Vitae Pharmaceuticals (VTAE)

Focus Transitions to Proprietary Autoimmune Program with PoC Data by Year-End; Reiterate OUTPERFORM but Reducing PT to $20 for Loss of Diabetes

- **We see VTP-34072 for diabetes as essentially shelved.** Vitae announced that VTP-34072 on top of metformin did not achieve potent enough control of fasting plasma glucose in Phase 2 to satisfy their partner, Boehringer Ingelheim (BI). Even though the program is not formally discontinued and data from the placebo arm is due in 2015, we understand that new diabetes drugs should have at least additive effects on top of metformin to be competitive. Consequently, we presume the diabetes program will likely be shelved and have removed it from our estimates.
- **The Alzheimer's program restart is on track for 2015.** As previously announced, BI is expected to initiate a Phase 1 clinical trial of BI-1147560 for Alzheimer's disease by year-end.
- **VTP-43742 in psoriasis could achieve blockbuster sales based on recent drug launches.** Vitae also announced the initiation of clinical testing for VTP-43742, a RORγt modulator, in healthy volunteers (phase 1a) and in Q3 will begin to test psoriasis patients (phase 1b PoC) with data releases for both in H2. Given that recently launched psoriasis drugs have achieved (Stelara-launched 2009, $2.38BN expected in 2015—source: Bloomberg) and are apparently heading toward (Otezla-launched 2014, $1.3BN expected in 2017) blockbuster sales, we have increased our peak sales for VTP-43742 from about $600MM to about $1.1BN. The company is planning to develop VTP-43742 for a large market indication (e.g. psoriasis, multiple sclerosis, rheumatoid arthritis) as well as for a rare disease.
- **Vitae also plans to initiate clinical testing for their second proprietary candidate in 2015.** Initiation of a Phase 1 safety and PK trial for VTP-38543 in atopic dermatitis (eczema) is anticipated in H2:15.
- **We reiterate our OUTPERFORM rating but have reduced our price target to $20 for loss of the diabetes program offset by increasing our value for VTP-43742 in psoriasis.** Our 12-month PT uses a sum-of-parts plus our estimate for year-end cash 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 and dividing by diluted share count.

June 29, 2015

Price
$12.38

Rating
OUTPERFORM

12-Month Price Target
$20 **(from $21)**

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Company Information

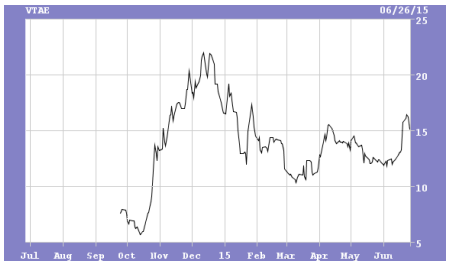
Shares Outst (M)	20827
Market Cap (M)	$332
52-Wk Range	$5.41 - $23.35
Book Value/sh	$4.38
Cash/sh	$4.26
Enterprise Value (M)	$420
LT Debt/Cap %	0.0
User Input	0.0

Company Description

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

FYE Dec	2014A	2015E			2016E		
REV (M)	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	$1.2A	$0.2A		$0.1A	$0.2E		N/AE
Q2 Jun	1.2A	0.2E		0.1E	0.2E		N/AE
Q3 Sep	6.2A	0.2E		0.1E	0.2E		N/AE
Q4 Dec	0.2A	7.2E		3.6E	0.2E		N/AE
Year*	**$8.7A**	**$7.6E**		**$3.9E**	**$0.6E**		**$2.9E**
Change	--	--			--		
	2014A	**2015E**			**2016E**		
EPS	**ACTUAL**	**CURR.**	**PREV.**	**CONS.**	**CURR.**	**PREV.**	**CONS.**
Q1 Mar	($0.47)A	($0.47)A		($0.35)A	($0.53)E		N/AE
Q2 Jun	(0.48)A	(0.47)E		(0.37)E	(0.56)E		N/AE
Q3 Sep	(1.06)A	(0.49)E		(0.40)E	(0.58)E		N/AE
Q4 Dec	(0.40)A	(0.19)E		(0.33)E	(0.61)E		N/AE
Year*	**($3.61)A**	**($1.61)E**		**($1.44)E**	**($2.28)E**		**($1.66)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 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. After the apparent failure of VTP-34072 in diabetes, Vitae has one remaining partnered product candidate in the clinic (VTP-37948 in Alzheimer's) with Boehringer Ingelheim (BI) and has initiated clinical testing of VTP-43742—one of several wholly-owned product candidates from preclinical development and expects to initiate VTP-38543 clinical testing in atopic dermatitis in 2015, as well. The company anticipates release of proof-of-concept results for VTP-43742 in psoriasis by the end of 2015. Earlier-stage product candidates are currently unpartnered and include VTP-38443 for the treatment of acute coronary syndrome (ACS). Vitae intends to develop and commercialize the proprietary programs and/or to strategically partner them as appropriate. We have projected clinical development and potential regulatory approvals so that the first product could be launched in late 2020. We project the first full year of profitability in 2021 from revenues of about $88.5 million. As of the end of Q1:15, Vitae has $88.7MM in cash and cash equivalents, which we expect to provide cash runway covering transforming clinical data releases from multiple product candidates. On February 26 2015, Vitae announced that its partner Boehringer Ingelheim placed on temporary clinical hold its Phase 1 trial of VTP-37948 for the treatment of Alzheimer's disease. BI ultimately decided to discontinue development of VTP-37948 and move forward with a structurally distinct, Phase 1 ready BACE1 inhibitor, BI-1147560. We do not believe the switch in compounds is likely to have a material impact on the commercial opportunity for Vitae/BI's Alzheimer's disease program. 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.*

Figure 1: Updated Model

Vitae, Inc. (VTAE:NASDAQ) — **Wedbush Securities, Inc.**
Historical and Projected Income Statement — Liana Moussatos, PhD
(In thousands except per share data) — Kelechi Chikere, Ph.D.

	2014A	2015E					2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
	FY:14A	Q1A	Q2E	Q3E	Q4E	FY:15E	FY:16E	FY:17E	FY:18E	FY:19E	FY:20E	FY:21E	FY:22E	FY:23E	FY:24E	FY:25E
Gross Sales:									-	-	6,218	135,924	662,205	2,165,675	5,086,803	9,455,397
BI-1147560	-					-	-	-	-	-	-	39,939	165,004	517,421	1,270,275	2,401,079
VTP-43742	-					-	-	-	-	-	6,218	79,749	258,081	558,439	859,918	1,054,808
VTP-43742	-					-	-	-	-	-	-	13,088	176,096	606,105	1,580,799	3,096,985
VTP-38443	-					-	-	-	-	-	-	1,711	39,989	128,026	288,181	474,199
VTP-38543	-					-	-	-	-	-	-	1,437	8,929	26,210	54,814	89,850
VTP-xx5	-					-	-	-	-	-	-	-	14,107	329,473	1,032,816	2,338,477
Revenues:																
Product Sales/Royalties																
BI-1147560 (Alz)	-	-	-	-	-	-	-	-	-	-	-	3,994	17,352	64,010	166,179	310,438
VTP-43742 (psoriasis)	-	-	-	-	-	-	-	-	-	-	6,218	75,953	212,138	428,407	623,641	729,140
VTP-43742 (RMS)	-	-	-	-	-	-	-	-	-	-	-	6,479	85,943	283,342	723,401	1,362,000
VTP-38443 (ACS)	-	-	-	-	-	-	-	-	-	-	-	847	19,569	57,995	123,877	193,097
VTP-38543 (Atopic Dermatitis)	-	-	-	-	-	-	-	-	-	-	-	711	4,134	11,320	22,387	34,042
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Net Product Revenues	-	-	-	-	-	-	-	-	-	-	6,218	87,984	353,243	1,169,687	2,574,983	4,550,611
Collaborative Revenues	8,669	150	150	150	7,150	7,601	601	601	601	601	601	601	601	601	601	601
Total Revenues	$ 8,669	$ 150	$ 150	$ 150	$ 7,150	$ 7,601	$ 601	$ 601	$ 601	$ 601	$ 6,819	$ 88,585	$ 353,844	$ 1,170,288	$ 2,575,584	$ 4,551,212
Total COGS	-	-	-	-	-	-	-	-	-	-	622	8,798	35,324	116,969	257,498	455,061
Gross Margin	$ 8,669	$ 150	$ 150	$ 150	$ 7,150	$ 7,601	$ 601	$ 601	$ 601	$ 601	$ 6,197	$ 79,786	$ 318,519	$ 1,053,320	$ 2,318,085	$ 4,096,151
Operating Expenses:																
R&D	19,305	7,506	7,881	8,354	8,855	32,597	41,063	48,843	26,141	28,296	30,628	33,153	35,886	38,844	42,046	45,512
SG&A	7,915	2,111	2,113	2,115	2,117	8,457	8,792	9,216	14,948	29,774	42,141	43,852	45,633	47,486	49,414	51,420
Acquired in-process R&D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Expenses	$ 27,219	$ 9,617	$ 9,994	$ 10,469	$ 10,973	$ 41,053	$ 49,855	$ 58,059	$ 41,089	$ 58,070	$ 72,769	$ 77,005	$ 81,519	$ 86,330	$ 91,460	$ 96,932
Operating Income (Loss)	(18,550)	(9,467)	(9,844)	(10,319)	(3,822)	(33,452)	(49,254)	(57,458)	(40,488)	(57,469)	(66,572)	2,781	237,001	966,990	2,226,626	3,999,219
Other Income / (Expense), net	344	(207)	7	(19)	(55)	(273)	(196)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)	(187)
Interest Income	64	74	52	45	41	212	98	(36)	(159)	(278)	(443)	(554)	(435)	289	2,416	6,800
Interest (Expense)	(961)	(108)	(108)	(108)	(108)	(431)	0	0	0	0	0	0	0	0	0	0
Total other (expenses) income	(553)	(240)	(49)	(81)	(122)	(492)	(97)	(223)	(346)	(465)	(630)	(741)	(621)	102	2,230	6,614
Income Before Income Taxes	$ (19,103)	$ (9,707)	$ (9,893)	$ (10,400)	$ (3,944)	$ (33,945)	$ (49,351)	$ (57,681)	$ (40,833)	$ (57,934)	$ (67,202)	$ 2,040	$ 236,380	$ 967,092	$ 2,228,855	$ 4,005,833
Deemed Dividend to preferred stockholders	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Provision)/benefit for Income Taxes	-	-	-	-	-	-	-	-	-	-	-	(730)	(92,188)	(377,166)	(869,254)	(1,562,275)
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	39.0%	39.0%	39.0%	39.0%
Net Income (Loss)	$ (19,103)	$ (9,707)	$ (9,893)	$ (10,400)	$ (3,944)	$ (33,945)	$ (49,351)	$ (57,681)	$ (40,833)	$ (57,934)	$ (67,202)	$ 1,309	$ 144,192	$ 589,926	$ 1,359,602	$ 2,443,558
Stock-based compensation	3,954	0	975	1,204	1,013	3,192	3,752	3,836	3,846	3,846	3,846	3,846	3,846	3,846	3,846	3,846
EPS	$ (4.36)	$ (0.47)	$ (0.52)	$ (0.55)	$ (0.23)	$ (1.76)	$ (2.45)	$ (2.76)	$ (1.96)	$ (2.63)	$ (2.95)	$ (0.10)	$ 5.56	$ 22.67	$ 51.25	$ 90.19
GAAP EPS	$ (3.61)	$ (0.47)	$ (0.47)	$ (0.49)	$ (0.19)	$ (1.61)	$ (2.28)	$ (2.59)	$ (1.79)	$ (2.47)	$ (2.79)	$ 0.05	$ 5.71	$ 22.82	$ 51.40	$ 90.33
Weighted Average Shares Outstanding	5,291	20,827	20,977	21,127	21,277	21,052	21,652	22,252	22,852	23,452	24,052	24,652	25,252	25,852	26,452	27,052
Cash	$65,318	$88,693	$77,261	$67,025	$63,145	$63,145	$13,971	($43,513)	($84,146)	($141,880)	($210,586)	($217,675)	($99,815)	$418,107	$1,662,258	$3,963,173
Cash Per Share	$12.35	$4.26	$3.68	$3.17	$2.97	$3.00	$0.65	($1.96)	($3.68)	($6.05)	($8.76)	($8.83)	($3.95)	$16.17	$62.84	$146.50
Net Cash	$54,772	$83,889	$73,778	$64,861	$62,301	$62,301	$13,971	($43,513)	($84,147)	($141,881)	($210,586)	($217,676)	($99,815)	$418,107	$1,662,258	$3,963,173
Net Cash Per Share	$10.35	$4.03	$3.52	$3.07	$2.93	$2.96	$0.65	($1.96)	($3.68)	($6.05)	($8.76)	($8.83)	($3.95)	$16.17	$62.84	$146.50
Cash Burn (Generation)	$3,936					$38,973	$85,974	$94,284	$77,433	$94,534	$105,506	$43,890	($81,060)	($481,122)	($1,207,351)	($2,264,115)

Source: Company data, Wedbush Securities, Inc.

Due to VTP-34072's failure to achieve Boehringer Ingelheim' s (BI) predetermined level of control for fasting plasma glucose on top of metformin, we anticipate BI to terminate the program--even though the placebo (monotherapy) arm is still expected to release results in H2. We understand that new diabetes drug candidates should demonstrate added benefit on top of metformin in order to be competitive. Consequently, we have removed our projections and valuation for VTP-34072 in diabetes from our model. We now anticipate the first drug launch could occur in late 2020 (VTP-43742 in moderate-to-severe psoriasis) but still see full-year profitability in 2021. We have also increased our peak annual sales estimate for VTP-43742 in psoriasis from about $600 million to over $1.1 billion based on reviewing the launches of recent psoriasis drugs (Stelara and Otezla) which either have already achieved blockbuster status (Stelara Bloomberg consensus for 2015: $2.38 billion following a 2009 launch) or is headed toward blockbuster peak sales (Otezla Bloomberg consensus for 2017: $1.3 billion following a 2014 launch).

Figure 2: Milestones (*our estimates)

Timing	Milestones	Estimated Probability	Estimated Upside/Downside
H2:15	VTP-43742/ AUTOIMMUNE: PHASE 1 DATA RELEASE	50:50	± 0-15%
H2:15	VTP-34072/T2D-META: PHASE 2 DATA RELEASE (MONOTHERAPY ARM)	60:40	±0-15%
Q4:15	VTP-43742/ AUTOIMMUNE: PHASE 1 POC DATA RELEASE IN PSORIASIS	50:50	± 5-20%
2015*	BI-1147560(BACE) INITIATE PHASE 1 CLINICAL TRIAL	60:40	±5-15%
2015	VTP-38543/ATOPIC DERMATITIS: INITIATE PHASE 1 CLINICAL TRIAL	--	--
H1:16*	VTP-38543/ATOPIC DERMATITIS: PHASE 1 DATA RELEASE	50:50	± 0-15%

Source: Company data, Wedbush Securities, Inc.

Despite the setback with the diabetes program, Vitae still anticipates material clinical data releases in 2015 with phase 1 and psoriasis proof-of-concept data for VTP-43742 in H2. Management also anticipates initiating clinical testing for the back-up Alzheimer's candidate as well as for VTP-38543 in atopic dermatitis by year-end—setting the stage for additional potentially material data releases in 2016.

Figure 3: Pipeline Valuation

Vitae Product Pipeline Valuation		Eligible #	Pricing	Gross Sales		Net Revs	Peak		Estimated / Actual	Discount	Estimate	Fair Value
Product	Indication	Patients	$/Patient	($000)	Year	($000)	Penetration	Multiple	Launch	Rate	Fair Value	per Share
BI-1147560 (WW)	Alzheimer's Disease	8,730,000	$5,226	$3,738,358	2026	$867,924	10%	3	3/2/2021	30%	$195,785	$8.97
VTP-43742 (WW)	Psoriasis	654,500	$4,978	$1,175,712	2027	$783,743	34%	3	11/4/2020	30%	$169,576	$7.77
VTP-43742 (WW)	RMS	857,143	$49,683	$3,096,985	2025	$1,362,000	8%	3	11/4/2021	30%	$93,578	$4.29
VTP-38443 (WW)	ACS	600,000	$30,500	$754,409	2028	$274,449	4%	1	12/4/2021	30%	$9,602	$0.44
VTP-38543 (WW)	Atopic Dermatitis	1,235,000	$4,978	$148,850	2028	$50,055	2%	1	8/4/2021	30%	$1,854	$0.08
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		$19.63	$428,506	56%	
2: passed preclinical	7: Phase 3 data						Total Pipeline Value		$24.44	$533,540	95%	
3: IND filing/stable mature product	8: regulatory review						YE:15 Cash		$2.89	$63,145		
4: Phase 1 data	9: approved						Current Stockprice:		$12.55	$273,964		
5: Phase 2 data	10: launched											

Source: Company data, Wedbush Securities, Inc.

We reiterate our OUTPERFORM rating but have reduced our price target to $20 for loss of the diabetes program offset by increasing our value for VTP-43742 in psoriasis. We have removed our value for VTP-34072 in diabetes from our price target but have offset this by increasing our peak sales projection for VTP-43742 in psoriasis after reviewing the blockbuster potential for recent psoriasis drugs (Stelara and Otezla). Our 12-month PT uses a sum-of-parts plus our estimate for year-end cash 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 and dividing by diluted share count.

RISKS TO THE ATTAINMENT OF OUR 12-MONTH PRICE TARGET

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. On February 26, 2015, Vitae announced that its partner Boehringer Ingelheim (BI) placed a temporary clinical hold on its Phase 1 trial of VTP-37948/ BACE1 inhibitor due the observation of skin reactions in some patients. In March 2015, Vitae announced that BI decided to move forward with a Phase 1 ready, structurally distinct BACE inhibitor, BI-1147560. Although management has stated that BI-1147560 is comparable to VTP-43742 in preclinical efficacy and safety/tolerability profile, we remain cautious that there is the risk that efficacy, safety and tolerability issues may come up in clinical testing. Although results from the placebo arm are expected in 2015, we believe VTP-34072 is likely to be discontinued after the Phase 2 metformin combination arm failed to show additional benefit on fasting plasma glucose.

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 BACE. We note that BI observed manufacturing issue(s) with BI-1147560 in preclinical testing which contributed to BI decision to move forward with VTP-37948. Although management has stated that the manufacturing issue(s) have been resolved, we remain cautious that issue(s) or related issues may resurface.

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 Alzheimer's program, Vitae expects BI to commercialize this product 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) 11β-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) RORγt competition from potentially multiple companies which are actively assessing RORγt inhibitors in preclinical studies; and 4) LXRβ competition from Bristol-Myers Squibb, which is testing an LXRβ inhibitor in cardiovascular clinical trials and Alexar Therapeutics, Inc., which is developing an LXRβ 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. Vitae ended Q1:15 with $88.7MM in cash and cash equivalents. Management guided to runway through 2016 and we project that with the addition of $7MM from an anticipated milestone in Q4:15 from BI, we project Vitae has cash runway through Q1 2017.

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 16 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., Kelechi Chikere, 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/DisclosureQ115.pdf

Investment Rating System:
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 March 31, 2015)	**Investment Banking Relationships (as of March 31, 2015)**
Outperform:55% Neutral: 43% Underperform: 2%	Outperform:31% Neutral: 3% Underperform: 0%

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Wedbush Equity Research Disclosures as of June 29, 2015

Company	Disclosure
Vitae Pharmaceuticals	1,3,4,5,7

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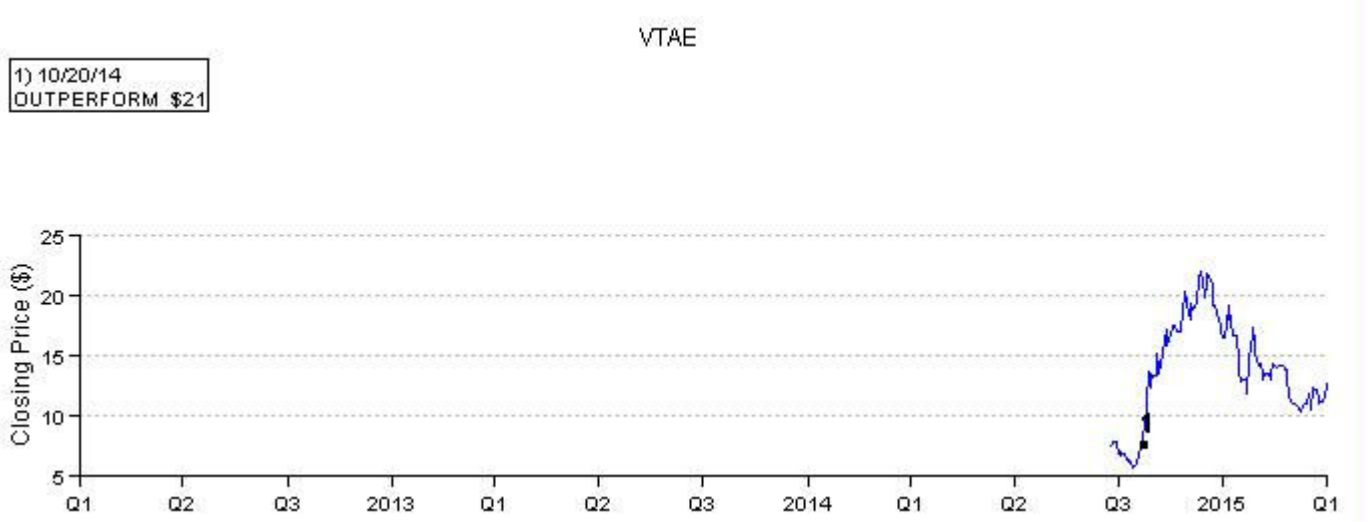

* WS changed its rating system from (Strong Buy/Buy/Hold/Sell) to (Outperform/ Neutral/Underperform) on July 14, 2009.
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