 and VTP-34072, have been validated scientifically and de-risked financially via separate business development agreements with Boehringer Ingelheim (a private, German biopharmaceutical company). Multiple near-term value inflection points offer investors with significant upside in the first half of 2015.

FY DEC		2014E	2015E	2016E
Revenue (\$M)	1Q	--	\$0.0	--
	2Q	--	\$0.0	--
	3Q	\$6.2A	\$0.0	--
	4Q	\$0.0	\$20.0	--
	FY	\$8.5	\$20.0	\$0.0
EPS	1Q	--	(\$0.46)	--
	2Q	--	(\$0.49)	--
	3Q	(\$1.04)A	(\$0.52)	--
	4Q	(\$0.39)	(\$0.54)	--
	FY	(\$1.07)	(\$2.01)	(\$1.85)

Source: Company reports and JMP Securities LLC

STOCK PRICE PERFORMANCE



FIGURE 1. Selected RORy Partnerships

Company	Partner	Date Partnership Announced	Stage	Partnership Details
Orca Pharmaceuticals	AstraZeneca	2/25/2015	Lead Identification	Upfront and Milestone payments totaling \$122.5 million with AstraZeneca maintaining the option to acquire the Orca compounds
lead Pharma	Sanofi	2/18/2015	Discovery	Royalty payments on global sales. Further details of the financial terms have not been disclosed
Lycera	Merck	2011	Unknown	\$12 million in upfront cash, eligible to receive up to \$295 million in milestones low double digit tiered royalties.
Karo Bio	Pfizer	2011	Preclinical	\$217 million in up-front and milestone payments, plus potential royalty fees. As of EOY2014 program transferred to Pfizer for continued development

Source: JMP Securities LLC and Company Reports

FIGURE 2. Upcoming Catalysts

Timing	Program	Catalyst
1H15	VTP-34072 (HSDβ-1)	Phase II clinical results expected in type-2 diabetes
1H15	BI-1181181 (BACE)	Results from multi-dose trial (candidate for Alzheimer's)
1H15	VTP-43742 (RORyt)	File IND / initiate Phase I proof-of-concept trial in an autoimmune condition
2H15	VTP-38543 (LXRβ)	File IND / Initiate Phase I clinical trial in atopic dermatitis
mid-15	VTP-43742 (RORyt)	Potential data readout from Phase I clinical trial in an autoimmune condition
2H15	VTP-38543 (LXRβ)	Phase I safety and PK trial results in atopic dermatitis
2016	VTP-38543 (LXRβ)	Results from Phase I trial in atopic dermatitis
2016	VTP-38443 (LXRβ)	File IND/ Initiate Phase I clinical trial in acute coronary syndrome
2016	VTP-43742 (RORyt)	Initiate Phase II trial (large indication)
2016	VTP-43742 (RORyt)	Initiate Phase II trial (rare/orphan indication)

Source: Company Presentations

FIGURE 3. VTAE Income Statement

Income Statement (\$MM)	2013E	1Q-2Q14	3Q14A	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Total Product Sales and Royalties	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	268.5	512.5	876.6	1,243.6	1,629.6	1,931.8
Collaborative Revenue	22.5	2.3	0.2		2.5											
Milestone Revenue	0.0		6.0	0.0	6.0	20.0	0.0	46.0	70.0	20.0	60.0	50.0	145.0	75.0	0.0	107.0
Total Revenue	22.5	2.3	6.2	0.0	8.5	20.0	0.0	46.0	70.0	41.7	328.5	562.5	1,021.6	1,318.6	1,629.6	2,038.8
Cost of Goods Sold							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross Profit	22.5	2.3	6.2	0.0	8.5	0.0	0.0	46.0	70.0	41.7	328.5	562.5	1,021.6	1,318.6	1,629.6	2,038.8
Operating Expenses:																
Research and Development	14.9	9.4	4.8	5.0	19.2	23.8	26.7	29.3	58.6	65.7	82.1	105.1	120.9	139.0	159.8	183.8
General and administrative	5.4	2.6	3.1	2.0	7.7	10.8	13.0	19.4	26.2	30.2	37.7	60.4	84.5	118.3	159.7	215.6
Total operating expenses	20.3	12.1	7.9	7.0	26.9	34.6	39.6	48.8	84.9	95.9	119.8	165.4	205.4	257.3	319.5	399.4
Operating income (loss)	2.2	(9.7)	(1.7)	(7.0)	(18.4)	(34.6)	(39.6)	(2.8)	(14.9)	(54.1)	208.7	397.1	816.3	1,061.3	1,310.1	1,639.4
Other income (expense):																
Interest income	0.1	0.00	0.0	0.0	0.02	0.0	0.0	0.7	0.7	0.5	(0.0)	1.5	4.3	9.7	16.6	25.2
Interest expense	(1.4)	(0.54)	(0.23)	(0.20)	(0.97)	(0.80)	-									
Other income	0.3	0.22	0.13	0.4	0.74	-										
Total other income, net	(1.0)	(0.3)	(0.1)	0.2	(0.2)	(0.8)	0.0	0.7	0.7	0.5	0.0	1.5	4.3	9.7	16.6	25.3
Pretax income (loss)	1.2	(10.0)	(1.8)	(6.8)	(18.6)	(35.4)	(39.6)	(2.1)	(14.2)	(53.6)	208.7	398.6	820.6	1,071.0	1,326.7	1,664.6
Income tax benefit (provision)					0.0	0.0	0.0	0.0	0.0	0.0	(54.8)	(119.6)	(287.2)	(374.8)	(464.4)	(582.6)
Tax Rate					0%	0%	0%	0%	0%	0%	26%	30%	35%	35%	35%	35%
Comprehensive income (loss)	1.2	(10.0)	(1.8)	(6.8)	(18.6)	(35.4)	(39.6)	(2.1)	(14.2)	(53.6)	153.9	279.1	533.4	696.1	862.4	1,082.0
Accretion of redeemable convertible preferred stock																
Net income (loss) attributable to common stockholder	0.0	(10.0)	(1.8)	(6.8)	(18.6)	(35.4)	(39.6)	(2.1)	(14.2)	(53.6)	153.9	279.1	533.4	696.1	862	1,082
Basic EPS to common stockholder	\$ -	\$ (0.96)	\$ (1.04)	\$ (0.39)	\$ (1.07)	\$ (2.01)	\$ (1.85)	\$ (0.09)	\$ (0.65)	\$ (2.41)	\$ 6.8	\$ 12.2	\$ 23.1	\$ 29.8	\$ 36.5	\$ 45.3
Diluted EPS to common stockholder	\$ -	\$ (0.96)	\$ (1.04)	\$ (0.39)	\$ (1.07)	\$ (2.01)	\$ (1.85)	\$ (0.09)	\$ (0.65)	\$ (2.41)	\$ 6.7	\$ 12.0	\$ 22.7	\$ 29.2	\$ 35.8	\$ 44.4
Basic shares outstanding	10.1	10.5	1.7	17.4	17.4	17.6	21.5	21.7	22.0	22.2	22.5	22.8	23.1	23.3	23.6	23.9
Diluted shares outstanding	10.7	10.5	1.7	17.4	17.4	17.8	21.5	21.7	22.0	22.2	23.0	23.2	23.5	23.8	24.1	24.4

Source: JMP Securities LLC and Company Reports

Company Description

Vitae is a biotechnology company focused on leveraging a discovery and development platform for the advancement of small molecule drugs to treat important unmet clinical diseases. Utilizing the company's proprietary Contour structure based discovery platform, Vitae is able to rapidly discover novel lead molecules with desired target efficacy and biological stability that support significant derisking at very early stages of drug development. Vitae has initially focused its development on two targets that treat large patient markets: type-2 diabetes and Alzheimer's disease. The company's most advanced clinical asset is VTP-34072, an inhibitor of 11- β HSD1, a preclinically validated target in diabetes and metabolic disease that is currently in Phase II clinical trials. Data is expected from this trial in the first half of 2015.

The second asset, VTP-37948, is an inhibitor of BACE-1, a target of high interest in the treatment of Alzheimer's disease that has entered Phase I clinical trials with expected biomarker and data read-outs by the end of 2015. Both of these clinical candidates target large markets and have been partnered since discovery for further development by Boehringer Ingelheim GmbH, resulting in significant upfront and milestone payments totaling \$152.4MM. The company has also used its platform to develop preclinical candidate inhibitors against difficult-to-target pathways in autoimmune disease, cardiovascular disease, and dermatological conditions. These wholly owned assets include VTP-43742, a ROR- γ t inhibitor strongly implicated in autoimmune diseases such as multiple sclerosis, psoriasis, and rheumatoid arthritis. Additionally, the company has developed VTP-38443 for the treatment of acute coronary syndrome, and VTP-38543 for the treatment of atopic dermatitis, both of which stimulate the LXR β receptor. Vitae is also developing an as-yet unnamed program to develop preclinical compounds for immune-oncology applications.

Investment Risks

Clinical and regulatory. If either VTP-34072 in diabetes or VTP-37948 in Alzheimer's is not able to meet any of its primary outcomes or suffer from safety and tolerability issues, Vitae and Boehringer Ingelheim (BI) may choose to end development in any of its current indications. Additionally, if the FDA and EMEA do not approve VTP-34072 or VTP-37948, Vitae's stock price would likely suffer.

Partnering. Vitae has partnered with (BI) in the development of VTP-34072 in diabetes and VTP-37948 in Alzheimer's. BI is responsible for the continued clinical and commercial development of both candidates and may decide to end development for one or more indications. If it were necessary for Vitae to develop and market any of its programs due to the loss or inability to retain a partner, it may be difficult to develop an internal commercial structure. Management has limited experience in commercial and marketing activities.

Competitive. The diabetes market is crowded and saturated with low-cost generic manufacturers of metformin and sulfonylureas. It may be difficult for BI and Vitae to garner significant market share. The high bar for safety and efficacy differentiation for the diabetes primary care market may limit adoption. VTP-37948 is not the only BACE-1 inhibitor in development and will not be a first-in-class therapy if Merck/Ligand are successful in bringing their drug to market. It may be difficult to compete in a market dominated by these therapies.

Financial. Vitae currently derives revenue from research and development funding and from license or collaboration agreements. The company sold ~6,875,000 shares in September 2014, raising net proceeds of ~\$51.15MM. We expect this funding to be able to carry it through to 2016. Like most non-profitable biotechnology companies, VTAE will likely need to seek additional financing, exposing current investors to dilutive risk.

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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.

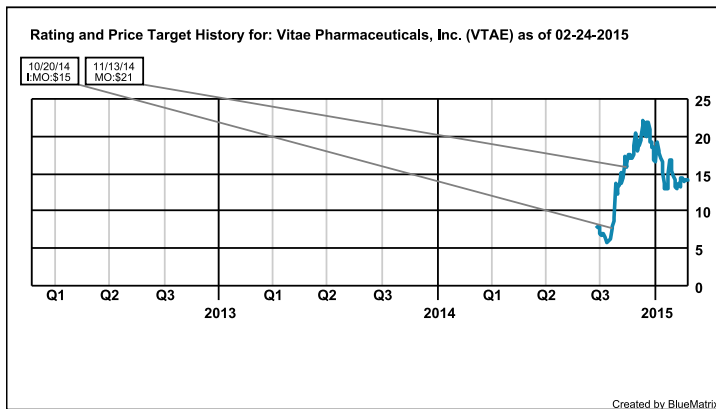
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JMP Rating	Regulatory Equivalent	# Co's Under Coverage	% of Total	# Co's Receiving IB Services in Past 12 Months				
				Regulatory Equivalent	# Co's Under Coverage	% of Total	% of Co's With This Rating	
MARKET OUTPERFORM	Buy	282	62.95%	Buy	282	62.95%	89	31.56%
MARKET PERFORM	Hold	154	34.38%	Hold	154	34.38%	21	13.64%
MARKET UNDERPERFORM	Sell	8	1.79%	Sell	8	1.79%	0	0%
COVERAGE IN TRANSITION		2	0.45%		2	0.45%	0	0%
TOTAL:		448	100%		448	100%	112	25.00%

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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