

Equity Research

March 30, 2015

**Price: \$19.28** (03/27/2015)

**Price Target: \$45.00**

**OUTPERFORM (1)**

**Ken Cacciatore**

646.562.1305

ken.cacciatore@cowen.com

**Tyler Van Buren, M.Sc.**

646.562.1338

tyler.vanburen@cowen.com

**Sal Rais, M.D.**

646.562.1420

sal.rais@cowen.com

**Key Data**

Symbol	NASDAQ: VSAR
52-Week Range:	\$36.86 - 16.15
Market Cap (MM):	\$564.0
Net Debt (MM):	\$(170.6)
Cash/Share:	\$7.03
Dil. Shares Out (MM):	29.3
Enterprise Value (MM):	\$393.5
ROIC:	NA
ROE (LTM):	NA
BV/Share:	\$6.90
Dividend:	NA

FY (Dec)	2014A	2015E	2016E
<b>Earnings Per Share</b>			
Year	\$(4.39)	\$(2.90)	\$(4.15)
Prior Year	\$(2.20)	\$(2.25)	
P/E	NM	NM	NM
Consensus EPS	-	\$(2.47)	\$(2.71)

Consensus source: Thomson Reuters

**Revenue (MM)**

Year	\$0.0	\$0.0	\$0.0
------	-------	-------	-------

Estimate Changes

# Activity Set To Increase In 2015; Our Conviction Remains Exceedingly High

## The Cowen Insight

We met with management, and given our analysis of the very positive Phase II extension study data and the ongoing Phase III, we continue to have a high level of conviction in a positive Phase III outcome. The bottom-line is that VRS-317 has a strong potential to alter the SOC and be the first long-acting pediatric hGH product to reach the market, which should drive significant value. Add here.

## Development Activity To Pick Up Substantially Through The Rest Of The Year And VRS-317 Continues To Lead Long-Acting hGH Therapies In Development

We recently had a meeting with management which further reinforced our belief that the company's late-stage drug candidate, VRS-317, is the leading – and most intriguing – long-acting hGH candidate in clinical development, and has the potential to alter the current standard of care. Currently, VRS-317 is being developed in both pediatric and adult GHD indications. The Phase III VELOCITY study in pediatric GHD patients began early this year and enrollment should be complete by year-end with an interim data disclosure of the 6-month height velocity analysis anticipated in mid-2016, while topline 12-month data should be available in early 2017. We could also see data from the second year of the Phase II extension study in early 2016. These time points and data completion should allow VRS-317 to remain on-track for a mid-2018 FDA approval and launch – which importantly – could allow the company to be first to market with a long-acting pediatric growth hormone deficiency therapy and provide Versartis with an important first-mover advantage in a treatment area currently fragmented by undifferentiated daily treatment options. The company has also conducted extensive discussions with the PMDA regulatory agency in Japan and plans to initiate a parallel Phase II/III pediatric trial for semi-monthly VRS-317 this year with potential 12 month data by H1:2017. Additionally, a monthly dose will be evaluated as part of the pediatric VRS-317 lifecycle expansion strategy and we should receive an update on that program later this year. Versartis also expects to initiate a Phase II/III registration study for once-monthly VRS-317 in adults starting in H2:15, which is also a significant additional market opportunity. Lastly, an additional undisclosed clinical development candidate could be announced in the second half of the year. The bottom-line is that Versartis is aggressively driving forward with multiple programs, should have a first-mover advantage in the long-acting hGH market (with its semi-monthly formulation), and should eventually complement this franchise with a potential once-monthly product. The strategy is sound, the technology is differentiated, the clinical and regulatory hurdles are low, and we would be adding at these levels.

Importantly, we believe the extension study data provided earlier in January (and discussed in detail once again below) on the patients administered the 3.5 mg/kg Phase III dose provided valuable insight on safety and efficacy ahead of Phase III, and we believe now further de-risks the program.

## At A Glance

### Our Investment Thesis

With the positive Phase II and extension study VRS-317 results and subsequent de-risking, we arrive at a base case valuation of \$45 per share. While VSAR shares are unlikely to find their way to those levels immediately, we believe that they should approach our price target as the Phase III program progresses and we near both the 6 and 12 month data readouts – and as investors begin to better understand that the risks associated with these events are relatively low. Further de-risking in Phase III for VRS-317 and assuming commercial success should take the value closer to \$65-70. The market potential from the adult GHD indication/program, which is also progressing, is clearly not included in these estimates.

### Forthcoming Catalysts

- 2015 – Potential Phase II/III study initiation of VRS-317 in pediatric GHD in Japan
- H2:2015 – Potential pivotal Phase II/III initiation of VRS-317 in adult GHD
- Mid-2016 – 6-month interim data readout for VRS-317 ongoing Phase III study
- Early 2017 – Final 12-month interim data readout for VRS-317 ongoing Phase III study

### Base Case Assumptions

\$45 per share based on positive Phase III VRS-317 interim data in pediatric patients

### Upside Scenario

\$65-70 per share based on Phase III VRS-317 clinical success

### Downside Scenario

\$5-10 per share based on VRS-317 clinical failure

### Price Performance

Source: Bloomberg

### Company Description

Versartis is a specialty pharmaceuticals company developing VRS-317, a potential long-acting hGH product with a once-monthly profile for pediatric and adult GHD. The management team has tremendous expertise in the field and VRS-317 appears to be one of the most promising long-acting hGH products in development.

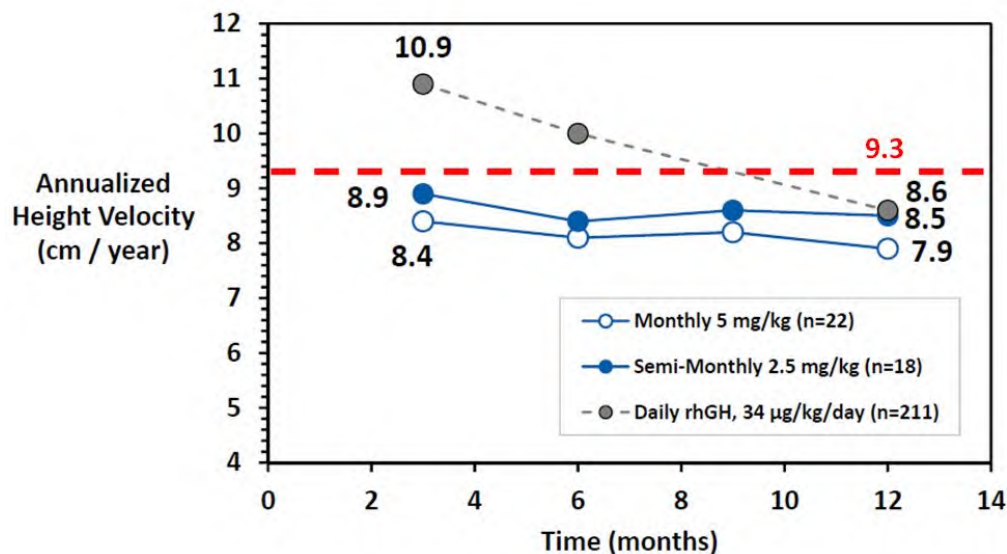
### Analyst Top Picks

	Ticker	Price (03/27/2015)	Price Target	Rating
Shire Pharmaceutical	SHPG	\$240.97	\$285.00	Outperform
Jazz Pharmaceuticals	JAZZ	\$175.42	\$190.00	Outperform
Actavis	ACT	\$303.56	\$350.00	Outperform

For review, our key takeaways from the data were that: (1) the 3.5 mg/kg semi-monthly dose that is being employed in Phase III resulted in IGF-1 SDS levels in the optimal, upper portion of the therapeutic range; (2) transitioning initial 1.15 mg/kg weekly patients that were treated for the first 6 months of the study to 3.5 mg/kg semi-monthly dose for the following 6 months of the study resulted in an almost 2 cm/year increase in height velocity to 9.3 cm/year after 12 months. That corresponded to IGF-1 increases in-line or greater than that observed with daily hGH therapies; (3) significantly less waning of height velocity was observed with VRS-317 relative to that observed with daily hGH therapies in year 1; and (4) the safety profile of the 3.5 mg/kg semi-monthly dose appears exceedingly clean and comparable to daily hGH therapies. Specifically, we would like to focus on points (2) and (3) as it relates to the 6-month interim and final 12-month VELOCITY trials readouts. Recall, for the 6-month interim results of the Phase III study anticipated in mid-2016, management will disclose the average annualized growth rates for the 3.5 mg/kg semi-monthly VRS-317 dose versus the active daily hGH comparator. Per the figure below, at this 6 month analysis, we would anticipate the Phase III 3.5 mg/kg semi-monthly VRS-317 dose to have a higher height velocity result than was observed in the Phase II study simply due to the added +1.0 mg/kg in dosing. Stated more clearly, the Phase III trial will have the higher 3.5 mg/kg semi-monthly VRS-317 dose for the entirety of the study, which should yield better results than in the Phase II. Given the 9.3 cm/year in height velocity that was observed at 12 months in the Phase II extension study, we would expect a higher result at 6 months due to the increased dose and as height velocity wanes over time, and therefore we wouldn't be surprised to see height velocity around 9-10 cm/year (but potentially closer to 10) at 6 months. However, we would also note that it is likely that the daily hGH comparator will be around 10 cm/year or higher in height velocity, which is the historical norm at 6 months and therefore there is the potential that VRS-317 may look numerically lower at the interim analysis.

With that said, the final 12 month endpoint is clearly the more important time point and we believe VRS-317 will prove noninferior and likely numerically higher when compared to daily hGH therapy. The reason for our confidence is that daily hGH therapy continues to decline quicker than VRS-317 as observed in the Phase II study and compared to the historical KIGS database. Therefore, given what we anticipate will be VRS-317's likely performance of higher than 9.3 cm/year at 12 months (using the results from the the Phase II extension study) versus the traditional 8.5-9.0 cm/year height velocity that has historically been observed with daily hGH therapy, we are increasingly unconcerned about VRS-317 meeting the 2 cm/year noninferiority margin (primary endpoint). In fact, because the Phase III program will have the high dose for the full 12 months (opposed to just the final 6 months in the Phase II extension study), we believe there is a strong potential for VRS-317 to achieve numerical superiority to daily hGH. For these reasons, we view the VRS-317 program as significantly de-risked as our consultants indicate that the initial efficacy profile observed in Phase II and the extension study should be highly predictive of the eventual 12 month results in the ongoing Phase III pivotal study.

### VRS-317 Annualized Height Velocity Over 12 Months In Phase II



Source: Versartis; Modified by Cowen and Company

### The Valuation Suggests Potential Significant Upside

As for the valuation, with the Phase II and extension study VRS-317 results and subsequent de-risking, we arrive at a base case valuation of \$45 per share. We believe that VSAR shares should approach our price target as the Phase III program progresses and we near both the 6 and 12 month data readouts – and as investors begin to better understand that the risks associated with these events are relatively low. Further de-risking in Phase III for VRS-317 and assuming commercial success should take the value closer to \$65-70. We have included peak sales estimates of \$400MM+, \$400MM+, and approximately \$250MM in the target US, EU, and Japanese pediatric GHD markets, respectively. However, we – and our consultants – believe that these peak sales estimates could likely prove conservative if the long-acting profile of VRS-317 holds up (which we believe it will) and no safety issues are observed, as use could spread into other indications. Additionally, a potential acquisition value assuming lower operating spending assumptions due to commercial synergies would inflect our valuation discussion closer to \$90-100, which given the global product opportunity and its potential transformative nature, appears possible. The market potential from the adult GHD indication/program, which is also progressing, is clearly not included in these estimates.

### The VRS-317 Pediatric GHD Phase III VELOCITY Program

Following interactions with the FDA and EMA, Versartis initiated a Phase III trial of VRS-317 in pediatric growth hormone deficient patients early this year. The trial is employing semi-monthly dosing and the commercial formulation is already prepared. The global Phase III pivotal program for VRS-317 will include up to 70 clinical sites across the U.S., Canada, and Western Europe (using many of the same sites as in Phase II). The pediatric patient demographics will be similar to the Phase II study (further de-risking the program), which enrolled moderately severe GHD patients with a mean age of 7-8. In our – and our consultants' – view, Versartis is studying VRS-317 in the appropriate patient population and these demographics are representative of typical GHD patients seen in the major markets where Versartis is focusing its commercial efforts. The study will utilize an open-label design with a non-inferiority 12 month height velocity endpoint for 3.5 mg/kg semi-monthly VRS-317 relative to current daily GHD therapy. 136 patients will be randomized 3:1 to either 3.5mg/kg semi-monthly VRS-317 or 34 µg/kg of daily rhGH, which is the highest approved

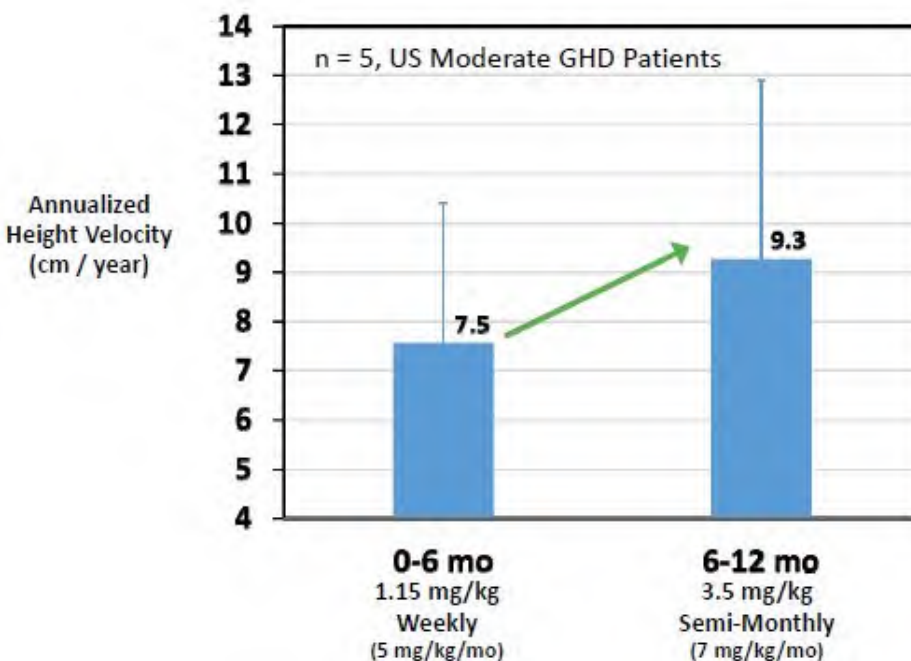
dose on the labels of Genotropin and Norditropin in all regions. Of note, the company has increased the dose from the 2.5 mg/kg used in the Phase II study to 3.5mg/kg based on extensive PK/PD modeling to determine an optimal dose that will provide catch-up growth at the highest tier. Given the clean safety and efficacy profile of the relatively low doses studied in Phase II, we had previously believed Versartis had the ability to take the VRS-317 dose to higher levels and achieving greater HV results. The company has transitioned 20 VRS-317 patients from Phase II to the 3.5 mg/kg dose in the ongoing safety expansion study with no issues, and the remaining patients will be converted by year-end. Finally, Versartis is currently in the process of developing an injection device for the product based on feedback from the FDA and the majority of patients in the Phase III study are expected to receive a single injection using a 30 gauge needle.

**Specifics Of The Extension Study Data Update With A Focus On The New 3.5 mg/kg Semi-Monthly Dose Being Used In Phase III; This Data Further De-Risks The Phase III Program**

As for the specifics of the extension study data update in early January, 95% of the Phase IIa pediatric GHD patients (n=60/64) rolled over into an ongoing extension study, which treated patients with 2.5 mg/kg semi-monthly, 3.5 mg/kg semi-monthly (1.15 mg/kg weekly patients from Phase IIa transferred to this new dose), and 5.0 mg/kg monthly. Recall, that the newer 3.5 mg/kg semi-monthly dose is being used for the ongoing Phase III VELOCITY trial in pediatric GHD patients, which was selected based upon the company's proprietary PK/PD model. Importantly, in the group of patients initially treated 6 months with the 1.15 mg/kg weekly dose in Phase IIa that were then transitioned to the newer 3.5 mg/kg semi-monthly dose for 6 months (n=5), IGF-1 levels increased as predicted and were almost a full standard deviation above those observed with the prior 2.5 mg/kg semi-monthly dose. To put it another way, the 2.5 mg/kg semi-monthly regimen resulted in a mean IGF-1 SDS value of -0.4 (n=19), which is the lower portion of the therapeutic range, whereas treatment with the 3.5 mg/kg semi-monthly regimen resulted in a mean value of 0.5 (n=16), which is in the upper portion of the therapeutic range. We would note that the 0.5 mean IGF-1 SDS value is nearly identical to that observed with the most common daily hGH dose of 40 ug/kg/day in almost the same patient population (based on age and height SDS demographics). Furthermore, no overexposure to IGF-1 was observed at the 3.5 mg/kg dose.

Not surprisingly, this increase in dose and corresponding mean IGF-1 SDS levels also resulted in an average increase in height velocity of nearly 2 cm/year (n=5) between the first 6 months of treatment at 1.15 mg/kg weekly (7.5 cm/year annualized) and the second 6 months of treatment at 3.5 mg/kg semi-monthly (9.3 cm/year annualized). We wonder if the height velocities above 9.3 cm/year could be achieved in patients if they are in fact treated with 3.5 mg/kg semi-monthly VRS-317 for the first full 12 months (as in the planned Phase III), as opposed to just the second 6 months per above. This seems plausible, especially considering the importance of catch-up growth in the first 6 months of initiation of treatment. Additionally, there appears to be less waning of growth response over the first year with VRS-317 when compared to daily hGH therapies. Using annualized height velocities at 3, 6, and 12 months, daily hGH therapies declined from 10.9 cm/year to 8.6 cm/year (a decline of 2.3 cm/year over 12 months), while VRS-317 2.5 mg/kg declined from 8.9 cm/year to 8.5 cm/year (a decline of 0.4 cm/year over 12 months). We see no reason to believe that less waning shouldn't occur with the 3.5 mg/kg semi-monthly regimen as well and wonder if this impact will continue to be observed into the second year of treatment, especially as compliance with daily therapies tends to drop off. This would clearly be an exceedingly positive development if it were to occur.

### VRS-317 Dosage Increase To 3.5 mg/kg Semi-Monthly Resulted In Increased Height Velocity In The Same GHD Children During Extension Study



Source: Versartis

From a safety perspective, all VRS-317 regimens, including the newer 3.5 mg/kg semi-monthly regimen, continue to be very well tolerated with the few observed AEs being very mild (grade 1) and transient. There were no drug-related SAEs, unexpected AEs, or lipoatrophy or nodules, which has been historically observed with daily hGH therapy. The number of AEs also decrease from the first to second 6 months of treatment. Lastly, 2 out of the 20 patients on the 3.5 mg/kg semi-monthly dose experienced 1 transient IGF-1 SDS excursion above 2 each. We – and our consultants – are completely unconcerned by this for the following reasons: (1) The FDA only is concerned about excursions above 3 IGF-1 SDS; (2) only excursions of chronic nature (these are transient and one-off) are concerning from a safety perspective; (3) as observed in a publication by Cohen et al. (J Clin Endocrinol Metab, July 2007, 92(7):2480–2486), even observing high doses of hGH where IGF-1 SDS levels at 2 or above were reached by 9 months and *maintained* in patients, safety did not differ from the lower, labeled doses of hGH and the incidence of AEs were similar to those reported in other studies; and (4) Nutropin AQ was approved with numerous observed excursions above an IGF-1 SDS of 2, and 3 as well, which has never been observed with VRS-317. Put simply, only chronic and maintained IGF-1 SDS levels above 3 should be of concern – these two observations and everything observed to date are not.

If approved, Versartis' semi-monthly option would reduce the current burden associated with daily hGH treatment for pediatric patients by not only reducing the number of administrations (from 365 to 24 a year), but also minimizing the complexity of the device. Daily hGH options have a multi-step administration process using a pen (needle gauge of 30–32) that in most cases needs to be refrigerated. For VRS-317, a simple autoinjector device (needle gauge of 29–30) will be utilized and can be stored at room temperature. We are unconcerned regarding this needle size and consultants suggest that it should not have any significant effect on patient use. Given the nature of GHD, Versartis plans to use a targeted specialty sales force to commercialize



VRS-317. The company estimates that it can focus its efforts on the roughly 800 high prescribing pediatric endocrinologists with about 50 sales reps.

#### **Overview Of Previously Reported Phase II VRS-317 Data**

Versartis presented positive 6 month VRS-317 results from a Phase IIa pediatric GHD study at the ICE/ENDO 2014 annual conference in Chicago in late June. VRS-317 demonstrated efficacy and safety comparable to the highest approved doses of market-leading daily growth hormone therapies, Genotropin and Norditropin. Similar to the initial 3 month data, the primary endpoint of repeat weekly, semi-monthly, and monthly dosing of VRS-317 over a 6 month period showed that annualized 6 month height velocity measurements were comparable to age-matched historical controls (on daily injection). Importantly, VRS-317 was safe and well-tolerated in the naive, pre-pubertal children as only mild and transient adverse events, which are typically observed with daily hGH therapy were observed. There were no SAEs or unexpected AEs. There were 5 patients with transient excursions of IGF-I SDS scores above 2 in the 5 mg/kg monthly dosing cohort, but as we stated previously, this is un-concerning to both us and our consultants. The bottom line is that after an additional 3 months of VRS-317 treatment exposure (up to 6 month total), VRS-317 demonstrated impressive efficacy, a safety profile that appears to be cleaner than previous long-acting therapies in development, and is leading the pack among long-acting hGH therapies in development.

Figure 1 Versartis Annual P&L

VERSARTIS - 2014-2020 ESTIMATED ANNUAL EPS BUILDUP (\$MM)																				
	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	CGR	Comments
U.S. VRS-317 pediatric GHD Sales						\$40.0	\$100.0	\$150.0	\$200.0	\$250.0	\$290.0	\$320.0	\$335.0	\$350.0	\$370.0	\$385.0	\$400.0	\$415.0	NM	- VRS-317 in Phase III; Launch expected in 2018
Growth Rate							+150%	+50%	+33%	+25%	+16%	+10%	+5%	+5%	+5%	+4%	+4%	+4%		- Rapid growth expected; biologic-type exclusivity
EU VRS-317 pediatric GHD Sales						\$40.0	\$110.0	\$150.0	\$200.0	\$250.0	\$280.0	\$300.0	\$330.0	\$345.0	\$360.0	\$380.0	\$395.0	\$410.0	NM	- VRS-317 in Phase III; Launch expected in 2018
Growth Rate							+175%	+36%	+65%	+50%	+40%	+30%	+10%	+5%	+5%	+5%	+4%	+4%		- Solid growth expected
Japan VRS-317 pediatric GHD Sales							\$30.0	\$110.0	\$140.0	\$160.0	\$180.0	\$195.0	\$205.0	\$215.0	\$225.0	\$230.0	\$235.0		NM	- VRS-317 Japan Phase II/III to start soon; Launch expected in 2020
Growth Rate								+65%	+50%	+40%	+30%	+7%	+5%	+5%	+5%	+5%	+3%	+3%		- Solid growth expected
Total VRS-317 pediatric GHD Sales						\$80.0	\$210.0	\$330.0	\$510.0	\$640.0	\$730.0	\$800.0	\$860.0	\$900.0	\$945.0	\$980.0	\$1,025.0	\$1,060.0	NM	- VRS-317 could garner \$1B+ in revenue given attractive profile
Growth Rate							+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+5%	+4%	+3%		- Rapid growth expected; biologic-type exclusivity
Other Indications						\$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		- Potential in short-stature, adult GHD, Turner Syndrome etc.
<b>Total Versartis Revenues</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$80.0</b>	<b>\$210.0</b>	<b>\$330.0</b>	<b>\$510.0</b>	<b>\$640.0</b>	<b>\$730.0</b>	<b>\$800.0</b>	<b>\$860.0</b>	<b>\$900.0</b>	<b>\$945.0</b>	<b>\$980.0</b>	<b>\$1,025.0</b>	<b>\$1,060.0</b>		
% Change							+103%	+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+4%	+3%		
Cost of Goods	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8.0	\$21.0	\$33.0	\$51.0	\$64.0	\$73.0	\$80.0	\$86.0	\$90.0	\$94.5	\$98.0	\$102.5	\$106.0		
Gross Profit	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$72.0	\$189.0	\$297.0	\$459.0	\$576.0	\$657.0	\$720.0	\$774.0	\$810.0	\$850.5	\$881.0	\$922.5	\$954.0		
Gross Margin							90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%		
SG&A	\$4.4	\$13.5	\$23.0	\$40.0	\$65.0	\$100.0	\$130.0	\$150.0	\$170.0	\$190.0	\$210.0	\$230.0	\$245.0	\$260.0	\$275.0	\$290.0	\$305.0	\$320.0	+29%	- Salesforce expansion in 2017-18, in preparation for VRS-317 launch
% of Revs							61.9%	45.5%	33.3%	29.7%	28.8%	28.8%	28.5%	28.9%	29.1%	29.3%	29.8%	30.2%		- 100 reps in US and EU @ \$300K adds \$30MM
R&D	\$18.9	\$32.6	\$62.5	\$85.0	\$85.0	\$75.0	\$65.0	\$50.0	\$50.0	\$45.0	\$45.0	\$40.0	\$40.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	+5%	
% of Revs							93.8%	31.0%	15.2%	8.8%	7.0%	6.2%	5.0%	4.7%	3.9%	3.7%	3.5%	3.4%		- Additional clinical trials for VRS-317 indications
Amortization	\$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	\$0.0	\$0.0	\$0.0	NM	
Operating Expenses	\$19.3	\$46.1	\$85.5	\$125.0	\$150.0	\$175.0	\$195.0	\$200.0	\$220.0	\$235.0	\$255.0	\$270.0	\$285.0	\$295.0	\$310.0	\$325.0	\$340.0	\$355.0	+19%	
% of Revenues							NM	92.9%	60.6%	43.1%	36.7%	34.9%	33.8%	33.1%	32.8%	32.8%	33.2%	33.5%		
Operating Income	(\$19.3)	(\$46.1)	(\$85.5)	(\$125.0)	(\$150.0)	(\$103.0)	(\$6.0)	\$97.0	\$239.0	\$341.0	\$402.0	\$450.0	\$489.0	\$515.0	\$540.5	\$566.0	\$582.5	\$599.0	NM	- Operating profit expected in 2020
% Operating Margin							NM	NM	29.4%	46.9%	53.3%	55.1%	56.3%	56.9%	57.2%	57.2%	56.8%	56.5%		
Non-Operating Income																				
Interest Income	\$0.0	\$0.1	\$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	\$0.0		
Interest Expense	(0.1)	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	0.0	0.0		
Other Income	0.0	(37.1)	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	0.0		
Non-Operating Income	\$0.0	(\$37.0)	\$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	\$0.0	\$0.0		
Pretax Income	(\$19.3)	(\$83.1)	(\$85.5)	(\$125.0)	(\$150.0)	(\$103.0)	(\$6.0)	\$97.0	\$239.0	\$341.0	\$402.0	\$450.0	\$489.0	\$515.0	\$540.5	\$566.0	\$582.5	\$599.0	NM	
% of Revs								29.4%	46.9%	53.3%	55.1%	56.3%	56.9%	57.2%	57.2%	56.8%	56.5%	56.2%		
Income Taxes								\$24.0	\$83.7	\$119.4	\$160.7	\$157.5	\$171.2	\$180.3	\$189.2	\$198.1	\$207.0	\$209.7	NM	
Income Tax Rate								35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%		
Net Income - Operations	(\$18.5)	(\$83.1)	(\$85.5)	(\$125.0)	(\$150.0)	(\$103.0)	(\$6.0)	\$63.1	\$155.4	\$221.7	\$261.3	\$292.5	\$317.9	\$334.8	\$351.3	\$367.9	\$378.6	\$389.4	NM	
% Net Margin								19.1%	30.5%	34.6%	35.8%	36.6%	37.0%	37.2%	37.2%	37.2%	36.9%	36.7%		
Extraordinary Items	\$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	\$0.0	\$0.0	\$0.0		
Reported Net Income	(\$18.5)	(\$83.1)	(\$85.5)	(\$125.0)	(\$150.0)	(\$103.0)	(\$6.0)	\$63.1	\$155.4	\$221.7	\$261.3	\$292.5	\$317.9	\$334.8	\$351.3	\$367.9	\$378.6	\$389.4	NM	
Interest Add-Back	\$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	\$0.0	\$0.0	\$0.0		
EPS (GAAP) - Before Ex. Items	(\$41.10)	(\$4.39)	(\$2.90)	(\$4.15)	(\$4.85)	(\$3.20)	(\$0.20)	\$1.85	\$4.45	\$6.15	\$7.05	\$7.65	\$8.05	\$8.25	\$8.40	\$8.55	\$8.55	\$8.55	NM	- Profitable in 2020 following the launch of VRS-317
Growth									+141%	+38%	+15%	+9%	+5%	+2%	+2%	+2%	+0%	+0%		
EPS - Extraordinary Items	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
EPS - Reported	(\$41.10)	(\$4.39)	(\$2.90)	(\$4.15)	(\$4.85)	(\$3.20)	(\$0.20)	\$1.85	\$4.45	\$6.15	\$7.05	\$7.65	\$8.05	\$8.25	\$8.40	\$8.55	\$8.55	\$8.55	NM	
Shares - Fully Diluted (MM)	0.5	18.9	29.3	30.2	31.1	32.0	33.0	34.0	35.0	36.0	37.1	38.2	39.4	40.6	41.8	43.0	44.3	45.6		- Diluted shares; assuming some onward dilution from options

Source: Cowen and Company



Figure 2 Worldwide hGH Market Build

US PEDIATRIC hGH MARKET BUILD																											
	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR Comments														
Nutropin (AQ)																											
US Market Share	27%	26%	26%	25%	26%	23%	22%	20%	18%	17%	17%	16%	- Market leader in the US														
Estimated Patients ('000)	5.6	5.7	5.7	5.6	5.6	5.4	5.5	5.3	5.2	5.2	5.0	4.9															
Average Price Per Year	\$21	\$22	\$23	\$23	\$24	\$25	\$26	\$26	\$27	\$28	\$29	\$30	- Based upon NuSpin 20 dose														
Estimated US Ped Sales (\$MM)	\$120	\$125	\$130	\$130	\$135	\$135	\$140	\$140	\$140	\$145	\$145	\$145	+1% - Assumes 50% pediatric														
Genotropin																											
US Market Share	19%	19%	18%	18%	17%	17%	16%	16%	16%	16%	14%	14%															
Estimated Patients ('000)	3.1	3.0	2.8	2.7	2.4	2.4	2.1	2.1	2.0	2.0	1.8	1.7															
Average Price Per Year	\$27	\$28	\$29	\$30	\$31	\$32	\$33	\$34	\$35	\$36	\$37	\$38	- Based upon 0.6 mg dose MiniQuick Pen														
Estimated US Ped Sales (\$MM)	\$85	\$85	\$80	\$80	\$75	\$75	\$70	\$70	\$70	\$70	\$65	\$65	-3% - Assumes 50% pediatric														
Humatrope																											
US Market Share	16%	16%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%															
Estimated Patients ('000)	2.7	2.7	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.2	2.2	2.1															
Average Price Per Year	\$26	\$26	\$27	\$28	\$29	\$30	\$31	\$31	\$32	\$33	\$34	\$35	- Based upon 24 mg dose														
Estimated US Ped Sales (\$MM)	\$70	\$70	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	\$75	+1% - Assumes 50% pediatric														
Norditropin Flexpro (Nordiflex)																											
US Market Share	17%	18%	19%	20%	21%	22%	23%	24%	26%	26%	27%	28%															
Estimated Patients ('000)	4.8	4.9	5.1	5.2	5.4	5.5	5.6	5.7	5.8	5.6	5.7	5.8															
Average Price Per Year	\$16	\$16	\$17	\$17	\$18	\$18	\$19	\$19	\$20	\$20	\$21	\$22	- Based upon 15 mg Flexpro dose														
Estimated US Ped Sales (\$MM)	\$75	\$80	\$85	\$90	\$95	\$100	\$105	\$110	\$115	\$115	\$120	\$125	+5% - Assumes 50% pediatric														
VRS-317																											
US Market Share						7%	18%	21%	28%	30%	33%	35%	- Conservatively assumes 35% penetration within 7 years														
Estimated Patients ('000)						1.3	3.2	4.5	8.8	9.8	11.8	13.0															
Average Price Per Year						\$30	\$32	\$33	\$35	\$36	\$38	\$40	- Priced at parity to market leading daily therapies														
Estimated US Ped Sales (\$MM)						\$40	\$100	\$150	\$200	\$250	\$290	\$320	+41% - 2018 US launch														
Other Daily hGH Therapies																											
US Market Share	22%	24%	25%	26%	28%	26%	25%	23%	22%	21%	21%	20%															
Estimated Patients ('000)	4.0	4.5	4.7	4.9	5.2	5.2	5.4	5.4	5.4	5.4	5.4	5.3															
Average Price Per Year	\$25	\$26	\$27	\$27	\$28	\$29	\$30	\$31	\$32	\$33	\$34	\$35	- On the high end of daily hGH therapies														
Estimated US Ped Sales (\$MM)	\$100	\$115	\$125	\$135	\$145	\$150	\$160	\$165	\$170	\$175	\$180	\$185	+5% - Other, newer hGH products gaining share														
Total US Ped Patients ('000)														20.2	20.8	21.1	21.1	21.2	22.3	24.2	26.4	27.2	27.8	27.8	+3%	- Treated patients increase with long-acting therapies	
Total US Ped Market Sales (\$MM)														\$450	\$475	\$495	\$510	\$525	\$575	\$650	\$710	\$770	\$830	\$875	\$915	+7%	- Long-acting therapies to expand the market
% Growth															6%	4%	3%	3%	10%	13%	9%	8%	8%	5%	5%		- Market growth coming from approval of new agents
EU PEDIATRIC hGH MARKET OPPORTUNITY																											
	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR Comments														
Total EU Ped Market Sales (\$MM)	\$550	\$580	\$610	\$640	\$670	\$705	\$735	\$765	\$795	\$820	\$845	\$870	+4% - EU market experiencing modest growth														
% Growth		5%	5%	5%	5%	5%	4%	4%	4%	3%	3%	3%															
VRS-317																											
EU Market Share						5.0%	16.0%	20.0%	25.0%	30.0%	33.0%	35.0%	- Conservatively assumes 35% penetration within 7 years														
Estimated EU Ped Sales (\$MM)						\$40	\$110	\$150	\$200	\$250	\$280	\$300	+40% - 2018 EU launch														
Other Daily hGH Therapies																											
EU Market Share	100.0%	100.0%	100.0%	100.0%	100.0%	95.0%	85.0%	80.0%	75.0%	70.0%	67.0%	65.0%															
Estimated EU Ped Sales (\$MM)	\$550	\$575	\$600	\$650	\$675	\$675	\$625	\$600	\$600	\$575	\$575	\$575	+0%														
JAPAN PEDIATRIC hGH MARKET OPPORTUNITY																											
	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR Comments														
Total Japan Ped Market Sales (\$MM)	\$450	\$480	\$515	\$550	\$585	\$620	\$655	\$690	\$725	\$760	\$790	\$820	+6% - More growth to come from new therapies with better efficacy														
% Growth		7%	7%	7%	6%	6%	6%	5%	5%	5%	4%	4%															
VRS-317																											
Japan Market Share								5.0%	18.0%	18.0%	20.0%	22.0%	- Conservatively assumes 20%+ penetration within 5 years														
Estimated Japanese Ped Sales (\$MM)								\$30	\$110	\$140	\$160	\$180	+57% - Potential 2020 Japan launch														
Other Daily hGH Therapies																											
Japan Market Share	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	95.0%	85.0%	82.0%	80.0%	78.0%	- Current therapies don't have great efficacy														
Estimated Japan Ped Sales (\$MM)	\$450	\$475	\$525	\$550	\$575	\$625	\$650	\$650	\$625	\$625	\$625	\$650	+3%														
WORLDWIDE PEDIATRIC hGH MARKET OPPORTUNITY																											
	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR Comments														
Total WW Ped Market Sales (\$MM)	\$1,450	\$1,535	\$1,620	\$1,700	\$1,780	\$1,900	\$2,040	\$2,165	\$2,290	\$2,410	\$2,510	\$2,605	+5% - Continued growth to come from long-acting therapies														
% Growth		6%	6%	5%	5%	7%	7%	6%	6%	5%	4%	4%															

Source: Cowen and Company

Figure 3 Versartis DCF Suggests \$45 Per Share

Assumptions:		Output:																		
Terminal Growth	2%	Enterprise Value	\$1,455																	
Increase in WC	3%	Estimated Share Price	\$45																	
Discount Rate	10%	Debt	\$0																	
Share Count (MM)	33	Cash	\$200																	
		Equity Value	\$1,255																	
Wacc:		10%																		
Versartis DCF																				
	2013	2014	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P
Total Revenues	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$80.0	\$210.0	\$330.0	\$510.0	\$640.0	\$730.0	\$800.0	\$860.0	\$900.0	\$945.0	\$990.0	\$1,025.0	\$1,060.0	\$775.0	\$500.0
% Change							+163%	+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+4%	+3%	-27%	-35%
Cost of Goods	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8.0	\$21.0	\$33.0	\$51.0	\$64.0	\$73.0	\$80.0	\$86.0	\$90.0	\$94.5	\$99.0	\$102.5	\$106.0	\$77.5	\$50.0
Gross Profit	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$72.0	\$189.0	\$297.0	\$459.0	\$576.0	\$657.0	\$720.0	\$774.0	\$810.0	\$850.5	\$891.0	\$922.5	\$954.0	\$697.5	\$450.0
Gross Margin - Total	NM	NM	NM	NM	NM	NM	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
SG&A	\$4.4	\$13.5	\$23.0	\$40.0	\$65.0	\$100.0	\$130.0	\$150.0	\$170.0	\$190.0	\$210.0	\$230.0	\$245.0	\$260.0	\$275.0	\$290.0	\$305.0	\$320.0	\$225.0	\$100.0
% of Revs	NM	NM	NM	NM	NM	NM	61.9%	45.5%	33.3%	29.7%	28.8%	28.8%	28.5%	28.9%	29.1%	29.3%	29.8%	30.2%	29.0%	20.0%
R&D	\$14.9	\$32.6	\$62.5	\$85.0	\$85.0	\$75.0	\$65.0	\$50.0	\$50.0	\$45.0	\$45.0	\$40.0	\$40.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$20.0
% of Revs	NM	NM	NM	NM	NM	93.8%	31.0%	15.2%	9.8%	7.0%	6.2%	5.0%	4.7%	3.9%	3.7%	3.5%	3.4%	3.3%	4.5%	4.0%
Operating Expenses	\$19.3	\$46.1	\$85.5	\$125.0	\$150.0	\$175.0	\$195.0	\$200.0	\$220.0	\$235.0	\$255.0	\$270.0	\$285.0	\$295.0	\$310.0	\$325.0	\$340.0	\$355.0	\$260.0	\$120.0
% of Revenues	NM	NM	NM	NM	NM	NM	92.9%	60.6%	43.1%	36.7%	34.9%	33.8%	33.1%	32.8%	32.8%	32.8%	33.2%	33.5%	33.5%	24.0%
Operating Income	(\$19.3)	(\$46.1)	(\$85.5)	(\$125.0)	(\$150.0)	(\$103.0)	(\$6.0)	\$97.0	\$239.0	\$341.0	\$402.0	\$450.0	\$489.0	\$515.0	\$540.5	\$566.0	\$582.5	\$599.0	\$437.5	\$330.0
% Operating Margin	NM	NM	NM	NM	NM	NM	29.4%	46.9%	53.3%	55.1%	56.3%	56.9%	57.2%	57.2%	57.2%	57.2%	56.8%	56.5%	56.5%	66.0%
Other Income	0.0	(\$7.1)	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	0.0	0.0	0.0
Adjusted EBIT	(\$18.4)	(\$53.2)	(\$85.5)	(\$125.0)	(\$150.0)	(\$103.0)	(\$6.0)	\$97.0	\$239.0	\$341.0	\$402.0	\$450.0	\$489.0	\$515.0	\$540.5	\$566.0	\$582.5	\$599.0	\$437.5	\$330.0
% of Revs	NM	NM	NM	NM	NM	NM	29.4%	46.9%	53.3%	55.1%	56.3%	56.9%	57.2%	57.2%	57.2%	57.2%	56.8%	56.5%	56.5%	66.0%
Taxes								\$34.0	\$83.7	\$119.4	\$140.7	\$157.5	\$171.2	\$180.3	\$189.2	\$198.1	\$203.9	\$209.7	\$153.1	\$115.5
Income Tax Rate								35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
NOPAT	(\$18.4)	(\$53.2)	(\$85.5)	(\$125.0)	(\$150.0)	(\$103.0)	(\$6.0)	\$63.1	\$155.4	\$221.7	\$261.3	\$292.5	\$317.9	\$334.8	\$351.3	\$367.9	\$378.6	\$389.4	\$284.4	\$214.5
Adjustments:																				Terminal
Capex	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)	(\$5.0)
Depreciation & Amortiza	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0	\$5.0
Change In Working Capi	(\$5.0)	(\$5.2)	(\$5.3)	(\$5.5)	(\$5.6)	(\$5.8)	(\$6.0)	(\$6.1)	(\$6.3)	(\$6.5)	(\$6.7)	(\$6.9)	(\$7.1)	(\$7.3)	(\$7.6)	(\$7.8)	(\$8.0)	(\$8.3)	(\$8.5)	(\$8.8)
Free Cash Flow	(\$23.4)	(\$58.4)	(\$90.8)	(\$130.5)	(\$155.6)	(\$108.8)	(\$12.0)	\$56.9	\$149.0	\$215.1	\$254.6	\$285.6	\$310.7	\$327.4	\$343.8	\$360.1	\$370.6	\$381.1	\$275.9	\$205.7
																				\$2,745.5

Source: Cowen and Company

## *Valuation Methodology And Risks*

---

### **Valuation Methodology**

---

#### **Pharmaceuticals/Specialty**

For our valuation methodology, we arrive at fair value utilizing a discounted cash flow (DCF) approach to derive our 12-month price target.

### **Investment Risks**

---

#### **Pharmaceuticals/Specialty**

**Risks include:** (1) growing competitive dynamics in the specialty pharmaceuticals space; (2) the ability of management to execute on external growth by successfully acquiring new strategic, accretive products; (3) the ability to grow organically and keep the product pipeline robust; (4) potential regulatory delays, rejections, or failures of pipeline products; (5) economic sensitivity of any self-pay products or weakening consumer demand; (6) domestic or international pricing pressures for marketed products; and (7) failure to execute on new product launches.

#### **Risks To The Price Target**

---

Versartis is an early stage clinical development company with a single product and with that carries risk. Failure of Versartis to successfully develop VRS-317, for which its valuation is solely predicated on, could result in a significant decrease to its valuation and corresponding share price.

# Addendum

## Stocks Mentioned In Important Disclosures

Ticker	Company Name
ACT	Actavis
JAZZ	Jazz Pharmaceuticals
SHPG	Shire Pharmaceutical
VSAR	Versartis

## Analyst Certification

Each author of this research report hereby certifies that (i) the views expressed in the research report accurately reflect his or her personal views about any and all of the subject securities or issuers, and (ii) no part of his or her compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed in this report.

## Important Disclosures

Cowen and Company, LLC and/or its affiliates make a market in the stock of Versartis, Actavis, Jazz Pharmaceuticals and Shire Pharmaceutical securities.

Versartis has been client(s) of Cowen and Company, LLC in the past 12 months.

Cowen and Company, LLC and/or its affiliates expect to receive, or intend to seek, compensation for investment banking services in the next 3 months from Versartis.

Versartis is or was in the past 12 months a client of Cowen and Company, LLC; during the past 12 months, Cowen and Company, LLC provided IB services.

Cowen and Company, LLC and/or its affiliates received in the past 12 months compensation for investment banking services from Versartis.

Cowen and Company, LLC and/or its affiliates managed or co-managed a public offering of Versartis within the past twelve months.

Cowen and Company, LLC compensates research analysts for activities and services intended to benefit the firm's investor clients. Individual compensation determinations for research analysts, including the author(s) of this report, are based on a variety of factors, including the overall profitability of the firm and the total revenue derived from all sources, including revenues from investment banking. Cowen and Company, LLC does not compensate research analysts based on specific investment banking transactions.

## Disclaimer

This research is for our clients only. Our research is disseminated primarily electronically and, in some cases, in printed form. Research distributed electronically is available simultaneously to all Cowen and Company, LLC clients. All published research can be obtained on the Firm's client website, <https://cowenlibrary.bluematrix.com/client/library.jsp>.

Further information on any of the above securities may be obtained from our offices. This report is published solely for information purposes, and is not to be construed as an offer to sell or the solicitation of an offer to buy any security in any state where such an offer or solicitation would be illegal. Other than disclosures relating to Cowen and Company, LLC, the information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete statement or summary of the available data. Any opinions expressed herein are statements of our judgment on this date and are subject to change without notice.

For important disclosures regarding the companies that are the subject of this research report, please contact Compliance Department, Cowen and Company, LLC, 599 Lexington Avenue, 20th Floor, New York, NY 10022. In addition, the same important disclosures, with the exception of the valuation methods and risks, are available on the Firm's disclosure website at <https://cowen.bluematrix.com/sellside/Disclosures.action>.

**Price Targets:** Cowen and Company, LLC assigns price targets on all covered companies unless noted otherwise. The price target for an issuer's stock represents the value that the analyst reasonably expects the stock to reach over a performance period of twelve months. The price targets in this report should be considered in the context of all prior published Cowen and Company, LLC research reports (including the disclosures in any such report or on the Firm's disclosure website), which may or may not include price targets, as well as developments relating to the issuer, its industry and the financial markets. For price target valuation methodology and risks associated with the achievement of any given price target, please see the analyst's research report publishing such targets.

**Notice to UK Investors:** This publication is produced by Cowen and Company, LLC which is regulated in the United States by FINRA. It is to be communicated only to persons of a kind described in Articles 19 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005. It must not be further transmitted to any other person without our consent.

### Copyright, User Agreement and other general information related to this report

© 2015 Cowen and Company, LLC. Member NYSE, FINRA and SIPC. All rights reserved. This research report is prepared for the exclusive use of Cowen clients and may not be reproduced, displayed, modified, distributed, transmitted or disclosed, in whole or in part, or in any form or manner, to others outside your organization without the express prior written consent of Cowen. Cowen research reports are distributed simultaneously to all clients eligible to receive such research reports. Any unauthorized use or disclosure is prohibited. Receipt and/or review of this research constitutes your agreement not to reproduce, display, modify, distribute, transmit, or disclose to others outside your organization the contents, opinions, conclusion, or information contained in this report (including any investment recommendations, estimates or price targets). All Cowen trademarks displayed in this report are owned by Cowen and may not be used without its prior written consent.

**Cowen and Company, LLC.** New York (646) 562-1000 **Boston** (617) 946-3700 **San Francisco** (415) 646-7200 **Chicago** (312) 577-2240 **Cleveland** (440) 331-3531 **Atlanta** (866) 544-7009 **London** (affiliate) 44-207-071-7500

### COWEN AND COMPANY RATING DEFINITIONS

#### Cowen and Company Rating System effective May 25, 2013

**Outperform (1):** The stock is expected to achieve a total positive return of at least 15% over the next 12 months

**Market Perform (2):** The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

**Underperform (3):** Stock is expected to achieve a total negative return of at least 10% over the next 12 months

**Assumption:** The expected total return calculation includes anticipated dividend yield

#### Cowen and Company Rating System until May 25, 2013

**Outperform (1):** Stock expected to outperform the S&P 500

**Neutral (2):** Stock expected to perform in line with the S&P 500

**Underperform (3):** Stock expected to underperform the S&P 500

**Assumptions:** Time horizon is 12 months; S&P 500 is flat over forecast period

**Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013**

**Buy** – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

**Sell** – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

**Hold** – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

**Cowen And Company Rating Definitions**

**Distribution of Ratings/Investment Banking Services (IB) as of 12/31/14**

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	461	60.50%	109	23.64%
Hold (b)	288	37.80%	14	4.86%
Sell (c)	13	1.71%	0	0.00%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

Note: "Buy", "Hold" and "Sell" are not terms that Cowen and Company, LLC uses in its ratings system and should not be construed as investment options. Rather, these ratings terms are used illustratively to comply with FINRA and NYSE regulations.

**Versartis Rating History as of 03/27/2015**

powered by: BlueMatrix



**Actavis Rating History as of 03/27/2015**

powered by: BlueMatrix



### Jazz Pharmaceuticals Rating History as of 03/27/2015

powered by: BlueMatrix



### Shire Pharmaceutical Rating History as of 03/27/2015

powered by: BlueMatrix



#### Legend for Price Chart:

I = Initiation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | UR = Price Target Under Review | T = Terminated Coverage | \$xx = Price Target | NA = Not Available | S=Suspended

## Points Of Contact

### Analyst Profiles



**Ken Cacciatore**

New York

646.562.1305

ken.cacciatore@cowen.com

Ken is a senior analyst covering specialty pharmaceuticals. He has been with Cowen for 17 years in health care banking & equity research.



**Tyler Van Buren, M.Sc.**

New York

646.562.1338

tyler.vanburen@cowen.com

Tyler Van Buren is a vice president covering specialty pharma. He joined Cowen in 2013, after working at LifeSci Advisors and Amylin.



**Sal Rais, M.D.**

New York

646.562.1420

sal.rais@cowen.com

Sal Rais is an associate covering specialty pharmaceuticals. He previously worked at Campbell Alliance and has an M.D. and MBA from UVA.

### Reaching Cowen

#### Main U.S. Locations

##### New York

599 Lexington Avenue  
New York, NY 10022  
646.562.1000  
800.221.5616

##### Atlanta

3399 Peachtree Road NE  
Suite 417  
Atlanta, GA 30326  
866.544.7009

##### Boston

Two International Place  
Boston, MA 02110  
617.946.3700  
800.343.7068

##### Chicago

181 West Madison Street  
Suite 3135  
Chicago, IL 60602  
312.577.2240

##### Cleveland

20006 Detroit Road  
Suite 100  
Rocky River, OH 44116  
440.331.3531

##### San Francisco

555 California Street, 5th Floor  
San Francisco, CA 94104  
415.646.7200  
800.858.9316

#### International Locations

##### Cowen International Limited

###### London

1 Snowden Street - 11th Floor  
London EC2A 2DQ  
United Kingdom  
44.20.7071.7500

##### Cowen and Company (Asia) Limited

###### Hong Kong

Suite 1401 Henley Building  
No. 5 Queens Road Central  
Central, Hong Kong  
852 3752 2333

