

Acceleron Pharma Inc. (XLRN)

Presents Encouraging Preliminary Data on Combination Use with Dalantercept

MARKET DATA

Price	\$31.75
52-Week Range:	\$16.78 - \$57.89
Shares Out. (M):	26.5
Market Cap (\$M):	\$841.4
Average Daily Vol. (000):	209.0
Cash (M):	\$116
Cash/Share:	\$3.74
Enterprise Value (M):	\$1,360
Float (M):	27.0
LT Debt (M):	\$11

Source: Thomson Reuters and JMP Securities LLC

MARKET OUTPERFORM | Price: \$31.75 | Target Price: \$53.00

INVESTMENT HIGHLIGHTS

ASCO abstracts just became available and Acceleron has presented encouraging preliminary data on dalantercept in late-stage RCC patients; we reiterate our Market Outperform rating and \$53 price target based on our DCF and SOTP valuation methodologies. Recall that the study design was a single-arm, dose-escalation, Phase I/II trial that examined the use of dalantercept in combination with axitinib (Inlyta) in patients who have received between one and three prior lines of therapy. The objective response rate (ORR, CR+PR) was 25%, while an additional 50% of the 25 evaluable patients exhibited stable disease, which in many solid tumors is positively correlated with improvement in overall survival.

Study particulars. A total of three doses of dalantercept were studied-0.6, 0.9, and 1.2mg/kg, with 3/12 patients showing a response, two at the 0.6 and one at the 0.9mg/kg dose. Two of these patients had three prior regimens and all three were study for more than 10 cycles (7.5 months). Six of eleven patients remained on therapy for more than six cycles (4.5 months). There were no dalantercept-related SAEs and the axitinib side effect profile was as expected. Dose expansion continues at the 1.2mg/kg dose; this was also considered the recommended Phase II dose (RP2D).

Dalantercept shows modest activity in head and neck cancer, not active in endometrial cancer. Two additional dalantercept studies were described in the abstracts, one of a study of 46 patients with recurrent or metastatic squamous cell cancer of the head and neck (RM-SCCHN), the other a study of 28 patients with recurrent/persistent endometrial cancer. Dalantercept did not appear to provide a response rate that would make it worth continuing the study in this indication. Indeed, XLRN terminated the study earlier in 2014. The side effect profile in this population was unremarkable, with 39% of patients showing Grade 3 and 4% of patients showing Grade 4 adverse events. Activity was modest in the SCCHN population, with one (3.7%) patient showing a PR at 0.6mg/kg, who was on study for nine months, while 23% at 0.6mg/kg and 37% of patients at 1.2mg/kg showing stable disease for >3 cycles. Side effects were mild, with only 13% of patients registering Grade 3 AEs, and no significant thromboembolic or bleeding events were observed.

We currently include a value for dalantercept per XLRN share of \$4.68. In our opinion, we gain greater comfort in our valuation attributable to dalantercept on the basis of this data.

We believe Acceleron represents a compelling opportunity in the biotech space over the course of the next several years. Our view is drawn from the company's focus and understanding of TGF beta biology, as well as developmental and commercialization advantages offered through its strategic partnership with Celgene (CELG, MO, \$205 PT). In our opinion, the interim data presented at NKF is robust

FY DEC		2013A	2014E	2015E
Revenue (\$M)	1Q	\$15.0	\$4.9	\$5.2
	2Q	\$26.4	\$5.2	\$5.4
	3Q	\$4.3	\$5.4	\$20.9
	4Q	\$11.5	\$20.9	\$36.4
	FY	\$57.2	\$36.4	\$42.9
EPS	1Q	\$0.12	(\$0.38)	(\$0.38)
	2Q	\$0.44	(\$0.38)	(\$0.42)
	3Q	(\$5.62)	(\$0.42)	\$0.04
	4Q	(\$0.64)	\$0.04	(\$1.13)
	FY	(\$4.15)	(\$1.13)	(\$1.24)

Source: Company reports and JMP Securities LLC

STOCK PRICE PERFORMANCE



and show potential for significant improvement in increasing hemoglobin and reducing adverse events in patients refractory to ESA use. Sotatercept is just part of the company's first wave of product candidates and, in our view, it is the tip of the iceberg that, over time, should create significant value for shareholders.

FIGURE 1. Upcoming Milestones

Timing	Drug	Milestones
2Q14	Dalantercept	Initiation of Phase IIa study in HCC in combination with Nexavar
2Q14	Sotatercept & ACE-536	Presentation of dose escalation Phase II results in β -thalassemia and MDS at ASCO (May 30 – June 3) and EHA (June 12-15)
3Q14	Dalantercept	Initiation of Phase II trial plus Avastin in GBM
4Q14	Sotatercept & ACE-536	Final results from Phase II trials in β -thalassemia and MDS
4Q14/1Q15	Sotatercept & ACE-536	Initiation of Phase III trial in β -thalassemia and/or MDS
4Q14	ACE-083	Initiation of Phase I trial in muscular dystrophy

Source: Company reports

Company Description

Acceleron Pharma (XLRN) is a Cambridge, MA biotechnology company focused on the discovery, development, and commercialization of its ligand trap fusion proteins directed against components of TGF β signaling pathway. These fusion proteins have shown clinical potential in the treatment of anemia disorders related to β -thalassemia and myelodysplastic syndromes, as well as in the treatment of solid cancers, muscle wasting disorders, and other indications impacted by dysregulated TGF β .

Since 2008, the company has benefited by robust strategic collaboration with Celgene related to its development lead programs, sotatercept and ACE-536, entitling the company to full reimbursement on both programs and eligibility for up to \$567MM in development, regulatory, and commercial milestones, and a $\geq 20\%$ royalty on worldwide sales, by our estimates. Sotatercept and ACE-536 are currently in Phase II trials for the treatment of β -thalassemia and low/intermediate-1 MDS with pivotal Phase III trials expected to initiate in the first half of 2014.

Dalantercept, the company's wholly owned, clinical-stage fusion protein, is directed against ALK1, a key mediator of tumor angiogenesis that functions independently from the VEGF axis. Dalantercept is currently in Phase II evaluation for the treatment of second-line RCC in combination with TKI therapy.

Investment Risks

Clinical. Drug development is an inherently risky business. Clinical trials always carry a risk of failure and Acceleron's assets (sotatercept, ACE-536, Dalantercept, or future drug candidates) may fail to demonstrate meaningful enough levels of efficacy in current or future clinical trials.

Regulatory and commercial. The ability of Acceleron or its partners to market its drugs depends on those drugs obtaining approval from the FDA and foreign regulatory agencies. Failure to achieve approval or delays in the timelines to approval could negatively impact the company's share price.

Competitive. Hereditary anemic disorders represent an increasingly competitive field and Acceleron faces competition from companies with development-stage drug candidates addressing similar biologic mechanisms, and from companies attempting to broaden the applicable indications for products already approved for use. Some of these companies may possess substantially greater R&D and commercial resources than Acceleron or its partners. As such, there is no assurance Acceleron will be competitive or differentiated from other drug products.

Partners. Acceleron has formed development and commercial partnerships with Celgene and is highly dependent on these partnerships for non-dilutive sources of capital, and for the potential commercialization of sotatercept and/or ACE-536. Changes to these partnership arrangements could have a substantially negative impact on the company's share price.

Financial. Following its IPO we estimated that Acceleron would end 4Q13 with approximately \$87MM in cash and cash equivalents - adequate resources to fund operations into 2015, according to Acceleron's financial guidance. We anticipate that Acceleron is likely to seek additional equity financing in the form of a secondary offering in order to complete the development of its drug candidates, creating dilution risk for existing shareholders.

JMP FACTS AND DISCLOSURES

Analyst Certification:

The research analyst(s) who prepared this report does/do hereby certify that the views presented in this report are in accordance with my/our personal views on the securities and issuers discussed in this report. As mandated by SEC Regulation AC no part of my/our compensation was, is or will be directly or indirectly related to the specific views or recommendations expressed herein. This certification is made under the obligations set forth in SEC Regulation AC. Any other person or entity may not use it for any other purpose. This certification is made based on my/our analysis on the date of this report's publication. I/We assume no obligation to update this certification to reflect any facts, circumstances or events that may subsequently come to my/our attention. Signed Michael G. King and Eric Joseph

JMP Securities Disclosures:

JMP Securities currently makes a market in the securities of Accelaron Pharma Inc. and Celgene Corporation

JMP Securities was manager or co-manager of a public offering of securities for Accelaron Pharma Inc. (XLRN) in the past 12 months, and received compensation for doing so.

JMP Securities Investment Opinion Definitions:

Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.

Market Perform (MP): JMP Securities expects the stock price to perform in line with relevant market indices over the next 12 months.

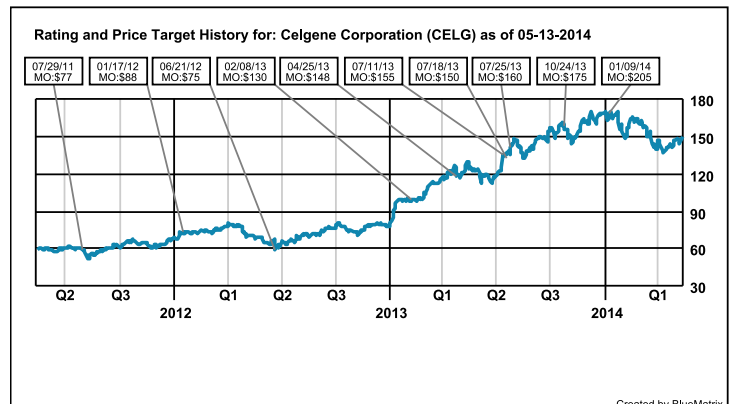
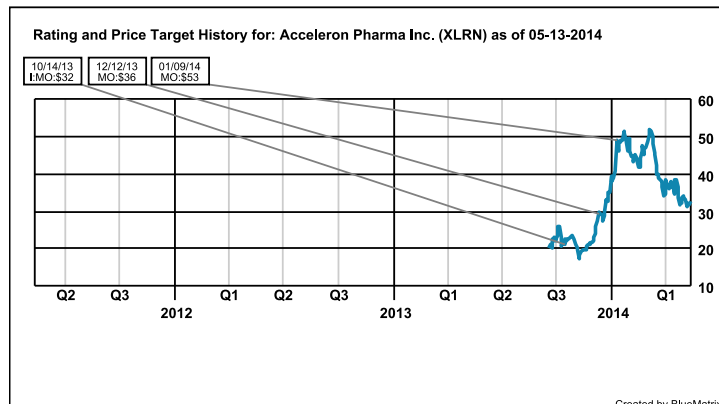
Market Underperform (MU): JMP Securities expects the stock price to underperform relevant market indices over the next 12 months.

JMP Securities Research Ratings and Investment Banking Services: (as of May 13, 2014)

JMP Rating	Regulatory Equivalent	# Co's Under Coverage	% of Total	Regulatory Equivalent	# Co's Under Coverage	% of Total	# Co's Receiving IB Services in Past 12 Months	% of Co's With This Rating
MARKET OUTPERFORM	Buy	254	57.99%	Buy	254	57.99%	98	38.58%
MARKET PERFORM	Hold	136	31.05%	Hold	136	31.05%	17	12.50%
MARKET UNDERPERFORM	Sell	5	1.14%	Sell	5	1.14%	0	0%
COVERAGE IN TRANSITION		43	9.82%		43	9.82%	0	0%
TOTAL:		438	100%		438	100%	115	26.26%

Stock Price Chart of Rating and Target Price Changes:

Note: First annotation denotes initiation of coverage or 3 years, whichever is shorter. If no target price is listed, then the target price is N/A. In accordance with NASD Rule 2711, the chart(s) below reflect(s) price range and any changes to the rating or price target as of the end of the most recent calendar quarter. The action reflected in this note is not annotated in the stock price chart. Source: JMP Securities.



JMP Disclaimer:

JMP Securities LLC (the "Firm") compensates research analysts, like other Firm employees, based on the Firm's profitability, which includes revenues from the Firm's institutional sales, trading, and investment banking departments as well as on the quality of the services and activities performed that are intended to benefit the Firm's institutional clients. These data have been prepared by JMP Securities LLC for informational purposes only and are based on information available to the public from sources that we believe to be reliable, but we do not guarantee their accuracy or completeness. Any opinions and projections expressed herein reflect our judgment at this date and are subject to change without notice. These data are neither intended nor should be considered as an offer to sell or a solicitation or a basis for any contract for the purchase of any security or other financial product. JMP Securities LLC, its affiliates, JMP Group LLC, Harvest Capital Strategies LLC, and their respective partners, directors, officers, and associates may have a long or short position in, may act as a market maker for, or may purchase or sell a position in the securities mentioned herein. JMP Securities LLC or its affiliates may be performing, have performed, or seek to perform investment banking, advisory, or other services and may have acted as manager or co-manager for a public offering of securities for any company mentioned herein. The reader should assume that JMP Securities LLC will solicit business from the company covered in this report. Members of our Sales and Trading Department provide oral and/or written market opinions and trading strategies to our clients that reflect their personal opinions about stocks that are the subject of the firm's research reports. Our research analysts discuss trading strategies with clients that sometimes reflect short-term expectations for the price of the securities that are the subject of research reports. These trading strategies are distinct from the analysts' fundamental rating for the stock, which is based upon the analysts' view compared to other stocks under coverage for the relevant time period. © Copyright 2014. All rights reserved by JMP Securities LLC. JMP Securities LLC is a member of FINRA, NASDAQ, and SIPC.

Jeffrey H. Spurr
Director of Research
(415) 835-3903

RESEARCH PROFESSIONALS

FINANCIAL SERVICES

Alternative Asset Managers

Devin Ryan (212) 906-3578
Brian McKenna (212) 906-3545

Commercial & Specialty Finance

Christopher York (415) 835-8965
Hannah Kim, CFA (415) 835-8962

Consumer Finance

David M. Scharf (415) 835-8942
Jeremy Frazer (312) 768-1796

Financial Processing & Outsourcing

David M. Scharf (415) 835-8942
Jeremy Frazer (312) 768-1796

Insurance

Matthew J. Carletti (312) 768-1784
Christine Worley (312) 768-1786

Investment Banks & Brokers

Devin Ryan (212) 906-3578
Brian McKenna (212) 906-3545

Mortgage Operating Companies

REITs: Agency, Hybrid, & Commercial Mortgage

Steven C. DeLaney (404) 848-7773
Trevor Cranston, CFA (415) 869-4431
Charter Robinson (757) 613-8955
Benjamin Zucker (212) 906-3529

HEALTHCARE

Biotechnology

Liisa A. Bayko (312) 768-1785
Heather Behanna, PhD (312) 768-1795
Andrew Prigodich (312) 768-1788
Jason N. Butler, PhD (212) 906-3505
Caroline Palomeque (212) 906-3509
Michael G. King, Jr. (212) 906-3520
Eric Joseph, PhD (212) 906-3514

Healthcare Services & Facilities

Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Arthur Kwok (415) 835-8908

Life Science Tools & Diagnostics

J. T. Haresco, III, PhD (415) 869-4477
Marie T. Casey, PhD (415) 835-3955

Medical Devices

J. T. Haresco, III, PhD (415) 869-4477
Marie T. Casey, PhD (415) 835-3955

Medical Devices & Supplies

David Turkaly (212) 906-3563
John Gillings (212) 906-3564

REAL ESTATE

Housing & Land Development

Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Bharathwajan Iyengar (415) 835-3902

Lodging & Leisure

Robert A. LaFleur (212) 906-3510
Whitney Stevenson (212) 906-3538

Property Services

Mitch Germain (212) 906-3546
Peter Lunenburg (212) 906-3537

REITs: Healthcare, Residential, & Specialty

Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Arthur Kwok (415) 835-8908

REITs: Office, Industrial, & Diversified

Mitch Germain (212) 906-3546
Peter Lunenburg (212) 906-3537

Residential Services

Peter L. Martin, CFA (415) 835-8904
Aaron Hecht (415) 835-3963
Bharathwajan Iyengar (415) 835-3902

TECHNOLOGY

Communications Equipment & Internet Security

Erik Suppiger (415) 835-3918
John Lucia (415) 835-3920

Internet & Digital Media

Ronald V. Josey III (212) 906-3528
Andrew Boone (415) 835-3957
Michael Wu (415) 835-8996

Software

Patrick Walravens (415) 835-8943
Peter Lowry (415) 869-4418
Caitlin Schields (415) 835-8960
Greg McDowell (415) 835-3934

Wireless & Cloud Computing Technologies

Alex Gauna (415) 835-8998

ADDITIONAL CONTACTS

Thomas R. Wright
Director of Equities
(212) 906-3599

Dan Wychulis
Director of Institutional Sales
(617) 235-8530

600 Montgomery Street, Suite 1100
San Francisco, CA 94111
www.jmpsecurities.com