# PiperJaffray.

# Vitae Pharmaceuticals, Inc. (VTAE)

# Overweight

Cash Of \$80 Million To Focus On Wholly Owned Autoimmune Program; Reiterate OW

#### CONCLUSION

Vitae ended 2Q:15 with \$80 million in cash to advance its wholly-owned, early stage pipeline. Vitae is conducting a Phase I trial of RORγt inhibitor VTP-43742 and plans to begin a multiple ascending dose trial in psoriasis in 3Q:15. Topical LXR-beta agonist VTP-38543 for atopic dermatitis will begin Phase I trials this year. Unfortunately, Boehringer Ingelheim's partnered diabetes drug, VTP-34072, failed in combination with metformin and BI elected to terminate the BACE inhibitor partnership following off-target tox in a multi-dose study earlier this year. While VTAE shares have come under pressure following this set-back, we remain buyers for the company's wholly-owned pipeline. We reiterate our Overweight rating and \$16 price target.

- RORγt Program Data in 2H:15. VTP-43742 is an inhibitor of RORγt, a key regulator in TH17 activation. Vitae is conducting a Phase I single ascending dose trial of VTP-43742 in 48 healthy volunteers. Vitae will commence a multiple ascending dose trial in 60 moderate-to-severe psoriasis patients in 3Q:15 with top-line 4-week PASI efficacy this year. Vitae has observed strong preclinical activity of VTP-43742 in a mouse multiple sclerosis model and plans to initiate two Phase II trials in 2016.
- Atopic Dermatitis a Second Focus. VTP-38543 is a topical LXR-beta agonist ready to begin Phase I trials this year with PoC data in 2016. In a mouse model of atopic dermatitis, VTP-38543 improved both breakdown of the dermal barrier and inflammatory disease processes on par with steroids. According to the NIH, atopic dermatitis affects up to 30% of Americans and more effective treatments are needed.
- Better Clarity on BACE and Diabetes by YE:15. Rights to the BACE inhibitor Alzheimer's disease program, including lead candidate VTP-36951, will return to Vitae on October 21st. The company will provide an update on its plan by YE:15, although we anticipate Vitae may seek a new partner. VTP-34072 + metformin failed to display efficacy in lowering blood glucose in a Phase II trial. BI will continue to run the monotherapy arms of the study to read out in 2H:15, but our expectations are low and we have removed all value for the program.

### RISKS TO ACHIEVEMENT OF PRICE TARGET

Risks include clinical, regulatory and commercial. Vitae may be unable to sign new partnerships and its drugs may fail in the clinic. Vitae may be unable to file new INDs. Vitae will likely need to raise additional capital.

## **COMPANY DESCRIPTION**

Vitae is a structure-based small molecule drug discovery company.

### PRICE: US\$9.61

Note: Price as of the close August 4, 2015.

#### TARGET: US\$16.00

Proj. EV of \$331M + mid-FY:16E net cash

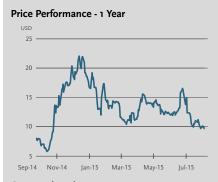
#### Edward A. Tenthoff

Sr Research Analyst, Piper Jaffray & Co. 212 284-9403, edward.a.tenthoff@pjc.com

#### Benjamin J. Adler, Ph.D.

Research Analyst, Piper Jaffray & Co. 212 284-9329, benjamin.j.adler@pjc.com

Changes Rating Price Tgt FY15E Rev (mil) FY16E Rev (mil) FY16E EPS FY16E EPS 52-Week High / Low Shares Out (mil) Market Cap. (mil) Total Assets (\$mil)	Previous ————————————————————————————————————	Current Overweight US\$16.00 US\$0.7 US\$1.0 US\$(1.84) US\$(1.95) 23.35 / US\$5.41 21.8 US\$209.5 NA
FY15E EPS FY16E EPS 52-Week High / Low Shares Out (mil) Market Cap. (mil)	US\$(1.90)	US\$(1.84) US\$(1.95) 23.35 / US\$5.41 21.8 US\$209.5



Source: Bloomberg

YEAR REVENUE (US\$ m)					EARNINGS PER SHARE (US\$)							
ILAK	Mar	Jun	Sep	Dec	FY	FY RM	Mar	Jun	Sep	Dec	FY	FY P/E
2014A	1.2	1.2	6.2	0.2	8.7	24.1X	(8.24)	(8.57)	(1.06)	(0.40)	(3.61)	NM
2015E	0.2A	0.2A	0.2	0.2	0.7	299.3x	(0.47)A	(0.45)A	(0.45)	(0.48)	(1.84)	NM
2016E	0.3	0.3	0.3	0.3	1.0	209.5x	(0.46)	(0.49)	(0.48)	(0.51)	(1.95)	NM

Vitae went public in Sept 2014.

Piper Jaffray does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decisions. This report should be read in conjunction with important disclosure information, including an attestation under Regulation Analyst certification, found on pages 3 - 5 of this report or at the following site: http://www.piperjaffray.com/researchdisclosures.

Vitae Pharmaceuticals, Inc. Page 1 of  $\frac{1}{2}$ 02

# Vitae Pharmaceuticals Quarterly Earnings Estimates (\$ in thousands except per share)

8/4/15

0/-1/10															
	<u>1QA</u>	2QA	3QA	4QA	2014A	<u>1QA</u>	2QE	3QE	4QE	2015E	<u>1QE</u>	2QE	3QE	4QE	2016E
Revenues:															1
Collaborative Revenue	\$1,173	\$1,155	\$6,178	\$162	\$8,669	\$150	\$162	\$200	\$200	\$712	\$250	\$250	\$250	\$250	\$1,000
Product Sales	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Revenues	\$1,173	\$1,155	\$6,178	\$162	\$8,669	\$150	\$162	\$200	\$200	\$712	\$250	\$250	\$250	\$250	\$1,000
Operating Expenses:															
Research and Development	4,548	4,877	4,799	5,080	19,305	7,506	7,773	8,000	8,500	31,779	8,500	9,000	9,000	9,500	36,000
General and Administrative	<u>1,260</u>	1,368	3,096	2,189	<u>7,914</u>	<u>2,111</u>	2,259	2,250	2,500	<u>9,120</u>	2,250	2,500	2,500	2,750	<u>10,000</u>
Total Operating Expenses	\$5,808	\$6,246	\$7,896	\$7,269	\$27,219	\$9,617	\$10,032	\$10,250	\$11,000	\$40,899	\$10,750	\$11,500	\$11,500	\$12,250	\$46,000
Operating Income/(Loss)	(\$4,634)	(\$5,090)	(\$1,718)	(\$7,108)	(\$18,550)	(\$9,467)	(\$9,871)	(\$10,050)	(\$10,800)	(\$40,187)	(\$10,500)	(\$11,250)	(\$11,250)	(\$12,000)	(\$45,000)
Operating Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Interest income, Net	(268)	(244)	(217)	(167)	(897)	(34)	108	0	0	74	0	0	0	0	0
Other Income	13	204	126	0	343	(207)	1	0	0	(205)	0	0	0	0	0
PreTax Income/(Loss)	(\$4,889)	(\$5,130)	(\$1,809)	(\$7,275)	(\$19,103)	(\$9,707)	(\$9,761)	(\$10,050)	(\$10,800)	(\$40,318)	(\$10,500)	(\$11,250)	(\$11,250)	(\$12,000)	(\$45,000)
Pretex Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Income Tax Benefit (Expense)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	О
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Income/(Loss)	(\$4,889)	(\$5,130)	(\$1,809)	(\$7,275)	(\$19,103)	(\$9,707)	(\$9,761)	(\$10,050)	(\$10,800)	(\$40,318)	(\$10,500)	(\$11,250)	(\$11,250)	(\$12,000)	(\$45,000)
Net Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Net Income/(Loss) per Share	(\$8.24)	(\$8.57)	(\$1.06)	(\$0.40)	(\$3.61)	(\$0.47)	(\$0.45)	(\$0.45)	(\$0.48)	(\$1.84)	(\$0.46)	(\$0.49)	(\$0.48)	(\$0.51)	(\$1.95)
Shares Outstanding	593	599	1,712	18,114	5,291	20,827	21,838	22,250	22,500	21,854	22,750	23,000	23,250	23,500	23,125
0 0 10															

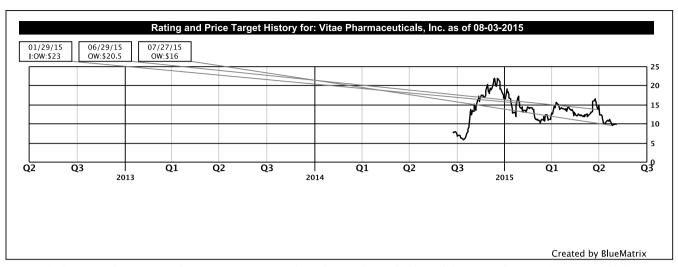
Source: Company reports and Piper Jaffray estimates

Current disclosure information for this company can be found at

http://www.piperjaffray.com/researchdisclosures.

Vitae Pharmaceuticals, Inc.

## IMPORTANT RESEARCH DISCLOSURES



Notes: The boxes on the Rating and Price Target History chart above indicate the date of the Research Note, the rating, and the price target. Each box represents a date on which an analyst made a change to a rating or price target, except for the first box, which may only represent the first Note written during the past three years.

#### Legend:

I: Initiating Coverage

R: Resuming Coverage

T: Transferring Coverage

D: Discontinuing Coverage

S: Suspending Coverage

OW: Overweight

N: Neutral

UW: Underweight NA: Not Available UR: Under Review

Distribution of Ratings/IB Services Piper Jaffray								
			IB Serv.	IB Serv./Past 12 Mos.				
Rating	Count	Percent	Count	Percent				
BUY [OW]	429	60.34	104	24.24				
HOLD [N]	264	37.13	13	4.92				
SELL [UW]	18	2.53	0	0.00				

Note: Distribution of Ratings/IB Services shows the number of companies currently in each rating category from which Piper Jaffray and its affiliates received compensation for investment banking services within the past 12 months. FINRA rules require disclosure of which ratings most closely correspond with "buy," "hold," and "sell" recommendations. Piper Jaffray ratings are not the equivalent of buy, hold or sell, but instead represent recommended relative weightings. Nevertheless, Overweight corresponds most closely with buy, Neutral with hold and Underweight with sell. See Stock Rating definitions below.

# Analyst Certification — Edward A. Tenthoff, Sr Research Analyst — Benjamin J. Adler, Ph.D., Research Analyst

The views expressed in this report accurately reflect my personal views about the subject company and the subject security. In addition, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report.

Vitae Pharmaceuticals, Inc.
Page 3 of § 04



#### Research Disclosures

Piper Jaffray was making a market in the securities of Vitae Pharmaceuticals, Inc. at the time this research report was published. Piper Jaffray will buy and sell Vitae Pharmaceuticals, Inc. securities on a principal basis.

Piper Jaffray has received compensation for investment banking services from or has had a client relationship with Vitae Pharmaceuticals, Inc. within the past 12 months.

Within the past 12 months Piper Jaffray was a managing underwriter of a public offering of, or dealer manager of a tender offer for, the securities of Vitae Pharmaceuticals, Inc. or the securities of an affiliate.

Within the past 3 years Piper Jaffray participated in a public offering of, or acted as a dealer manager for, Vitae Pharmaceuticals, Inc. securities.

Affiliate disclosures: This report has been prepared by Piper Jaffray & Co. and/or its affiliate Piper Jaffray Ltd., both of which are subsidiaries of Piper Jaffray Companies (collectively Piper Jaffray). Piper Jaffray & Co. is regulated by FINRA, NYSE and the United States Securities and Exchange Commission, and its headquarters are located at 800 Nicollet Mall, Minneapolis, MN 55402. Piper Jaffray Ltd. is authorized and regulated by the Financial Conduct Authority, and is located at 88 Wood Street, 13th Floor, London EC2V 7RS. Disclosures in this section and in the Other Important Information section referencing Piper Jaffray include all affiliated entities unless otherwise specified.

Piper Jaffray research analysts receive compensation that is based, in part, on overall firm revenues, which include investment banking revenues.

# **Rating Definitions**

Stock Ratings: Piper Jaffray ratings are indicators of expected total return (price appreciation plus dividend) within the next 12 months. At times analysts may specify a different investment horizon or may include additional investment time horizons for specific stocks. Stock performance is measured relative to the group of stocks covered by each analyst. Lists of the stocks covered by each are available at www.piperjaffray.com/ researchdisclosures. Stock ratings and/or stock coverage may be suspended from time to time in the event that there is no active analyst opinion or analyst coverage, but the opinion or coverage is expected to resume. Research reports and ratings should not be relied upon as individual investment advice. As always, an investor's decision to buy or sell a security must depend on individual circumstances, including existing holdings, time horizons and risk tolerance. Piper Jaffray sales and trading personnel may provide written or oral commentary, trade ideas, or other information about a particular stock to clients or internal trading desks reflecting different opinions than those expressed by the research analyst. In addition, Piper Jaffray offers technical research products that are based on different methodologies, may contradict the opinions contained in fundamental research reports, and could impact the price of the subject security. Recommendations based on technical analysis are intended for the professional trader, while fundamental opinions are typically suited for the longer-term institutional investor.

- Overweight (OW): Anticipated to outperform relative to the median of the group of stocks covered by the analyst.
- Neutral (N): Anticipated to perform in line relative to the median of the group of stocks covered by the analyst.
- Underweight (UW): Anticipated to underperform relative to the median of the group of stocks covered by the analyst.

Vitae Pharmaceuticals, Inc.

Page 4 of § 05

## **Other Important Information**

The material regarding the subject company is based on data obtained from sources we deem to be reliable; it is not guaranteed as to accuracy and does not purport to be complete. This report is solely for informational purposes and is not intended to be used as the primary basis of investment decisions. Piper Jaffray has not assessed the suitability of the subject company for any person. Because of individual client requirements, it is not, and it should not be construed as, advice designed to meet the particular investment needs of any investor. This report is not an offer or the solicitation of an offer to sell or buy any security. Unless otherwise noted, the price of a security mentioned in this report is the market closing price as of the end of the prior business day. Piper Jaffray does not maintain a predetermined schedule for publication of research and will not necessarily update this report. Piper Jaffray policy generally prohibits research analysts from sending draft research reports to subject companies; however, it should be presumed that the fundamental equity analyst(s) who authored this report has had discussions with the subject company to ensure factual accuracy prior to publication, and has had assistance from the company in conducting diligence, including visits to company sites and meetings with company management and other representatives.

Notice to customers: This material is not directed to, or intended for distribution to or use by, any person or entity if Piper Jaffray is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to such person or entity. Customers in any of the jurisdictions where Piper Jaffray and its affiliates do business who wish to effect a transaction in the securities discussed in this report should contact their local Piper Jaffray representative. Europe: This material is for the use of intended recipients only and only for distribution to professional and institutional investors, i.e. persons who are authorised persons or exempted persons within the meaning of the Financial Services and Markets Act 2000 of the United Kingdom, or persons who have been categorised by Piper Jaffray Ltd. as professional clients under the rules of the Financial Conduct Authority. United States: This report is distributed in the United States by Piper Jaffray & Co., member SIPC, FINRA and NYSE, Inc., which accepts responsibility for its contents. The securities described in this report may not have been registered under the U.S. Securities Act of 1933 and, in such case, may not be offered or sold in the United States or to U.S. persons unless they have been so registered, or an exemption from the registration requirements is available.

This report is produced for the use of Piper Jaffray customers and may not be reproduced, re-distributed or passed to any other person or published in whole or in part for any purpose without the prior consent of Piper Jaffray & Co. Additional information is available upon request.

Copyright 2015 Piper Jaffray. All rights reserved.

Vitae Pharmaceuticals, Inc.

Page 5 of 106