

Equity Research

August 29, 2014

Price: \$13.39 (08/28/2014)

Price Target: NA

OUTPERFORM (1)

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Key Data

Symbol **NASDAQ: RDUS**

Market Cap (MM) **\$398.3**

Company Quick Take

RAD1901 Data Provide Proof Of Mechanism

The Cowen Insight

Phase I data on RAD1901, a selective estrogen receptor degrader, showed the drug candidate to be well tolerated, capable of penetrating the CNS, and active at suppressing the estrogen receptor. Dose escalation in this trial continues. We expect RDUS shares to outperform as lead candidate abaloparatide advances in its Phase III osteoporosis trial.

The News: Radius announced that initial Phase I data on RAD1901 will be presented at the 4th Annual Brain Metastases Research and Emerging Therapy Conference on September 19th. While detailed results will be presented at the conference, the company has indicated that a well-tolerated dose of RAD1901 has demonstrated strong suppression of positive baseline estrogen receptors in healthy volunteers as assessed by PET imaging. RAD1901 showed the ability to reduce 18F-fluoroestradiol estrogen receptor occupancy in brain imaging studies, providing proof of concept for its ability to cross the blood brain barrier and degrade the ER receptor. Recall Radius intends to develop RAD1901 for the treatment of ER+ breast cancer patients with brain metastases, a major unmet need. Radius will continue the ongoing Phase I PK/PD trial in healthy volunteers to identify a maximum tolerated dose.

Our Take: We view the PET imaging data as supportive of RAD1901's mechanism of action. We believe RAD1901, if successfully developed, could play a role in treating the ~12,000 ER+ breast cancer patients in the U.S. who develop brain metastases each year as well as other patient subsets. We view SERDs as a promising class of therapeutics for tamoxifen resistant ER+ cancers as evidenced by Roche's recent \$1B acquisition of Seragon Pharma, yet believe investors have accorded minimal value to RDUS for its SERD candidate.

What's Next For Radius Health? A Phase Ib study on RAD1901 in breast cancer patients could be initiated by year end. Most importantly, the company will report 18-month fracture data from abaloparatide's pivotal fracture prevention study in late December 2014. Regulatory filings could follow in mid-2015.

Our Thesis On RDUS: We view abaloparatide, a peptide analog of the PTH-related protein, as a low risk anabolic drug candidate for osteoporosis that is likely to succeed in a Phase III trial. Furthermore, we view abaloparatide as differentiated relative to Forteo, and capable of capturing much of that drug's \$1B+ market. Radius is financed to mid-2015 and through abaloparatide's pivotal readout. We expect positive Phase III data to drive significant stock outperformance.

Valuation Methodology And Risks

Valuation Methodology

Biotechnology:

In calculating our 12-month target price, we employ one or more valuation methodologies, which include a discounted earnings analysis, discounted cash flow analysis, net present value analysis and/or a comparable company analysis. These analyses may or may not require the use of objective measures such as price-to-earnings or price-to-sales multiples as well as subjective measures such as discount rates.

We make investment recommendations on early stage (pre-commercial) biotechnology companies based upon an assessment of their technology, the probability of pipeline success, and the potential market opportunity in the event of success. However, because these companies lack traditional financial metrics, we do not believe there are any good methodologies for assigning a specific target price to such stocks.

Investment Risks

Biotechnology:

There are multiple risks that are inherent with an investment in the biotechnology sector. Beyond systemic risk, there is also clinical, regulatory, and commercial risk. Additionally, biotechnology companies require significant amounts of capital in order to develop their clinical programs. The capital-raising environment is always changing and there is risk that necessary capital to complete development may not be readily available.

Risks To The Price Target

Radius Health is unprofitable, has no approved products, and will likely need to raise additional capital from the public markets prior to turning profitable. There is no guarantee that abaloparatide's Phase III study will meet its primary endpoint of fracture reduction. Even if successful, abaloparatide may face other commercial and competitive risks that thwart adoption.

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Addendum

Stocks Mentioned In Important Disclosures

Ticker	Company Name
RDUS	Radius Health

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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

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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

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Cowen And Company Rating Definitions

Distribution of Ratings/Investment Banking Services (IB) as of 06/30/14

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	417	58.57%	94	22.54%
Hold (b)	279	39.19%	7	2.51%
Sell (c)	16	2.25%	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.

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Radius Health Rating History as of 08/28/2014

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

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