

Reason for report:

**COMPANY UPDATE** 

## **ELEVEN BIOTHERAPEUTICS, INC.**

EBI-005 Ph.2 Data In Allergic Conjunctivitis Mixed, But Positive On Balance

- Bottom Line: Ph. 2 data reported this morning by EBIO's EBI-005 for treatment of allergic conjunctivitis (AC) was mixed but overall positive on balance -- demonstrating drug activity through reduction of ocular itching and establishing a clinical model going forward. While the proof-of-concept study didn't show a stat sig benefit on the primary endpoint of ocular itching using an environmental chamber ("EEC test"), the drug did show a stat sig benefit on the pre-specified secondary endpoint which employed a direct allergen challenge ("CAPT test"; ~1/3 of subjects). Given that the CAPT model is the more widely accepted clinical model, we are ultimately encouraged by the data, particularly ss improvements during both of the final two assessment periods. We continue to view the market opportunity for AC as \$500m in the US. Next up, mgmt will make a decision on AC study timing/design early next yr, presumably after the Ph. 3 dry eye study reads out. We remain OP with a \$19/shr PT.
- · Mixed efficacy data, but positive on balance. As noted, EBIO missed its primary efficacy endpoint of ocular itching using the EEC model. However, a couple things with the EEC model are worth noting: (1) environmental chamber studies can produce variable responses & multihr exposure to allergens is questionably representative of real world exposure, which explains why drug developers have mixed views on its utility; (2) assuming a drug has activity, the CAPT model doesn't require a large patient number to demonstrate a drug response. On the CC, mgmt commented that EEC models are not typically used in pivotal trials for ophthalmic products. Overall, we're overall encouraged by '005's drug activity based on stat sig reduction in ocular itching (CAPT), particularly during the last two assessment periods when inflammation (not histamine) is causing the disease symptoms. Also, we are encouraged to see '005 show significant benefits on other prespecified exploratory endpoints of ocular tearing and associated nasal symptoms.
- Today's results provide some positive read through to EBIO's Ph. 3 dry eye trial. We are encouraged by '005's activity at the 5mg dose in the AC pt population and view the reduction in ocular itching in the CAPT model as a positive. Ocular itching is also found in dry eye although the mechanism behind its cause is different (from AC), but in both diseases IL-1 (which '005 blocks) is a primary modulator of inflammation. In our view, the AC study provides some corroborative clinical data for dry eye disease (DED). Last, '005 was well tolerated in pts and demonstrated a favorable safety profile, which is consistent with past studies.
- Next steps for the AC program likely to come after '005's Phase 3 trial in dry eye. Mgmt noted on the CC they will decide the path forward for the AC program by early next year. It is unclear whether EBIO will run a second Ph. 2 trial in AC or proceed straight to Ph. 3 based on today's results. Our view is mgmt will likely wait for the read out of the Ph. 3 dry

Key Stats: (NASDAQ:EBIO)

 S&P 600 Health Care Index:
 1,269.56

 Price:
 \$11.51

 Price Target:
 \$19.00

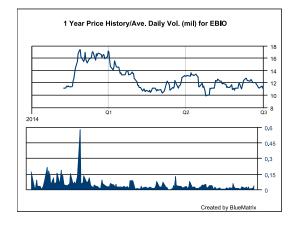
 Methodology:
 DCF analysis, 17.5% WACC

 52 Week High:
 \$19.33

 52 Week Low:
 \$9.50

 Shares Outstanding (mil):
 16.1

Market Capitalization (mil):\$185.3Book Value/Share:\$0.00Cash Per Share:\$2.80Dividend (ann):\$0.00Dividend Yield:0.0%



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2013A	0.0	0.0	0.0	0.0	0.0	(\$0.08)	(\$0.09)	(\$0.09)	(\$0.08)	(\$0.39)	NM
2014E	0.6A	0.8A	0.7	0.7	2.7	(\$0.80)A	(\$0.51)A	(\$0.45)	(\$0.36)	(\$1.93)	NM
2015E					1.0					(\$1.53)	NM

Source: Company Information and Leerink Partners LLC Research

Revenues in MM



### **INVESTMENT THESIS**

We rate EBIO shares Outperform. We expect that EBIO shares will appreciate upon receipt of Ph. 3 top-line data for EBI-005 for treatment of dry eye disease, most likely in early 2015. The market for dry eye disease therapy is large and there remains a paucity of topical anti-inflammatory drugs that are both potent and tolerable. Based on improved understanding of the pathophysiology of dry eye, EBI-005 was developed to inhibit IL-1, which if left unchecked will promote expression of the other key inflammatory factors that exacerbate dry eye. Lastly, '005 has the potential to be a very long-tailed asset, with pending patents projected to expire in 2034 and 005 could enjoy additional exclusivity owing to the fact that it is a biologic.

### **VALUATION**

Our ~\$19 price target on EBIO shares is based on our risk-adjusted DCF through 2034 discounted at 17.5% WACC. Using our sales forecasts and applying a 5x multiple to 2023 sales (year of peak market share) discounted back 9 periods at 17.5% WACC & 55% probability of success (POS) translates to \$19. Our current valuation is solely predicated on EBI-005 for dry eye and we view label expansion to allergic conjunctivitis as upside.

### RISKS TO VALUATION

Risks to our EBIO valuation include (1) EBI-005 drives our valuation and failure to demonstrate efficacy in Phase 3 trials would significantly reduce our valuation; (2) pipeline competitors develop more competitive product profiles, making it difficult for '005 to capture market share; and (3) generic threats to AGN's Restasis somehow materialize, making pricing/reimbursement for DED drugs more challenging.

#### EBIO Annual P&L Summary (Adj. Basis)

(figures in \$m, except per share data)

	2012	2013	1Q14	2Q14	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026	CAGR 19-24E
EBI-005 (IL-1 blockade; dry eye disease) EBI-005 (IL-1 blockade; allergic conjunctivitis)	-	-	-	-	-	-	-	-	-	36	112	180	265	367	465	562	583	605	628	27%
Collaboration revenue	-	0.8	0.6	0.8	0.7	0.7	2.7	0.6	-	-					-				-	na
Total Rev (MM) % y/y growth	na	0.8 na	<b>0.6</b> na	<b>0.8</b> na	<b>0.7</b> na	<b>0.7</b> na	2.7 na	1 na	na	36 nm	112 208%	180 61%	265 47%	<b>367</b> 39%	<b>465</b> 27%	<b>562</b> 21%	583 4%	605 4%	628 4%	27%
COGS	774	7,0	- 114	- 114	714	714	na -	-	na -	5	13	18	26	37	47	56.2	58.3	60.5	62.8	27%
% of sales	nm	0%	na	na	na	na	0%	0%	nm	15%	12%	10%	10%	10%	10%	10%	10%	10%	10%	21 70
Gross Income % of net sales	- nm	0.8 1	0.6	0.8	0.7	0.7	2.7 100.0%	0.6 100.0%	- nm	31 85.0%	98 88.0%	162 90.0%	238 90.0%	331 90.0%	419 90.0%	505.4 90.0%	524.7 90.0%	544.8 90.0%	565.6 90.0%	27%
EBI-005 clinical development costs Employee costs & other study costs	8.7 6.6	7.6 6.5	4.1 1.7	5.1 1.7	5.5 1.5	5.3 1.6	20.0 6.5	15.0 6.5	15.0 6.8	8.0 7.2	2.0 7.5	2.0 7.9	2.0 8.3	2.0 8.7	2.0 9.1	2.0 9.6	2.0 10.1	2.0 10.6	2.0 11.1	0% 5%
Other programs Total R&D % of sales	15.3 nm	14.1 nm	5.8 na	6.8 na	7.0 na	6.9 na	26.5 981%	21.5 3583%	21.8 nm	3.0 18.2 <i>50%</i>	4.0 13.5 12%	5.0 14.9 8%	5.0 15.3 <i>6</i> %	5.0 15.7 <i>4</i> %	5.0 16.1 3%	5.0 16.6 3%	5.0 17.1 3%	5.0 17.6 3%	5.0 18.1 3%	3%
G&A % of sales	4.2 nm	3.5 422%	1.9 na	2.1 na	1.5 na	0.5 na	6.0 222%	6.2 1033%	6.6 nm	17.5 <i>4</i> 8%	20.0 18%	21.4 12%	22.9 9%	24.5 7%	26.2 6%	28.1 5%	30.0 5%	32.1 5%	34.4 5%	7%
Sales reps cost Marketing costs Total S&M	-	-	-	-	-			-	-	25 30 55	26 28 54	28 29 57	29 31 60	30 32 63	32 34 66	34 36 69	35 38 73	37 39 76	39 41 80	5% 5% 5%
Total operating expenses	19.5	17.6	7.8	8.8	8.5	7.4	32.5	27.7	28.5	90.7	87.8	93.3	98.0	103.0	108.3	113.9	119.8	126.0	132.6	
Operating (loss)/gain % of sales	(19.5) nm	(16.8) nm	(7.2) na	(8.0) na	(7.8) na	(6.8) na	<b>(29.8)</b> -1104%	<b>(27.1)</b> -4517%	(28.5) nm	<b>(59.8)</b> -164%	<b>10.6</b> 10%	<b>68.5</b> 38%	<b>140.1</b> 53%	<b>227.7</b> 62%	<b>310.4</b> 67%	<b>391.5</b> 70%	<b>404.9</b> 69%	<b>418.8</b> 69%	<b>433.0</b> 69%	43%
Other income Intererest expense/income Net financial expense	(0.0) (0.2) (0.2)	(0.1) (0.7) (0.8)	0.051 (0.084) (0.0)	0 (0) (0)	(0) (0) (0)	(0.0) (0.2) (0)	(0.7) (0.7)	(0.7) (0.7)	(0.7) (0.7)	(0.7) (0.7)	1.0 1.0	1.0 1.0	2.0 2.0	3.0 3.0	4.0 4.0	5.0 5.0	10.0 10.0	11.0 11.0	12.0 12.0	na 58% 58%
Pre-tax Income % Pre-tax Margin	(19.7) nm	(17.5) nm	(7.2) nm	(8.1) nm	(8.1) nm	(7.0) nm	(30.5) nm	(27.8) nm	( <b>29.2)</b> nm	( <b>60.5</b> ) -166.3%	<b>11.6</b> 10.4%	<b>69.5</b> 38.7%	<b>142.1</b> 53.7%	<b>230.7</b> 62.8%	<b>314.4</b> 67.6%	<b>396.5</b> 70.6%	<b>414.9</b> 71.2%	<b>429.8</b> 71.0%	<b>445.0</b> 70.8%	43%
Taxes (benefit) % Tax rate	0.0%	0.0%		-	-		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	81 35.0%	110 35.0%	139 35.0%	145 35.0%	150 35.0%	156 35.0%	na
Preferred stock dividends  Net Income/(loss) (MM) % of net sales	(3.1) (23) NM	(3.6) <b>(21)</b> NM	(1) (8) <i>N/M</i>	- (8) <i>N/M</i>	- (8) <i>N/M</i>	- (7) N/M	(31) NM	(28) nm	( <b>29)</b> nm	- ( <b>60</b> ) -166.3%	- <b>12</b> 10.4%	<b>70</b> 38.7%	142 53.7%	150 40.8%	<b>204</b> 43.9%	<b>258</b> 45.9%	<b>270</b> 46.3%	279 46.1%	2 <b>89</b> 46.0%	31%
Basic & Diluted EPS Y/Y	(\$0.50) NM	(\$0.39) NM	(\$0.80)	(\$0.51)	(\$0.45)	(\$0.36)	(\$1.93) NM	(\$1.53) NM	(\$1.57) NM	( <b>\$2.89</b> ) 83%	<b>\$0.54</b> -119%	\$3.19 <i>4</i> 86%	<b>\$6.39</b> 100%	<b>\$6.62</b> 3%	\$8.84 34%	\$10.93 24%	\$11.21 3%	\$11.38 2%	\$11.56 2%	29%
Weighted Avg Basic & Diluted Shares (MM) % growth	45.2 NM	54.2 20%	9.6	16.1	18.2	19.3	15.8 -71%	18.2 15%	18.5 2%	20.9 13%	21.4 2%	21.8 2%	22.2 2%	22.7 2%	23.1 2%	23.6 2%	24.1 2%	24.5 2%	25.0 2%	2%

Source: Company reports and Leerink Research estimates



# **Disclosures Appendix Analyst Certification**

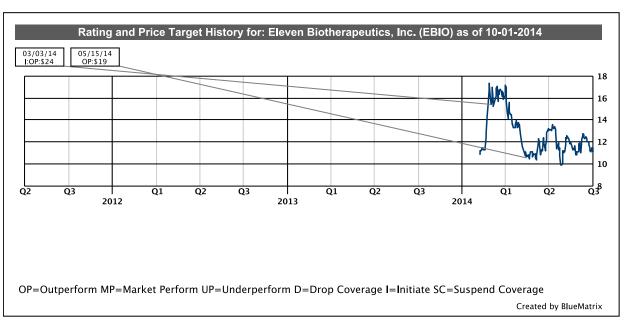
I, Jason M. Gerberry, JD, certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

### **Valuation**

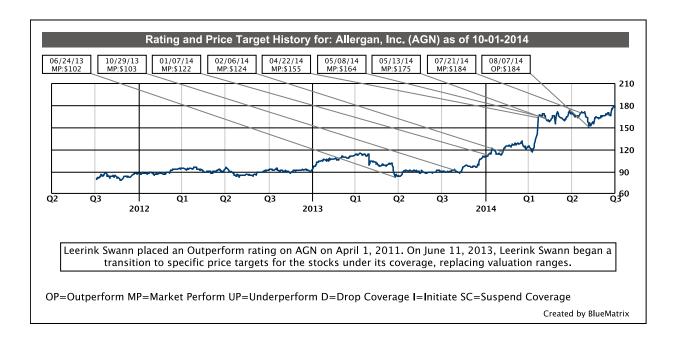
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	Distribution of Ratings/Investment Bankin	g Services (IB) a		of 06/30/14 IB Serv./Past 12 Mos.					
Rating	Count	Percent	Count	Percent					
BUY [OP]	138	69.00	50	36.20					
HOLD [MP]	62	31.00	2	3.20					
SELL [UP]	0	0.00	0	0.00					

# **Explanation of Ratings**

Outperform (Buy): We expect this stock to outperform its benchmark over the next 12 months.

<u>Market Perform (Hold/Neutral):</u> We expect this stock to perform in line with its benchmark over the next 12 months.

<u>Underperform (Sell):</u> We expect this stock to underperform its benchmark over the next 12 months. The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.

For the purposes of these definitions the relevant benchmark will be the S&P 600® Health Care Index for issuers with a market capitalization of less than \$2 billion and the S&P 500® Health Care Index for issuers with a market capitalization over \$2 billion.

# **Important Disclosures**

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In the past 12 months, the Firm has received compensation for providing investment banking services to Eleven Biotherapeutics, Inc. .

Leerink Partners LLC makes a market in Eleven Biotherapeutics, Inc.

Leerink Partners LLC is willing to sell to, or buy from, clients the common stock of Allergan, Inc. on a principal basis.

Leerink Partners LLC has acted as the manager for a public offering of Eleven Biotherapeutics, Inc. in the past 12 months.

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