Alder Biopharmaceuticals (ALDR)

SMALL & MID CAP RESEARCH

Valuable Migraine Program with Optionality for Clazakizumab and Pipeline/Technology

In the seven months since its IPO, ALDR has advanced its wholly owned drug ALD403 into Phase IIb testing for chronic migraine with data expected in late 2015 (primary clinical catalyst for ALDR shares). In 2015, we also anticipate one or more corporate deals for ex-US rights to ALD403 or a global deal for clazakizumab (rights recently returned from Bristol). As competitors in the migraine space advance their programs, we expect investor interest in anti-CGRP antibodies will increase and drive ALDR shares higher. We are raising our TP to $34 from $19.

- **Phase IIb underway in migraine.** ALDR has initiated a Phase IIb in chronic migraine (data in late 2015) and plans to start a Phase IIb trial in frequent episodic migraine in H1:15 (data in mid-2016). We believe these trials will be major derisking events. Our current probability of success is 60%, so new data could provide a significant value inflection.
- **Pipeline could generate news and value in 2015.** In H1:15, we expect data from the confirmatory Phase IIb trial of clazakizumab in RA. This trial is funded by Bristol, who recently returned full commercial rights to ALDR. Positive data could catalyze a new global partnership. We also expect ALDR to initiate a Phase I trial of a new clinical candidate from its internal pipeline in 2015.
- **New $34 target.** We have bumped our probability of success for ALD403 from 55% to 60%, increased our assumptions for an ex-US partnership, and assumed less dilution (as a result of the higher share price). Our $34 target uses a blended valuation based on current shares and our projection for future dilution in 2015. Our 2015 EPS increases on forecast lower dilution.

Rating	**OUTPERFORM* [V]**
Price (16 Dec 14, US$)	24.79
Target price (US$)	(from 19.00) 34.00[1]
52-week price range	26.73 - 9.91
Market cap. (US$ m)	763.69
Enterprise value (US$ m)	709.90

**Stock ratings are relative to the coverage universe in each analyst's or each team's respective sector.*
[1]Target price is for 12 months.
[V] = Stock considered volatile (see Disclosure Appendix).

Research Analysts

Jason Kantor, PhD
415 249 7942
jason.kantor@credit-suisse.com

Jeremiah Shepard, PhD
415 249 7933
jeremiah.shepard@credit-suisse.com

Ravi Mehrotra PhD
212 325 3487
ravi.mehrotra@credit-suisse.com

Anuj Shah
212 325 6931
anuj.shah@credit-suisse.com

Financial and valuation metrics

Year	12/13A	12/14E	12/15E	12/16E
EPS (CS adj.) (US$)	-0.94	0.36	-1.45	-2.15
Prev. EPS (US$)	—	—	-1.56	-2.23
P/E (x)	-26.3	69.3	-17.1	-11.5
P/E rel. (%)	-139.3	395.6	-106.9	-80.7
Revenue (US$ m)	18.8	54.5	14.8	15.5
EBITDA (US$ m)	-19.8	11.7	-51.7	-81.8
OCFPS (US$)	-1.65	-1.30	0.36	-2.36
P/OCF (x)	—	-19.1	68.4	-10.5
EV/EBITDA (current)	-35.6	60.5	-13.7	-8.6
Net debt (US$ m)	-23	-54	-206	-114
ROIC (%)	37.60	162.53	93.86	188.12

Number of shares (m)	30.81	IC (current, US$ m)	-55.22
BV/share (Next Qtr., US$)	1.9	EV/IC (x)	105.2
Net debt (Next Qtr., US$ m)	-53.8	Dividend (current, US$)	—
Net debt/tot eq (Next Qtr., %)	-88.9	Dividend yield (%)	—

Source: Company data, Credit Suisse estimates

ALDR Phase IIb trial in chronic migraine

ALDR initiated a 600-patient Phase IIb trial of ALD403 in chronic migraine (15-25 migraine days per month). The trial tests four different single doses of ALD403 (by IV infusion) vs. placebo. The primary endpoint is change in migraine days from baseline to 12 weeks, with data expected in H2:15. The goal is to establish a minimally effective dose for quarterly administration.

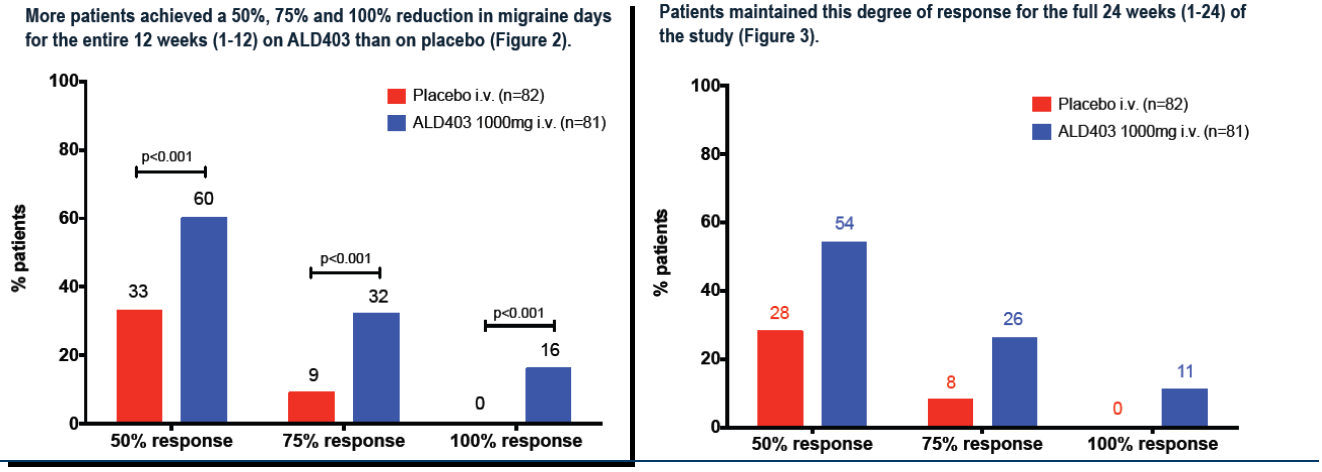
We believe the IV formulation of ALD403 could be competitive if it provides adequate migraine relief for a large portion of patients over the full 12 week period.

ALDR plans to initiate a repeat dosing "roll-over" study in 2015 for patients in this trial who wish to continue on therapy. The dose, interval, and exact design of the trial have not been determined.

Second Phase IIb trial in H1:15

ALDR plans to initiate a second Phase IIb trial in frequent episodic migraine (4-15 days/month) in H1:15. This trial is expected to enroll over 400 patients. It will also be a placebo controlled, dose-ranging trial, testing monthly subcutaneous (subQ) injections.

Exhibit 1: ALD403 provides sustained migraine relief for 3 months and 6 months (Phase IIa results)



Source: Company data, Credit Suisse estimates

Competitors are making more noise about this emerging drug class

AMGN highlighted its AMG 334 (anti-CGRP receptor) program at its analyst event in October as one of its programs with the greatest potential to impact patient quality of life and described the opportunity as "huge". Earlier this month, AMGN made a passing comment that the Phase IIb trial was positive and that AMGN would move forward with Phase III development.

> "I had the opportunity to review the Phase 2b data from the episodic migraine population that studied three doses of AMG 334 in a parallel design. And the data, we were very pleased with the data and have decided to aggressively move forward into Phase 3 with that molecule" Sean Harper EVP, Research and Development.

Teva also recently highlighted its anti-CGRP program at its analyst event, stating that antibodies against CGRP are "uniquely positioned to become a leading treatment for chronic and episodic migraine," pointing to validation from ALDR and LLY and including

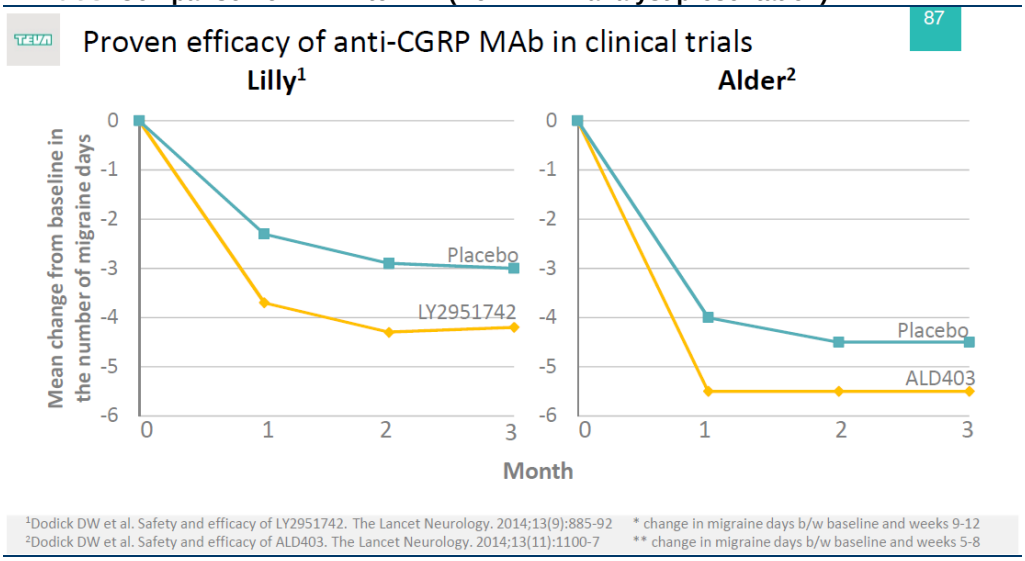
the lack of toxicity and the early onset of efficacy. Note that in TEVA's side-by-side comparison of the ALDR and LLY data, the ALDR data shows more rapid and complete activity in the first month (Exhibit 3). Teva expects Phase IIb results will be available in Q1:15.

Exhibit 2: Competition in the CGRP inhibitor space

Company	Drug	MOA	Stage	Episodic	Chronic
Amgen	AMG 334	Anti-CGRP receptor	Phase 2b	Completed	Ongoing
Alder	ALD403	Anti-CGRP	Phase 2b	Planned	Ongoing
Eli Lilly	LY2951742	Anti-CGRP	Phase 2b	Ongoing	Planned
Teva (Labrys)	TEV-48125 (LBR-101, RN-307)	Anti-CGRP	Phase 2b	Ongoing	Ongoing

Source: Company data, Credit Suisse estimates

Exhibit 3: Comparison of ALDR to LLY (from TEVA analyst presentation)



Source: Company data, Credit Suisse estimates

Differences among the competitors

There are currently four antibodies in development for migraine prophylaxis that target the CGRP pathway.

- **Target:** The drugs from ALDR, LLY, and TEVA are most similar, all targeting soluble CGRP. AMGN's program is different and targets the CGRP receptor. This could provide unexpected benefits relative to the therapies targeting the ligand, but it could also cause unexpected side effects by affecting the biology of the receptor. Detailed data from AMGN's Phase II program is expected in 2015, and this should shed some light on the potential for positive or negative differentiation.
- **Data:** To date, we have only seen clinical efficacy results from ALDR and LLY, which were both featured at AAN in May 2014. Both drugs showed substantial reductions in key primary and secondary endpoints. These results provide significant derisking for the drug class. It is not possible to determine if there is a substantial difference between the LLY and ALDR antibody, but ALD403 appears to have very rapid and complete activity within one month, which may prove to be a competitive advantage if earlier time points are measured.

- **Stage:** Both AMGN and TEVA moved aggressively ahead of the pack with large Phase II trials in high-frequency episodic and chronic migraine. Neither had established efficacy prior to these studies. AMGN has recently announced plans to advance AMG 334 into Phase III (presumably in 2015), and TEVA expects Phase II data in Q1:15 from both trials.

New $34 price target

We are raising our target price to $34. The primary changes to our model include (1) an increase in the probability of success to 60% from 55% (which leaves substantial room for further derisking), (2) an increase in the forecast upfront and milestone payments for a potential ex-US partner, and (3) a decrease in our dilution calculation, given the recent move in ALDR shares.

We assume ALDR will raise money in 2015. Our DCF gets us to $38 using current share count and $30 assuming additional dilution (with no credit for the added cash). We use a blended valuation to arrive at our $34 target.

Exhibit 4: $34 Target Price

Program	NPV ($M)	Sales ($M)	POS	Per share (current)	per share (future)
ALD403	$1,101	$1,070	60%	$34	$27
Clazakizumab	$84	$510	25%	$3	$2
NOLs (future)	$35			$1	$1
Total	**$1,221**			**$38**	**$30**

Source: Company data, Credit Suisse estimates

Exhibit 5: ALDR News Flow

Product	Catalyst	Expected Date
New target	Select new clinical stage candidate	YE14
Clazakizumab	Phase IIb dose exploration data in RA	H1:15
ALD403	Start Phase IIb dose ranging study in frequent episodic migraine patients (subQ)	H1:15
ALD403	Phase IIb data	H2:15
New target	First clinical study start (one or more)	H2:15
Clazakizumab	Potential development partner	2015
ALD403	End of Phase II meeting with FDA	YE:15
ALD403	Start Phase III in migraine	2016

Source: Company data, Credit Suisse estimates

Exhibit 6: ALDR Pipeline

Drug	Target	Indication	Stage	Partner
ALD403	CGRP	Migraine	Phase II	Proprietary
Clazakizumab	IL-6	Rheumatoid Arthritis	Phase IIb	Proprietary
		Psoriatic Arthritis	Phase II	Proprietary
4 preclinical programs	TBA	TBA	Preclinical	Proprietary

Source: Company data, Credit Suisse estimates

Exhibit 7: ALDR Model

	2013A	Q1:14A	Q2:14A	Q3:14A	Q4:14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Revenues														
US sales of ALD403											32.4	168.6	394.7	547.5
Ex-US royalies on ALD403												0.7	6.3	23.7
Royalties on Clazakizumab											1.4	3.1	6.5	10.4
Collaboration and license agreement	18.8	4.8	4.7	38.8	6.2	54.5	14.8	15.5	15.5	79.9	120.0	12.0	6.0	
Total Revenues	**18.8**	**4.8**	**4.7**	**38.8**	**6.2**	**54.5**	**14.8**	**15.5**	**15.5**	**79.9**	**153.8**	**184.4**	**413.5**	**581.6**
Expenses														
Cost of goods											3.2	16.9	39.5	54.8
Research and development	31.9	7.0	9.4	7.0	7.5	30.9	51.0	74.0	90.0	92.0	87.0	77.0	75.0	72.0
Sales, general, administrative	7.7	3.2	2.7	3.2	3.5	12.6	16.2	24.0	24.0	26.0	35.0	40.0	45.0	40.0
Total Operating Expenses	**39.6**	**10.2**	**12.1**	**10.2**	**11.0**	**43.5**	**67.2**	**98.0**	**114.0**	**118.0**	**122.0**	**117.0**	**120.0**	**112.0**
Operating income (loss)	(20.8)	(5.4)	(7.4)	28.6	(4.8)	11.0	(52.4)	(82.5)	(98.5)	(38.1)	31.8	67.4	293.5	469.6
Total Other Income (Expense)	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2
Pre Tax Income	(20.6)	(5.4)	(7.4)	28.6	(4.8)	11.1	(52.3)	(82.4)	(98.4)	(37.9)	32.0	67.6	293.7	469.8
Income tax													102.8	164.4
Net Income	**(20.6)**	**(5.4)**	**(7.4)**	**28.6**	**(4.8)**	**11.1**	**(52.3)**	**(82.4)**	**(98.4)**	**(37.9)**	**32.0**	**67.6**	**190.9**	**305.4**
EPS - basic (proforma)	($3.84)	($5.38)	($0.40)	$0.93	($0.15)	$0.54	($1.45)	($2.15)	($2.23)	($0.84)	$0.71	$1.47	$4.12	$6.53
EPS - diluted (proforma)	($3.84)	($5.38)	($0.40)	$0.88	($0.15)	$0.36	($1.45)	($2.15)	($2.23)	($0.84)	$0.66	$1.38	$3.84	$6.06
Shares outstanding - basic (proforma)	21.89	1.00	18.56	30.81	31.20	20.39	36.11	38.36	44.17	44.95	45.40	45.85	46.31	46.77
Shares outstanding - diluted (proforma)	21.89	1.00	18.56	32.51	31.20	30.93	36.11	38.36	44.17	47.93	48.53	49.14	49.76	50.40

Source: Company data, Credit Suisse estimates

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Companies Mentioned *(Price as of 16-Dec-2014)*

Alder Biopharmaceuticals (ALDR.OQ, $24.79, OUTPERFORM[V], TP $34.0)
Amgen Inc. (AMGN.OQ, $159.44)
Eli Lilly & Co. (LLY.N, $69.26)
Teva Pharmaceutical Ind. (TEVA.N, $55.15)

Disclosure Appendix

Important Global Disclosures

Jason Kantor, PhD, Jeremiah Shepard, PhD and Ravi Mehrotra PhD each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

3-Year Price and Rating History for Alder Biopharmaceuticals (ALDR.OQ)

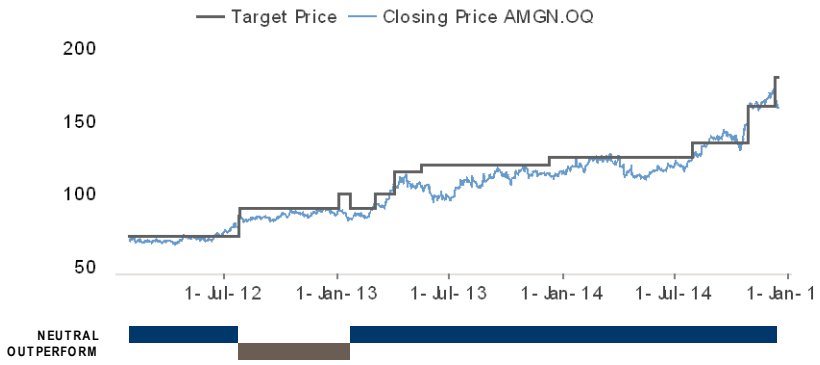
ALDR.OQ Date	Closing Price (US$)	Target Price (US$)	Rating
02-Jun-14	12.26	20.00	O *
02-Sep-14	14.80	19.00	

** Asterisk signifies initiation or assumption of coverage.*

3-Year Price and Rating History for Amgen Inc. (AMGN.OQ)

AMGN.OQ Date	Closing Price (US$)	Target Price (US$)	Rating
30-Jan-12	68.32	71.00	N
25-Jul-12	77.96	85.00	O
26-Jul-12	79.30	90.00	
03-Jan-13	88.59	100.00	
22-Jan-13	83.29	90.00	N
04-Mar-13	92.73	100.00	
04-Apr-13	105.90	115.00	
17-May-13	105.63	120.00	
10-Dec-13	114.10	125.00	
30-Jul-14	130.01	135.00	
28-Oct-14	157.19	160.00	
11-Dec-14	166.08	180.00	

** Asterisk signifies initiation or assumption of coverage.*



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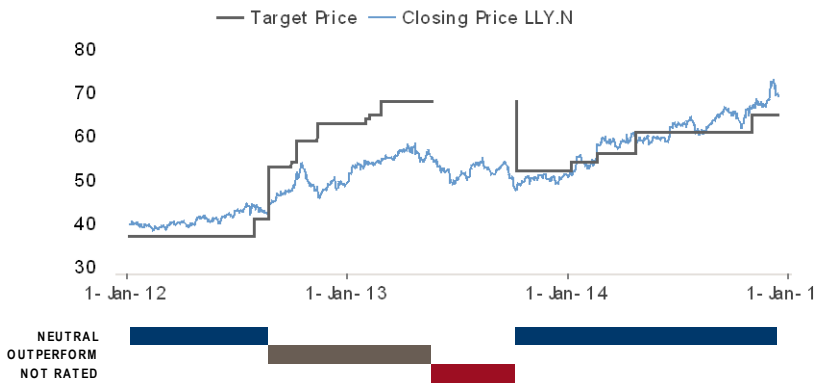
3-Year Price and Rating History for Eli Lilly & Co. (LLY.N)

LLY.N	Closing Price	Target Price	
Date	(US$)	(US$)	Rating
06-Jan-12	39.88	37.00	N
30-Jul-12	44.05	41.00	
24-Aug-12	43.86	53.00	O
30-Sep-12	47.41	54.00	
09-Oct-12	51.81	59.00	
12-Nov-12	48.30	60.00	
13-Nov-12	47.14	63.00	
31-Jan-13	53.69	64.00	
07-Feb-13	53.78	65.00	
26-Feb-13	54.43	68.00	
22-May-13	54.92		NR
08-Oct-13	48.05	52.00	N *
07-Jan-14	51.19	54.00	
19-Feb-14	58.09	56.00	
24-Apr-14	58.68	61.00	
02-Nov-14	66.33	65.00	



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Underperform/Sell*	14%	(43% banking clients)
Restricted	2%	

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Price Target: (12 months) for Alder Biopharmaceuticals (ALDR.OQ)

Method: Our $34 valuation is justified by a fully-taxed, probability weighted, product level DCF for each of the two clinical stage programs plus the value of future NOLs. We assume an ex-US partner for ALD403 and significant dilution from future equity raises prior to profitability. Our DCF gets us to $38 using current share count and $30 assuming additional dilution (with no credit for the added cash). We use a blended valuation to arrive at our $34 target.

Risk: Risks to our $34 TP include: 1) unexpected negative result for proprietary clinical programs, 2) financing risk from expected future equity raises, 3) significant delay in one or more clinical programs that pushes potential approval timeline(s) out.

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See the Companies Mentioned section for full company names

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