

## Achaogen (AKAO)

### 4Q14 in Line; Plazomicin Update in 2Q15

- **Achaogen reported 4Q14 loss per share of \$0.27, in line with our estimates and consensus.** It ended the year with \$63.7M in cash and equivalents, which we project should be sufficient through early 2017.
- **Pivotal trial enrollment still sluggish for plazomicin; update expected 2Q15.** Achaogen is working with regulators to define changes to the protocol to improve enrollment. We anticipate an update on these adaptations as well as evolved thinking for a supportive study to fill out the safety database for plazomicin. We anticipate a supportive study will likely be an open-label study, potentially leveraging the new FDA guidance honing in on specific patients with unmet medical need.
- **Proposed legislation could remove barriers to reimbursement and create a fast path to market.** We remind investors that two initiatives are currently being considered by Congress. The ADAPT Act is focused on establishing a rapid approval pathway for antibiotics to treat potentially fatal infections. Plazomicin fits under this guidance; we believe we could see input from ADAPT worked into the protocol for supportive studies of plazomicin. The second piece of legislation, DISARM, would remove drug pricing from the hospital DRG, allowing for pricing flexibility and incentives for manufacturers to develop novel antibiotics. Based on strong bipartisan support, we believe this legislation may be passed this year. Currently there is language in the act defining a voucher program where companies may sell one year of its GAIN exclusivity. We see this as less likely to be in the final legislation; however, it could represent tremendous upside for all antibiotic companies developing new antibiotics.
- **We maintain our NEUTRAL rating and \$9 price target.** Our price target is achieved by applying a 5x multiple on plazomicin peak US sales of ~\$225M and a 15x multiple on plazomicin peak royalty revenue from EU sales, discounted by 35%. Risks to the attainment of our price target include failure of plazomicin to enroll its pivotal study on time for data in 1H17 or failure of plazomicin to be superior to colistin in its pivotal study.

March 16, 2015

Price  
**\$10.05**

Rating  
**NEUTRAL**

12-Month Price Target  
**\$9**

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#### Company Information

Shares Outst (M)	17.8
Market Cap (M)	\$178.7
52-Wk Range	\$7.72 - \$19.69
Book Value/sh	\$3.85
Cash/sh	\$3.58
Enterprise Value (M)	\$115.1
LT Debt/Cap %	0%
Cash Burn (M)	\$17.7

#### Company Description

Achaogen is a biopharmaceutical company based in South San Francisco, California, focused on antibiotics for multi-drug resistant infections.



Source: Thomson Reuters

FYE Dec	2014A	2015E			2016E		
REV	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	\$6.0A	\$4.3E	\$5.1E	\$5.5E	\$4.5E		\$5.8E
Q2 Jun	\$5.2A	\$4.4E	\$5.2E	5.6E	\$4.5E		5.8E
Q3 Sep	\$4.5A	\$4.7E	\$5.5E	5.8E	\$4.5E		5.8E
Q4 Dec	\$4.3A	\$5.0E		5.8E	\$4.5E		3.8E
Year*	\$20.0A	\$18.4E	\$20.8E	\$24.3E	\$18.0E		\$20.6E
Change	8%	-8%			--		
	2014A	2015E			2016E		
EPS	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	(\$1.00)A	(\$0.27)E	(\$0.23)E	(\$0.23)E	(\$0.35)E	(\$0.34)E	(\$0.25)E
Q2 Jun	(\$0.20)A	(\$0.28)E	(\$0.23)E	(0.25)E	(\$0.36)E	(\$0.35)E	(0.27)E
Q3 Sep	(\$0.47)A	(\$0.31)E	(\$0.24)E	(0.27)E	(\$0.36)E		(0.29)E
Q4 Dec	(\$0.27)A	(\$0.30)E	(\$0.29)E	(0.20)E	(\$0.37)E		(0.39)E
Year*	(\$1.42)A	(\$1.16)E	(\$1.00)E	(\$1.19)E	(\$1.44)E	(\$1.41)E	(\$1.33)E
P/E	--	--			--		
Change	96%	18%			--		

Consensus estimates are from Thomson First Call.

\* Numbers may not add up due to rounding.

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**Upcoming Milestones:**

Timing	Event	Program
H2:15	Phase III Interim Analysis #1	Plazomicin (CRE)
Q4:15	Supportive efficacy trial top-line data (sep trial)	Plazomicin (CRE)
2015	IND for LpxC inhibitor or antimicrobial antibody	Pseudomonas Aeruginosa

**Figure 1: Revised Income Statement**


Heather Behanna, Ph.D.

3/16/2015

**Achaogen**

Annual Financial Results &amp; Projections

(\$ in thousands except per share data)

	Q1	Q2	Q3	Q4	FY:14E	FY:15E	FY:16E	FY:17E	Q4	FY:18E	FY:19E	FY:20E	FY:21E	FY:22E
<b>REVENUES</b>														
Plazomicin US	0	0	0	0	0	0	0	0	707	899	6,543	21,112	57,381	115,395
Collaborations, contract revenue, royalties	5,988	5,203	4,520	4,259	19,970	18,428	18,000	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>5,988</b>	<b>5,203</b>	<b>4,520</b>	<b>4,259</b>	<b>19,970</b>	<b>18,428</b>	<b>18,000</b>	<b>0</b>	<b>707</b>	<b>899</b>	<b>6,543</b>	<b>21,283</b>	<b>58,223</b>	<b>118,646</b>
<b>EXPENSES</b>														
COGS	0	0	0	0	0	0	0	0	0	0	796	1,915	5,822	11,865
R&D expense	6,605	6,195	10,678	6,632	30,110	28,728	33,391	36,000	8,000	32,000	32,000	32,000	32,000	32,000
SG&A	2,617	2,346	2,175	2,508	9,646	10,285	10,703	12,500	12,000	32,500	67,016	76,477	82,781	89,605
<b>TOTAL</b>	<b>9,222</b>	<b>8,541</b>	<b>12,853</b>	<b>9,140</b>	<b>39,756</b>	<b>39,013</b>	<b>44,094</b>	<b>48,500</b>	<b>20,000</b>	<b>64,500</b>	<b>99,812</b>	<b>110,392</b>	<b>120,603</b>	<b>133,469</b>
Operating Income	(3,234)	(3,338)	(8,333)	(4,881)	(19,786)	(20,585)	(26,094)	(48,500)	(19,293)	(63,601)	(93,269)	(89,110)	(62,380)	(14,823)
Interest (expense) and other, net	(221)	(217)	0	0	(438)	(39)	0	0	0	0	0	0	0	0
<b>PRETAX INCOME</b>	<b>(3,455)</b>	<b>(3,507)</b>	<b>(8,312)</b>	<b>(4,854)</b>	<b>(20,176)</b>	<b>(20,624)</b>	<b>(26,094)</b>	<b>(48,500)</b>	<b>(19,293)</b>	<b>(63,601)</b>	<b>(93,269)</b>	<b>(89,110)</b>	<b>(62,380)</b>	<b>(14,823)</b>
Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>NET INCOME</b>	<b>(3,455)</b>	<b>(3,507)</b>	<b>(8,312)</b>	<b>(4,854)</b>	<b>(20,128)</b>	<b>(20,721)</b>	<b>(26,094)</b>	<b>(48,500)</b>	<b>(19,293)</b>	<b>(63,601)</b>	<b>(93,269)</b>	<b>(89,110)</b>	<b>(62,380)</b>	<b>(14,823)</b>
<b>GAAP EPS (fully taxed)</b>	<b>(1.00)</b>	<b>(0.20)</b>	<b>(0.47)</b>	<b>(0.27)</b>	<b>(1.42)</b>	<b>(1.16)</b>	<b>(1.44)</b>	<b>(2.22)</b>	<b>(0.78)</b>	<b>(2.62)</b>	<b>(3.77)</b>	<b>(3.23)</b>	<b>(2.18)</b>	<b>(0.51)</b>
Diluted Shares Outstanding	3,456	17,691	17,711	17,786	14,211	17,911	18,111	22,061	24,586	24,301	24,751	27,576	28,651	28,851
Cash Burn	(2,867)	(2,796)	(7,768)	(4,305)	(17,736)	(18,385)	(23,694)	(45,500)	(18,293)	(59,601)	(83,269)	(79,110)	(52,380)	(4,823)
Cash Balance	84,937	74,496	72,030	63,679	63,679	45,294	55,440	66,340	91,338	91,338	109,589	147,979	95,599	90,776

Source: Company data, Wedbush Securities, Inc.

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**Analyst Biography**


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Heather Behanna, Ph.D. is an Analyst covering stocks in the Biotechnology/Biodefence sector. Her prior sell-side research experience at JMP Securities focused on anti-infective, orphan and oncology companies of various market caps.

Heather received her Ph.D.(Chemistry) at Northwestern University, M.Sc. (Organic Chemistry) from the Weizmann Institute of Science and B.S. (Biopsychology) from Tufts University. She also completed a postdoctoral fellowship at the Feinberg Medical School in CNS Drug Discovery.

*Heather's Edge:* Heather's experience working at a global pharmaceutical company as a medicinal chemist gives her a novel perspective for evaluating developmental stage biotech companies. Her experience in various therapeutic areas on the science and corporate side gives her focus on value creation.

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**Analyst Certification**

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Company	Disclosure
Achaogen	1

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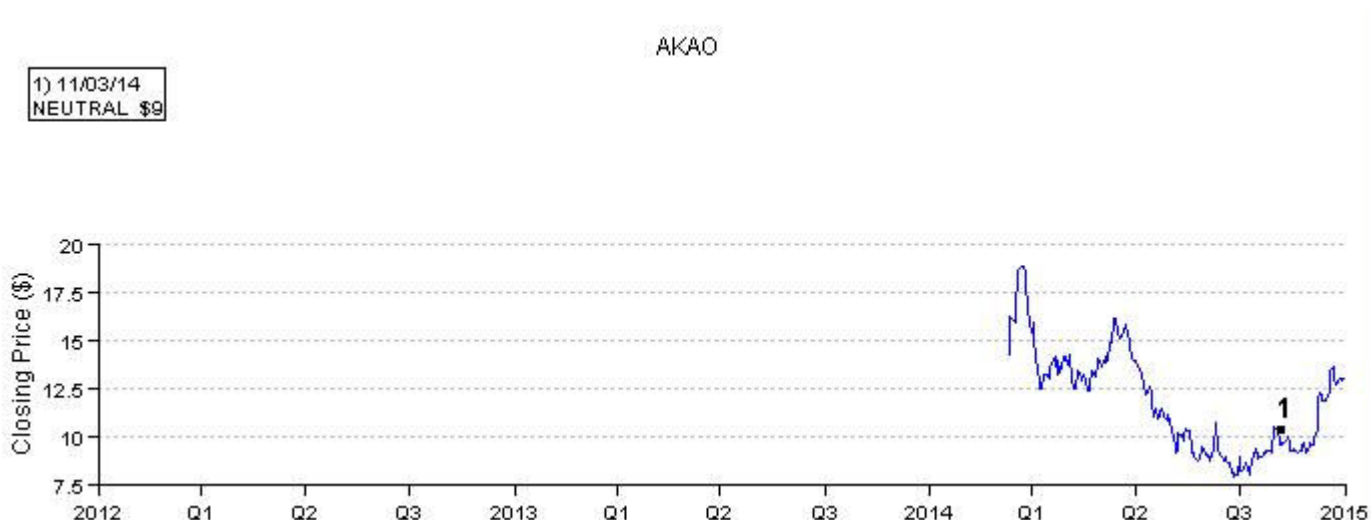
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