

Vitae Pharmaceuticals (VTAE)

Q3 Financials Update; Material Catalyst in H1 2015; Reiterate OUTPERFORM and \$21 PT

- **Q3:14 Update.** Vitae reported \$6.2 million in revenues—lower than our \$7.2 million estimate. Revenues included a previously announced \$6 million milestone from Boehringer Ingelheim related to the initiation of the Phase 2 trial of VTP-34072 in diabetic patients. GAAP EPS loss of \$1.06 was reported versus our \$(0.05) estimate as revenue and share count for the quarter were lower than anticipated. Vitae ended Q3 with about \$67.8 million in cash & short-term investments and issued cash runway guidance into H1:16.
- **NEXT: Top-line results from the Phase 2 proof-of-concept trial of VTP-34072 in diabetic patients in H1 2015.** We also anticipate data release from the multiple ascending Phase 1 study of VTP-37948/Alzheimer's and the release of data from the single-dose Phase 1 safety and PK trial of VTP-43742/Autoimmune in the first half of 2015. Vitae is in the process of completing API manufacturing and GLP toxicology studies for VTP-43742.
- **Management provided insight into plans for VTP-43742.** The Phase 1 study of VTP-43742 will examine overall improvement in the clinical skin manifestations of psoriasis as well as biomarkers from skin biopsies. We believe positive data in psoriasis could precipitate trials in multiple sclerosis and other autoimmune diseases—possibly an orphan disease.
- **We reiterate our OUTPERFORM rating and our price target of \$21.** Our 12-month PT is a 365-day projection of our current fair value estimate calculated using a sum-of-parts with each part calculated using a 30% annual discount from peak sales of each drug/disease to present day and applying a 1-10x multiple, depending on stage of development to reflect risk.

November 13, 2014

Price
\$17.21

Rating
OUTPERFORM

12-Month Price Target
\$21

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Company Information

Shares Outst (M)	18.0
Market Cap (M)	\$310.2
52-Wk Range	\$5.41 - \$18.79
Book Value/sh	\$N/A
Cash/sh	\$0.00
Enterprise Value (M)	\$310.2
LT Debt/Cap %	0.0

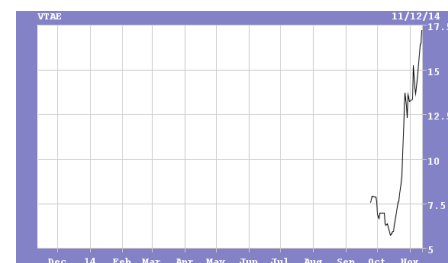
Company Description

Vitae is a clinical stage emerging pharmaceutical company discovering and developing small molecule drug candidates to treat large market indications with unmet medical needs.

FYE Dec	2013A	2014E			2015E		
REV (M)	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	\$1.0A	\$1.2A			(\$0.2)E	\$0.8E	\$0.3E
Q2 Jun	1.0A	1.2A			(0.2)E	0.8E	\$0.3E
Q3 Sep	10.3A	6.2A	7.2E	6.4E	(0.2)E	0.8E	\$0.3E
Q4 Dec	10.3A	0.2E	1.2E	0.4E	(0.2)E	0.8E	\$6.9E
Year*	\$22.5A	\$8.7E	\$10.7E	\$6.8E	(\$0.9)E	\$3.1E	\$5.8E
Change	--	--			--		
EPS	2013A	2014E			2015E		
	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	\$(0.66)A	\$(0.47)A			\$(0.45)E	\$(0.43)E	\$(0.47)E
Q2 Jun	(0.34)A	(0.48)A			(0.46)E	(0.44)E	\$(0.49)E
Q3 Sep	0.26A	(1.06)A	(0.05)E	(0.11)E	(0.47)E	(0.45)E	\$(0.52)E
Q4 Dec	0.46A	(0.43)E	(0.40)E	\$(0.38)E	(0.48)E	(0.47)E	\$(0.53)E
Year*	\$0.11A	\$(1.91)E	\$(1.27)E	\$(0.96)E	\$(1.87)E	\$(1.79)E	\$(1.94)E
P/E	--	--			--		
Change	--	--			--		

Consensus estimates are from Thomson First Call.

* Numbers may not add up due to rounding.



Source: Thomson Reuters

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INVESTMENT THESIS: Vitae, located in Fort Washington, Pennsylvania, is a clinical-stage emerging pharmaceutical company focused on discovering and developing novel, small molecule drugs for large market diseases with significant unmet medical needs. The company's proprietary structure-based drug design platform called Contour® has provided multiple, high-quality product candidates which have attracted over \$150 million in collaboration funding from big pharma. Vitae has two partnered product candidates in the clinic and several wholly-owned product candidates in preclinical development. The most advanced product candidates include VTP-34072, currently being tested in phase 2 for the treatment of type 2 diabetes and VTP-37948 which is in phase 1 for the treatment of Alzheimer's disease. Both products are being developed by Vitae's partner Boehringer Ingelheim GmbH (BI). Earlier-stage product candidates are currently unpartnered and include VTP-43742 for the treatment of autoimmune disorders, VTP-38443 for the treatment of acute coronary syndrome (ACS) and VTP-38543 for the treatment of atopic dermatitis (eczema). Vitae intends to develop and commercialize these programs and/or to strategically partner programs as appropriate. We have projected clinical development and potential regulatory approvals so that the first product could be launched in late 2019. We project the first full year of profitability in 2021 from revenues of about \$119 million. We estimate Vitae ended Q3 2014 with about \$67.8 million in cash and equivalents which we project can last through 2016. We project cash runway could cover transforming clinical data releases from multiple product candidates. We also anticipate upside potential from additional partnerships around their currently unpartnered product candidates and that Vitae's future clinical success could result in the company's acquisition.

A replay of the Q3 financials conference call may be listened to at <http://ir.vitaepharma.com/>

Figure 1: MODEL UPDATE

Vitae, Inc. (VTAE:NASDAQ)												Wedbush Securities, Inc.											
Historical and Projected Income Statement (In thousands except per share data)												Liana Moussatos, PhD											
	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A	2013A
	FY:13A	Q1A	Q2A	Q3A	Q4E	FY:14E	FY:15E	FY:16E	FY:17E	FY:18E	FY:19E	FY:20E	FY:21E	FY:22E	FY:23E	FY:24E	FY:25E						
Revenues:																							
Product Sales/Royalties																							
VTP-34072																							
VTP-37948																							
VTP-43742																							
VTP-38443																							
VTP-38543																							
Total Net Product Revenues																							
Collaborative Revenues																							
Total Revenues																							
Total COGS																							
Gross Margin																							
Operating Expenses:																							
R&D																							
SG&A																							
Acquired in-process R&D																							
Total Operating Expenses																							
Operating Income (Loss)																							
Other Income / (Expense), net																							
Interest Income																							
Interest (Expense)																							
Total other (expenses) income																							
Income Before Income Taxes																							
Income Tax Expense																							
Net Income (Loss)																							
Stock-based compensation																							
EPS																							
GAAP EPS																							
Weighted Average Shares Outstanding																							
Cash																							
Cash Per Share																							
Net Cash																							
Net Cash Per Share																							
Cash Burn (Generation)																							

Source: Company data, Wedbush Securities, Inc.

Q3:14 Update. Vitae reported \$6.2 million in revenues—slightly below our \$7.2 million estimate. Revenues included a previously announced \$6 million milestone from Boehringer Ingelheim related to the initiation of the Phase 2 trial of VTP-34072 in diabetic patients. GAAP EPS loss of \$1.06 was reported versus our \$(0.05) as revenue and share count for the quarter were lower than anticipated. Vitae ended Q3 with about \$67.8 million in cash & short-term investments and issued cash runway guidance into H1:16.

Figure 2: MILESTONES (*our estimates)

Timing	Milestones	Estimated Probability	Estimated Upside/Downside
H1:15	VTP-34072/T2D-META: PHASE 2 DATA RELEASE	60:40	±10-25%
H1:15	VTP-37948/ALZ: COMPLETION OF ADDITIONAL PHASE 1 TRIALS	60:40	±5-15%
H1:15*	VTP-43742/AUTOIMMUNE: PHASE 1 POC DATA RELEASE	50:50	± 5-20%
YE:15*	VTP-37948/ALZ: PHASE 2 DATA RELEASE	60:40	±10-30%
Q2:16*	VTP-38543/ADERM: PHASE 1 DATA RELEASE	50:50	± 0-15%

Source: Company data, Wedbush Securities, Inc.

NEXT: Top-line results from the Phase 2 proof of concept trial of VTP-34072 in diabetic patients in H1 2015. We also anticipate data release from the multiple ascending Phase 1 study of VTP-37948/Alzheimer's and the release of data from the single dose Phase 1 safety and PK trial of VTP-43742/Autoimmune in the first half of 2015. Vitae is in the process of completing API manufacturing and GLP toxicology studies for VTP-43742.

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Figure 2: VALUATION

Vitae Product Pipeline Valuation		Eligible #	Pricing	Gross Sales		Net Revs	Peak		Estimated /	Discount	Estimate	Fair Value
Product	Indication	Patients	\$/Patient	(\$000)	Year	(\$000)	Penetration	Multiple	Launch	Rate	Fair Value	per Share
VTP-34072 (WW)	Diabetes / Metabolic Syndrome	67,152,070	\$1,952	\$2,428,129	2025	\$293,353	2%	4	12/4/2019	30%	\$211,557	\$11.74
VTP-37948 (WW)	Alzheimer's Disease	8,730,000	\$5,226	\$4,318,067	2026	\$910,566	10%	3	9/4/2020	30%	\$168,060	\$9.32
VTP-43742 (WW)	Psoriasis	609,167	\$4,978	\$369,925	2027	\$144,635	11%	2	11/4/2020	30%	\$14,762	\$0.82
VTP-43742 (WW)	MS	857,143	\$49,683	\$4,405,808	2025	\$1,830,916	8%	2	11/4/2020	30%	\$118,032	\$6.55
VTP-38443 (WW)	ACS	600,000	\$30,500	\$754,409	2028	\$274,449	4%	1	12/4/2021	30%	\$8,150	\$0.45
VTP-38543 (WW)	Atopic Dermatitis	1,235,000	\$4,978	\$148,850	2028	\$50,055	2%	1	8/4/2021	30%	\$1,574	\$0.09
We use multiples to account for clinical and regulatory risk at various stages of development.									Stock	MktCap (\$000)	Upside	
1: in preclinical testing	6: in Phase 3								12-month Price Target	\$21.06	\$379,617	22%
2: passed preclinical	7: Phase 3 data								Total Pipeline Value	\$28.97	\$522,136	68%
3: IND filing/stable mature product	8: regulatory review								Current Cash	\$3.76	\$67,807	
4: Phase 1 data	9: approved								Current Stockprice:	\$17.21	\$310,183	
5: Phase 2 data	10: launched								Primary Sharecount	18,023		

Source: Company data, Wedbush Securities, Inc.

We reiterate our OUTPERFORM rating and 12-month price target of \$21. Our 12-month PT is a 365-day projection of our current fair value estimate calculated using a sum-of-parts with each part calculated using a 30% annual discount from peak sales of each drug/disease to present day and applying a 1-10x multiple, depending on stage of development to reflect risk.

RISKS TO THE ATTAINMENT OF OUR FAIR VALUE

Clinical Risks: Despite producing high-quality product candidates and encouraging initial clinical and preclinical data, Vitae has not completed phase-3 testing with any product candidate and, in general, the majority of clinical candidates fail. Vitae with BI are also developing a treatment for Alzheimer's disease in which the vast majority of clinical candidates have failed. Vitae is also dependent on BI for the proper development of their two lead product candidates VTP-34072 and VTP-37948. Both Vitae and BI use third parties to conduct preclinical and clinical testing which we view as higher risk as we believe third parties may be less motivated to reduce execution risk. Near-term clinical risks including data releases from the two lead programs are the highest risks to our price target at this time, in our view.

Regulatory Risks: Despite Vitae's management having big pharma experience, Vitae has not achieved regulatory approval for any product candidate.

Manufacturing Risks: On one hand, we view manufacturing risk to be lower for small molecule drug candidates versus biologics and oligonucleotides; however, Vitae relies on third parties for the manufacture of their product candidates for preclinical, clinical, and potential commercial manufacture and we view third parties as less motivated, in general. Also, if Vitae succeeds at obtaining regulatory approval for a product candidate, the current purchase order supply arrangements will need to be augmented with long-term supply arrangements. Vitae intends to also work with additional manufacturers to provide active pharmaceutical ingredients (APIs) and fill-and-finish services prior to pursuing regulatory approval. BI is responsible for the manufacture of API and fill-and-finish services for both 11 β -HSD1 and BACE.

Commercial Risks: For their unpartnered programs, Vitae anticipates retaining US commercial rights in specialty markets and establish regional partnerships to commercialize outside the United States. At this time, Vitae does not have a sales force or marketing capabilities. For the two lead programs, Vitae expects BI to commercialize these products with their sales and marketing group.

Competition Risks: Vitae's product candidates, if approved, will compete with currently marketed treatments and potentially with product candidates currently in development focusing on the same mechanism of action which include: 1) 11 β -HSD1 competition from Bristol-Myers Squibb, Eli Lilly & Co., and Roche Holding AG which are also testing their inhibitors in clinical trials; 2) BACE

competition from Merck & Co., AstraZeneca PLC and Eisai Co., Ltd. in collaboration with Biogen Idec which are studying BACE inhibitors in clinical trials; 3) RORyt competition from potentially multiple companies which are actively assessing RORyt inhibitors in preclinical studies; and 4) LXR β competition from Bristol-Myers Squibb which is testing an LXR β inhibitor in cardiovascular clinical trials and Alexar Therapeutics, Inc., which is developing an LXR β inhibitor for dermatologic conditions.

Intellectual Property Risks: Due to the nature of Vitae's business model, we consider intellectual property risks to be low as the company discovers its own product candidates and has composition-of-matter protection to 2030 and beyond.

Financial Risks: Vitae is a development-stage emerging pharmaceutical company and, despite receiving substantial partnership income from Boehringer Ingelheim, they have no product sales or royalty income and are unlikely to before late 2019. We project that the company is likely to end Q3 2014 with about \$67.8 million in cash and equivalents which we project could last into 2016.

Analyst Biography

Ms. Moussatos is a Managing Director, Equity Research responsible for the coverage of stocks in the Emerging Pharmaceuticals sector. Liana joined Wedbush from Pacific Growth Equities where she was a Senior Research Analyst. Prior to that she came from UBS Global Asset Management where she was Director and Portfolio Manager of the UBS Global Biotech Funds for five years. Previously Liana was with Bristol-Meyers Squibb where she was a manager in University and Government Licensing External Science and Technology and she also worked with Sloan-Kettering Cancer Institute in the Office of Industrial Affairs and the National Cancer Institute in the Office of Technology Development.

Liana received a B.S. in Entomology and a M.S. in Zoology and Biochemistry from Clemson University and a Ph.D. in Plant Pathology from the University of California Davis and completed a postdoctoral research fellowship in Cellular and Molecular Physiology at the Yale School of Medicine.

Liana's Edge: Liana's industry and buy-side experience provide depth in her understanding of what investors need to know along with her 13 years experience in following healthcare stocks. Her pipeline valuation includes all drug candidates / disease indications in active development and provides investors with a stock value for each program.

Analyst Certification

I, Liana Moussatos, Ph.D., certify that the views expressed in this report accurately reflect my personal opinion and that I have not and will not, directly or indirectly, receive compensation or other payments in connection with my specific recommendations or views contained in this report.

Disclosure information regarding historical ratings and price targets is available at <http://www.wedbush.com/ResearchDisclosure/DisclosureQ314.pdf>

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Outperform: Expect the total return of the stock to outperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Neutral: Expect the total return of the stock to perform in-line with the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Underperform: Expect the total return of the stock to underperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

The Investment Ratings are based on the expected performance of a stock (based on anticipated total return to price target) relative to the other stocks in the analyst's coverage universe (or the analyst's team coverage).*

Rating Distribution (as of September 30, 2014)	Investment Banking Relationships (as of September 30, 2014)
Outperform: 54%	Outperform: 23%
Neutral: 43%	Neutral: 1%
Underperform: 3%	Underperform: 0%

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Wedbush Equity Research Disclosures as of November 13, 2014

Company	Disclosure
Vitae Pharmaceuticals	1,3,5,7

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8. WS provided non-investment banking securities-related services within the past 12 months.
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VTAE



* WS changed its rating system from (Strong Buy/Buy/Hold/Sell) to (Outperform/ Neutral/Underperform) on July 14, 2009.

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