

## US Equity Research

18 June 2015

## BUY

unchanged

PRICE TARGET US\$70.00

unchanged

Price (18-Jun) US\$60.10

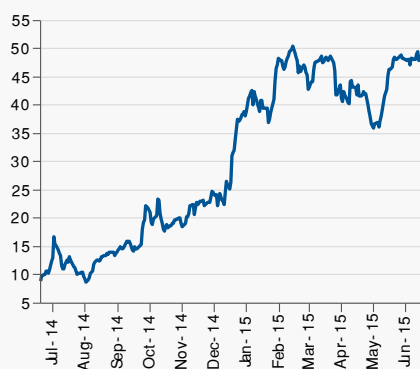
Ticker RDUS-NASDAQ

52-Week Range (US\$): 7.46 - 51.22  
 Avg Daily Vol (M) : 277.6  
 Shares Out. (M) : 29.7  
 Market Cap (US\$M): 1,072

FYE Dec	2014A	2015E	2016E
Revenue (US\$M)	0.0	0.0	82.9
EPS Adj&Dil (US\$)	(53.81)	(2.29)↑	(1.10)↑
Previous	(53.81)	(2.31)	(1.19)

Quarterly Revenue	Q1	Q2	Q3	Q4
2014A	0.0	0.0	0.0	0.0
2015E	0.0A	0.0	0.0	0.0
2016E	-	-	-	-

Quarterly EPS Adj&Dil	Q1	Q2	Q3	Q4
2014A	(50.45)	(2.22)	(0.59)	(0.55)
2015E	(0.47)A	(0.66)	(0.58)	(0.58)
2016E	-	-	-	-



Source: FactSet

Radius is a biotechnology company focused on drugs for endocrine disorders, including osteoporosis.

John Newman, PhD | Canaccord Genuity Inc. (US) | JNewman@canaccordgenuity.com | 212.389.8042

## Estimates Revised

## ACTIVEExtend results positive for abaloparatide, RAD109 holds additional value

## Abaloparatide extension study maintains strong Ph 3 results

Alendronate maintained the strong 86% reduction in new vertebral fractures vs. placebo ( $p < 0.0001$ ) in the 6-month alendronate extension period, which is very encouraging, in our view. Also, the arm receiving 18 months of abaloparatide followed by 6 months of alendronate showed a 0.57 hazard ratio versus placebo for non-vertebral fractures vs. 0.72 for the teriparatide arm, which was not statistically significant vs. placebo.

## Wrist fracture data may open orthopedic opportunity

We are particularly interested in the 72% reduction in wrist fractures for abaloparatide followed by alendronate, as this may open an opportunity for the drug in the orthopedic market. Interestingly, there are ~440,000 wrist fractures per year in women, many of which are untreated, with only 20-25% of women tested or treated for osteoporosis following a fracture.

## Expect YE15 FDA filing, launch in 2016

Radius expects to file the NDA for abaloparatide for the treatment of severe osteoporosis by YE15, and we expect approval in 2016. We maintain our \$560M US peak sales estimate, which assumes Radius captures ~50% of current market share from Forteo.

## RAD-1901 holds upside, data expected YE15

We await initial data in breast cancer for RAD-1901 by YE15, likely at the San Antonio Breast cancer symposium. Based on activity for Seragon's drug with a similar mechanism of action, but better safety for RAD-1901, we could see exciting clinical activity. As of ASCO 2015, only a few patients had been enrolled in the RAD-1901 study, so no efficacy data were available. We currently model ~\$470M US peak sales and apply a 35% probability adjustment to arrive at \$10 per share US, and similar metrics to arrive at \$9 per share Ex-US. We have updated the estimated share count for 2015 and 2016, resulting in slightly higher EPS estimates of (\$2.29) for 2015 vs. (\$2.31) previously, and (\$1.10) for 2016 vs. (\$1.19) previously.

Figure 1: RDUS valuation

Product	Peak Sales (\$MM)	Year	NPV at launch	Estimated launch	Time to launch	Probability Adjustment	Current Value (\$MM)	Scenario probability	Value / Share (EV/Sales)
<b>abaloparatide</b>									
US	\$358	2022	\$561	6/1/2016	1.0	85%	\$388	100%	\$21
Ex-US - co-promote	\$346	2021	\$390	1/1/2017	1.5	85%	\$254	50%	\$11
Ex-US - royalty	\$346	2021	\$189	1/1/2017	1.5	85%	\$135	50%	\$11
<b>Total abaloparatide</b>							<b>\$641</b>		<b>\$44</b>
<b>RAD-1901</b>									
US	\$467	2023	\$670			35%	\$235		\$10
Ex-US	\$427	2023	\$188			35%	\$66		\$9
<b>Total RAD-1901</b>							<b>\$300</b>		<b>\$19</b>
<b>Total Product Value</b>							<b>\$641</b>		<b>\$64</b>
Cash							243		\$7
<b>Total Equity Value</b>							<b>884</b>		<b>\$70</b>
Shares Outstanding (MM)							36		

Risk-Free Rate	2.0%
Beta	1.8
Risk Premium	6%
Discount Rate	12%
EV/Sales	5.5

Source: Company Reports, Canaccord Genuity estimates

Figure 2: Radius income statement

Radius Health, Inc.												
(000's) [FY - DEC]												
Revenues	2013A	2014A	1Q15A	2Q15E	3Q15E	4Q15E	2015E	2016E	2017E	2018E	2019E	2020E
abaloparatide - US								82,902	122,229	165,478	212,938	264,914
abaloparatide - Ex-US								-	90,548	204,751	251,503	298,717
Total								82,902	212,777	370,229	464,441	563,631
Income Statement	2013A	2014A	1Q15A	2Q15E	3Q15E	4Q15E	2015E	2016E	2017E	2018E	2019E	2020E
Total Revenue	-	-	-	-	-	-	-	82,902	146,677	265,806	341,204	420,247
COGS	-	-	-	-	-	-	-	16,580	29,335	53,161	68,241	84,049
Gross Profit	-	-	-	-	-	-	-	66,322	117,341	212,645	272,963	336,197
Operating Expenses												
Research and development	60,536	45,719	11,559	16,270	15,173	13,525	56,527	47,591	47,070	57,626	77,561	111,588
General and administrative	6,829	13,674	4,756	4,956	5,156	5,356	20,224	58,031	47,670	59,806	76,771	94,556
Total Operating Expense	67,365	59,393	16,315	21,226	20,329	18,881	76,751	105,622	94,740	117,432	154,332	206,143
EBITDA												
Operating income	(67,365)	(59,393)	(16,315)	(21,226)	(20,329)	(18,881)	(76,751)	(39,301)	22,602	95,212	118,631	130,054
Other income (expense), net	9,085	(2,126)	(50)	(2,126)	(50)	(2,126)	(4,352)	(2,126)	(4,352)	(2,126)	(4,352)	(2,126)
Loss on retirement of note payable												
Interest (expense) income, net	(2,410)	(768)	(692)	(768)	(692)	(768)	(2,920)	(768)	(2,920)	(768)	(2,920)	(768)
Accretion of preferred stock												
Pre-tax income (GAAP)	(60,690)	(71,501)	(17,057)	(24,120)	(21,071)	(21,775)	(84,023)	(42,195)	15,330	92,318	111,359	127,160
Pre-tax income (non-GAAP)												
Taxes (GAAP)	-	-	-	-	-	-	-	-	5,672	34,158	41,203	47,049
Tax rate (GAAP)	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%
Net Income (GAAP)	(60,690)	(71,501)	(17,057)	(24,120)	(21,071)	(21,775)	(84,023)	(42,195)	9,658	58,161	70,156	80,111
GAAP EPS (diluted)	(\$3.97)	(\$53.81)	(\$0.47)	(\$0.66)	(\$0.58)	(\$0.58)	(\$2.29)	(\$1.10)	\$0.25	\$1.46	\$1.72	\$1.93
Basic shares outstanding	15,278	12,121	31,000	31,031	31,062	33,062	31,539	35,562	37,340	39,207	41,167	43,226
Diluted shares outstanding	15,278	17,578	36,269	36,305	36,342	37,541	36,614	38,346	39,113	39,896	40,694	41,507

Source: Company reports, Canaccord Genuity estimates

## Appendix: Important Disclosures

### Analyst Certification

Each authoring analyst of Canaccord Genuity whose name appears on the front page of this research hereby certifies that (i) the recommendations and opinions expressed in this research accurately reflect the authoring analyst's personal, independent and objective views about any and all of the designated investments or relevant issuers discussed herein that are within such authoring analyst's coverage universe and (ii) no part of the authoring analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the authoring analyst in the research.

Analysts employed outside the US are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity Inc. and therefore may not be subject to the NASD Rule 2711 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

### Target Price / Valuation Methodology:

Radius Health - RDUS

Our \$70 price target is based on an adjusted EV/S methodologies.

### Risks to achieving Target Price / Valuation:

Radius Health - RDUS

Risks to our outlook and price target include the following: the Phase 3 study for abaloparatide in osteoporosis may be negative, or fail to meet investor expectations, resulting in downside to shares and our price target. Also, Phase 3 data may be positive in terms of efficacy, but show an unexpected safety signal, also resulting in downside to our price target. Antibody formation was seen in Phase 2 studies, with one patient showing potential evidence of neutralizing antibodies. Even assuming positive Phase 3 data for subcutaneous abaloparatide in osteoporosis, FDA approval may be delayed or may not occur at all, also resulting in downside to shares and our price target. FDA may also grant approval, but require large, lengthy and expensive post-approval studies, which could also result in downside to shares and our price target. Clinical data from other osteoporosis products including anti-sclerostin antibodies from Amgen, Merck, Eli Lilly and Novartis could be viewed as superior to abaloparatide, pressuring shares. Competition from existing and new osteoporosis products could also result in lower revenues than expected, leading to downside to our estimates and the share price. Although unlikely, a paragraph 4 challenge could be filed against Lilly's Forteo, a molecule closely related to abaloparatide, which investors may interpret as increasing risk for abaloparatide, and pressuring Radius shares. Forteo was approved as an NDA, where the ANDA pathway is well established. Even though Forteo is essentially a biologic, since it is a peptide, it is feasible although unlikely that a generic challenger could emerge. FDA has approved a generic version of Lovenox, a biologic approved via the NDA pathway, although the process took many years. If a generic version of Forteo were to reach the market, usage of abaloparatide could decline, resulting in downside to our estimates and price target. Also, if FDA were to approve a generic version of Copaxone, a peptide used to treat multiple sclerosis, investors may see increased risk of a generic challenge and approval for abaloparatide, as both products are classified as NDA filings for biologic peptides. A transdermal microneedle formulation for abaloparatide may not be feasible, which investors may view as negative for life cycle management and commercial competitive positioning for Radius, pressuring shares. Even if a microneedle formulation can be developed to show equal efficacy to the subcutaneous formulation, FDA may require a full clinical study versus a bridging study, which would require additional funding and time to approval.

### Distribution of Ratings:

#### Global Stock Ratings (as of 06/18/15)

Rating	Coverage Universe		IB Clients
	#	%	%
Buy	588	58.92%	32.99%
Hold	322	32.26%	15.53%
Sell	40	4.01%	5.00%
Speculative Buy	48	4.81%	54.17%
	998*	100.0%	

\*Total includes stocks that are Under Review

### Canaccord Genuity Ratings System

**BUY:** The stock is expected to generate risk-adjusted returns of over 10% during the next 12 months.

**HOLD:** The stock is expected to generate risk-adjusted returns of 0-10% during the next 12 months.

**SELL:** The stock is expected to generate negative risk-adjusted returns during the next 12 months.

**NOT RATED:** Canaccord Genuity does not provide research coverage of the relevant issuer.

“Risk-adjusted return” refers to the expected return in relation to the amount of risk associated with the designated investment or the relevant issuer.

### Risk Qualifier

**SPECULATIVE:** Stocks bear significantly higher risk that typically cannot be valued by normal fundamental criteria. Investments in the stock may result in material loss.

### Canaccord Genuity Company-Specific Disclosures (as of date of this publication)

Radius Health currently is, or in the past 12 months was, a client of Canaccord Genuity or its affiliated companies. During this period, Canaccord Genuity or its affiliated companies provided investment banking services to Radius Health.

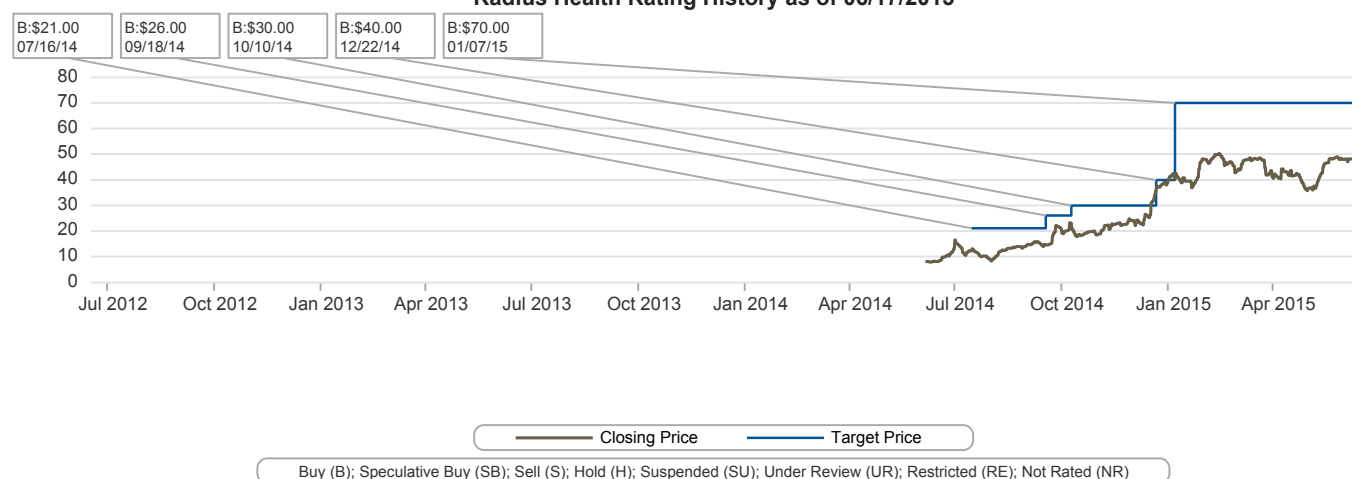
In the past 12 months, Canaccord Genuity or its affiliated companies have received compensation for Corporate Finance/Investment Banking services from Radius Health.

In the past 12 months, Canaccord Genuity or any of its affiliated companies have been lead manager, co-lead manager or co-manager of a public offering of securities of Radius Health or any publicly disclosed offer of securities of Radius Health or in any related derivatives. Canaccord Genuity or one or more of its affiliated companies is a market maker or liquidity provider in the securities of Radius Health or in any related derivatives.

Canaccord Genuity or one or more of its affiliated companies intend to seek or expect to receive compensation for Corporate Finance/Investment Banking services from Radius Health in the next six months.

An analyst has visited the material operations of Radius Health. No payment was received for the related travel costs.

Radius Health Rating History as of 06/17/2015



### Online Disclosures

Up-to-date disclosures may be obtained at the following website (provided as a hyperlink if this report is being read electronically) <http://disclosures.canaccordgenuity.com/EN/Pages/default.aspx>; or by sending a request to Canaccord Genuity Corp. Research, Attn: Disclosures, P.O. Box 10337 Pacific Centre, 2200-609 Granville Street, Vancouver, BC, Canada V7Y 1H2; or by sending a request by email to [disclosures@canaccordgenuity.com](mailto:disclosures@canaccordgenuity.com). The reader may also obtain a copy of Canaccord Genuity's policies and procedures regarding the dissemination of research by following the steps outlined above.

### General Disclosures

“Canaccord Genuity” is the business name used by certain wholly owned subsidiaries of Canaccord Genuity Group Inc., including Canaccord Genuity Inc., Canaccord Genuity Limited, Canaccord Genuity Corp., and Canaccord Genuity (Australia) Limited, an affiliated company that is 50%-owned by Canaccord Genuity Group Inc.

The authoring analysts who are responsible for the preparation of this research are employed by Canaccord Genuity Corp. a Canadian broker-dealer with principal offices located in Vancouver, Calgary, Toronto, Montreal, or Canaccord Genuity Inc., a US broker-dealer with principal offices located in New York, Boston, San Francisco and Houston, or Canaccord Genuity Limited., a UK broker-dealer with principal offices located in London (UK) and Dublin (Ireland), or Canaccord Genuity (Australia) Limited, an Australian broker-dealer with principal offices located in Sydney and Melbourne.

The authoring analysts who are responsible for the preparation of this research have received (or will receive) compensation based upon (among other factors) the Corporate Finance/Investment Banking revenues and general profits of Canaccord Genuity. However, such authoring analysts have not received, and will not receive, compensation that is directly based upon or linked to one or more specific Corporate Finance/Investment Banking activities, or to recommendations contained in the research.

Canaccord Genuity and its affiliated companies may have a Corporate Finance/Investment Banking or other relationship with the issuer that is the subject of this research and may trade in any of the designated investments mentioned herein either for their own account or the accounts of their customers, in good faith or in the normal course of market making. Accordingly, Canaccord Genuity or their affiliated companies, principals or employees (other than the authoring analyst(s) who prepared this research) may at any time have a long or short position in any such designated investments, related designated investments or in options, futures or other derivative instruments based thereon.

Some regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of research. This research has been prepared in accordance with Canaccord Genuity's policy on managing conflicts of interest, and information barriers or firewalls have been used where appropriate. Canaccord Genuity's policy is available upon request.

The information contained in this research has been compiled by Canaccord Genuity from sources believed to be reliable, but (with the exception of the information about Canaccord Genuity) no representation or warranty, express or implied, is made by Canaccord Genuity, its affiliated companies or any other person as to its fairness, accuracy, completeness or correctness. Canaccord Genuity has not independently verified the facts, assumptions, and estimates contained herein. All estimates, opinions and other information contained in this research constitute Canaccord Genuity's judgement as of the date of this research, are subject to change without notice and are provided in good faith but without legal responsibility or liability.

Canaccord Genuity's salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and our proprietary trading desk that reflect opinions that are contrary to the opinions expressed in this research. Canaccord Genuity's affiliates, principal trading desk, and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

This research is provided for information purposes only and does not constitute an offer or solicitation to buy or sell any designated investments discussed herein in any jurisdiction where such offer or solicitation would be prohibited. As a result, the designated investments discussed in this research may not be eligible for sale in some jurisdictions. This research is not, and under no circumstances should be construed as, a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. This material is prepared for general circulation to clients and does not have regard to the investment objectives, financial situation or particular needs of any particular person. Investors should obtain advice based on their own individual circumstances before making an investment decision. To the fullest extent permitted by law, none of Canaccord Genuity, its affiliated companies or any other person accepts any liability whatsoever for any direct or consequential loss arising from or relating to any use of the information contained in this research.

**For Canadian Residents:**

This research has been approved by Canaccord Genuity Corp., which accepts sole responsibility for this research and its dissemination in Canada. Canadian clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity Corp. in their particular province or territory.

**For United States Residents:**

Canaccord Genuity Inc., a US registered broker-dealer, accepts responsibility for this research and its dissemination in the United States. This research is intended for distribution in the United States only to certain US institutional investors. US clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity Inc. Analysts employed outside the US, as specifically indicated elsewhere in this report, are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity Inc. and therefore may not be subject to the NASD Rule 2711 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

**For United Kingdom and European Residents:**

This research is distributed in the United Kingdom and elsewhere Europe, as third party research by Canaccord Genuity Limited, which is authorized and regulated by the Financial Conduct Authority. This research is for distribution only to persons who are Eligible Counterparties or Professional Clients only and is exempt from the general restrictions in section 21 of the Financial Services and Markets Act 2000 on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Article 19(5) (Investment Professionals) and 49(2) (High Net Worth companies, unincorporated associations etc) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended). It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. This material is not for distribution in the United Kingdom or elsewhere in Europe to retail clients, as defined under the rules of the Financial Conduct Authority.

**For Jersey, Guernsey and Isle of Man Residents:**

This research is sent to you by Canaccord Genuity Wealth (International) Limited (CGWI) for information purposes and is not to be construed as a solicitation or an offer to purchase or sell investments or related financial instruments. This research has been produced by an affiliate of CGWI for circulation to its institutional clients and also CGWI. Its contents have been approved by CGWI and we are providing it to you on the basis that we believe it to be of interest to you. This statement should be read in conjunction with your client agreement, CGWI's current terms of business and the other disclosures and disclaimers contained within this research. If you are in any doubt, you should consult your financial adviser.



CGWI is licensed and regulated by the Guernsey Financial Services Commission, the Jersey Financial Services Commission and the Isle of Man Financial Supervision Commission. CGWI is registered in Guernsey and is a wholly owned subsidiary of Canaccord Genuity Group Inc.

**For Australian Residents:**

This research is distributed in Australia by Canaccord Genuity (Australia) Limited ABN 19 075 071 466 holder of AFS Licence No 234666. To the extent that this research contains any advice, this is limited to general advice only. Recipients should take into account their own personal circumstances before making an investment decision. Clients wishing to effect any transactions in any financial products discussed in the research should do so through a qualified representative of Canaccord Genuity (Australia) Limited. Canaccord Genuity Wealth Management is a division of Canaccord Genuity (Australia) Limited.

**For Singapore Residents:**

This research is distributed pursuant to 32C of the Financial Advisers under an arrangement between each of the Canaccord Genuity entities that publish research and Canaccord Genuity Singapore Pte. Ltd who are an exempt financial adviser under section 23(1)(d) of the Financial Advisers Act. This research is only intended for persons who fall within the definition of accredited investor, expert investor or institutional investor as defined under section 4A of the Securities and Futures Act. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Recipients of this report can contact Canaccord Genuity Singapore Pte. Ltd. (Contact Person: Tom Gunnersen's tel # is +852 3919 2561) in respect of any matters arising from, or in connection with, the [analyses or report].

**For Hong Kong Residents:**

This research is distributed in Hong Kong by Canaccord Genuity (Hong Kong) Limited who is licensed by the Securities and Futures Commission. This research is only intended for persons who fall within the definition of professional investor as defined in the Securities and Futures Ordinance. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Recipients of this report can contact Canaccord Genuity (Hong Kong) Ltd. (Contact Person: Tom Gunnersen's tel # is +852 3919 2561) in respect of any matters arising from, or in connection with, the research.

**Additional information is available on request.**

Copyright © Canaccord Genuity Corp. 2015 . – Member IIROC/Canadian Investor Protection Fund

Copyright © Canaccord Genuity Limited 2015 . – Member LSE, authorized and regulated by the Financial Conduct Authority.

Copyright © Canaccord Genuity Inc. 2015 . – Member FINRA/SIPC

Copyright © Canaccord Genuity (Australia) Limited 2015 . – Participant of ASX Group, Chi-x Australia and of the NSX. Authorized and regulated by ASIC.

All rights reserved. All material presented in this document, unless specifically indicated otherwise, is under copyright to Canaccord Genuity Corp., Canaccord Genuity Limited, Canaccord Genuity Inc or Canaccord Genuity Group Inc. None of the material, nor its content, nor any copy of it, may be altered in any way, or transmitted to or distributed to any other party, without the prior express written permission of the entities listed above.