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OUTPERFORM

Reason for report:

COMPANY UPDATE

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LEERINK SWANN

HEALTHCARE EQUITY RESEARCH

KALOBIOS PHARMACEUTICALS, INC.

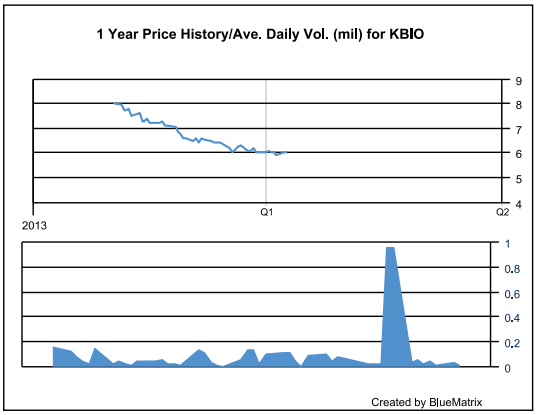
Promising MAb Pipeline on Track for Key Data Readouts in Early 2014

• **Bottom Line**: KBIO management provided an update on its proprietary antibody pipeline last Saturday at an industry conference. We believe KBIO remains on track to report key derisking safety and efficacy data for multiple promising monoclonal antibody (mAb) therapeutics by 1H:14. We expect KBIO to report placebo-controlled Phase II data for KB003 (asthma) and KB001-A (Cystic Fibrosis) and initiate the Phase Ib expansion phase for KB004 in 3Q:13 (cancer). We believe KBIO has an exciting antibody pipeline and investors should take notice, especially on the heels of REGN's (OP) recent dupilumab Phase II asthma data. We believe KBIO is a great opportunity for investors to buy a monoclonal antibody developer before key value infliction points in early 2014. **Reiterate OP rating and $15 fair value estimate in 12 months.**

• **KB003 (anti-GM-CSF) Phase II asthma data expected in 1Q:14.** KBIO has now over 50% of patients recruited in its severe asthma Phase II study and reaffirmed the target date of top-line data for 1Q:14. The Phase II trial is a randomized, double-blinded, placebo-controlled, monthly-dose study in asthma patients inadequately controlled by corticosteroids. KBIO plans to enroll 150 subjects pre-screened for "reversibility," or a demonstrated FEV1 bronchodilator response of >12% from baseline, as this patient segment showed a positive trend in responding to a precursor antibody. While the trial is sized to detect a statistically significant treatment effect on the primary endpoint of FEV1, KBIO retains the ability to alter the sample size of the study after 60 subjects have completed the trial to assess the possibility of achieving a significant difference on the key secondary endpoint of exacerbation. KB003 safety and tolerability have been examined in 21 patients in Phase I and have been found to be non-immunogenic.

• **KBIO has moved its KB004 (anti-EphA3) Phase I dose escalation study to the 140 mg cohort**, up from the 100 mg cohort. KB004 is an anti-EphA3 receptor tyrosine kinase monoclonal antibody, in the dose escalation portion of a Phase I clinical trial in patients with hematologic malignancies. KBIO has now observed one responder in a patient who was EphA3-positive in the lowest dose cohort (20mg) who has now been treated for over a year with KB004; these patients generally have a life expectancy of about 3-4 months. KBIO to date has not seen any bleeding effects and infusion reactions, which are common with antibodies, may end up being the dose limiting toxicity, according to mgmt. Interestingly, infusion reactions were not observed at very high doses with normal primates, even at doses ~50X higher, so mgmt believes occurrence of IRs may be related to drug hitting its target which is believed to be not found on normal tissues. KBIO is on track to initiate expansion portion of this trial, which will prescreen subjects for EphA3 expression in 3Q:13.

Key Stats:	**(Symbol:KBIO)**
S&P 600 Health Care Index:	**907.75**
Price:	**$6.00**
52 Week High:	$8.25
52 Week Low:	$5.91
Shares Outstanding (mil):	24.1
Market Capitalization (mil):	$144.6
Book Value/Share:	$0.00
Cash Per Share:	$2.32
Dividend (ann):	$0.00
Dividend Yield:	0.0%
Valuation:	$15 on DCF analysis



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	P/E
2012A	$3.0	$3.0	$0.1	0.0	$6.1	$0.57	($1.01)	($4.05)	($5.40)	($11.22)	NM
2013E	0.0	0.0	0.0	0.0	0.0	($0.67)	($0.51)	($0.55)	($0.59)	($2.29)	NM
2014E	--	--	--	--	$25.0	--	--	--	--	($1.19)	NM
2015E	--	--	--	--	0.0	--	--	--	--	($2.38)	NM

Source: Company Information and Leerink Swann LLC Research
Revenues in $MM.
GAAP EPS; IPO 1/10/13.

Please refer to pages 9 - 12 for Important Disclosures, Price Charts and Analyst Certification.

INVESTMENT THESIS

We believe that KBIO shares are poised to appreciate as clinical and commercial catalysts are realized for KBIO's three proprietary monoclonal antibody (mAb) therapeutics: KB001-A, KB003, and the early but intriguing KB004. We believe that KBIO's attractive clinical portfolio is differentiated by its proprietary Humaneering technology, which enables the generation of mAbs with low immunogenicity and enhanced sequence specificity. Our belief in the uniqueness of KBIO's technology has been corroborated by an investment from SNY (OP), which has agreed to fund the development and commercialization of KB001-A for ventilator-assisted patients (VAP) at risk for Pseudomonas Aeruginosa (Pa) induced pneumonia. Additionally, operating by the same attractive biochemical mechanism, KB001-A is enrolled in a Phase II study examining its ability to control Pa infections in cystic fibrosis patients, with clinical data expected in mid-2014. SNY has the ability to opt-in and partner with KBIO in developing KB001-A in this indication as well after Phase II data is released in 2Q:14. For KB003, KBIO is currently running a 150-patient Phase II trial in patients with severe asthma. We believe that KB003 may be broadly applicable to both allergic and non-allergic asthmatics, since its epitope is an inflammatory marker integral to multiple aspects of the disease cascade. Thus far, while the trials run for KBIO's mAbs (mainly performed on their precursor antibodies) were not powered for statistical significance, they nonetheless suggested that KBIO's therapeutics are non-immunogenic and will likely be able to produce a statistically significant clinical effect by interfering with pathogenic biological processes. Thus, our rating of Outperform reflects our confidence that as more clinical data for KBIO's mAb therapeutics are generated and crucial partnerships are cemented, KBIO shares will appreciate on the Street's enhanced view of the company's potential.

VALUATION

We estimate a risk-adjusted per share value for KBIO of $15 in 12 months. We use a sum-of-the-parts discounted cash flow (DCF) methodology, attributing ~$4 to KB001-A in Pa VAP, ~$4 to KB001-A in Pa CF, ~$5 to KB003 in asthma, and ~$2 to net cash. We use a 12% WACC as our discount rate since the risks involved with drug development and regulatory approval have already been handicapped by probability-weighting our revenues. Over the longer term, we assume a 5% terminal growth rate, which we believe is conservative, given that no generic mAbs have ever been approved and KBIO may expand its mAb pipeline and recognize revenues from therapeutics that are not yet in development. In probability weighting our projected revenue streams from each program, we risk-adjust all sales estimates at 50%, since KB001-A and KB003 have thus far only been examined in Phase I/II trials.

RISKS TO VALUATION

Risks include the potential for disappointing clinical data, regulatory setbacks, and commercial shortfalls. Since KBIO is presently unprofitable and only has products that have completed early-stage clinical trials, any of the possible aforementioned setbacks may impact the stock significantly.

KBIO P&L ($MM)	2011	1Q12	2Q12	3Q12	4Q12	2012	1Q13E	2Q13E	3Q13E	4Q13E	2013E	2014E	2015E	2016E	2017E
Contract revenue (p/w)	20.3	3.0	3.0	0.1	-	6.1	-	-	-	-	-	25.0	-	30.0	42.5
Royalties (p/w)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Product sales (p/w)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue	**20.3**	**3.0**	**3.0**	**0.1**	**-**	**6.1**	**-**	**-**	**-**	**-**	**-**	**25.0**	**-**	**30.0**	**42.5**
COGS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R&D	18.5	3.2	4.2	6.8	10.3	24.5	7.5	8.0	8.5	9.0	33.0	40.0	46.3	53.8	56.4
SG&A	4.0	0.9	0.9	1.6	1.7	5.1	3.5	4.0	4.5	5.0	17.0	20.0	25.0	30.0	35.0
Operating expenses	22.5	4.2	5.1	8.4	12.0	29.6	11.0	12.0	13.0	14.0	50.0	60.0	71.3	83.8	91.4
Operating income	(2.3)	(1.1)	(2.1)	(8.3)	(12.0)	(23.5)	(11.0)	(12.0)	(13.0)	(14.0)	(50.0)	(35.0)	(71.3)	(53.8)	(48.9)
Interest income	0.0	0.0	0.0	0.0	-	0.0	0.1	0.1	0.1	0.0	0.2	0.2	0.4	0.1	0.3
Interest expense	-	-	-	-	0.1	0.1	0.3	0.3	0.3	0.3	1.2	1.2	1.2	0.6	-
Other income (expense)	(0.0)	0.0	0.0	(0.3)	0.4	0.1	-	-	-	-	-	-	-	-	-
EBT	(2.2)	(1.1)	(2.1)	(8.6)	(11.7)	(23.5)	(11.2)	(12.2)	(13.2)	(14.3)	(51.0)	(36.0)	(72.0)	(54.2)	(48.7)
Tax expense (benefit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income (loss)	(2.2)	(1.1)	(2.1)	(8.6)	(11.7)	(23.5)	(11.2)	(12.2)	(13.2)	(14.3)	(51.0)	(36.0)	(72.0)	(54.2)	(48.7)
Diluted EPS	**(1.15)**	**0.57**	**(1.01)**	**(4.05)**	**(5.40)**	**(11.22)**	**(0.67)**	**(0.51)**	**(0.55)**	**(0.59)**	**(2.29)**	**(1.19)**	**(2.38)**	**(1.50)**	**(1.34)**
Basic shares outstanding	1.9	2.0	2.1	2.1	2.2	2.1	16.6	24.1	24.1	24.1	22.3	30.1	30.2	36.2	36.3
Diluted shares outstanding				18.8	20.9		20.0	27.5	27.5	27.5	25.6	33.5	33.6	39.6	39.7

Source: SEC filings and Leerink Swann Estimates

KBIO BS	2011	1Q12	2Q12	3Q12	4Q12	2012	1Q13E	2Q13E	3Q13E	4Q13E	2013E	2014E	2015E	2016E	2017E
Cash + MS	**17.8**		**27.5**	**24.7**	**20.3**	**20.3**	**73.6**	**62.3**	**50.1**	**37.0**	**37.0**	**88.7**	**20.5**	**52.4**	**13.8**
Debt	**-**	**-**	**-**	**4.8**	**9.8**	**9.8**	**9.8**	**9.8**	**9.8**	**9.8**	**9.8**	**9.8**	**9.8**	**-**	**-**
Term Loan (MidCap Financial)	-	-	-	4.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

KBIO CFS	2011	1Q12	2Q12	3Q12	4Q12	2012	1Q13E	2Q13E	3Q13E	4Q13E	2013E	2014E	2015E	2016E	2017E
Change in cash	**(5.6)**	-	6.6	(3.5)	(6.5)	**(3.4)**	53.3	(11.3)	(12.2)	(13.1)	**16.7**	**51.7**	**(68.2)**	**31.8**	**(38.5)**
Cash from operations	**(15.3)**		**(8.7)**	**(6.6)**	**(11.5)**	**(26.8)**	**(10.3)**	**(11.3)**	**(12.2)**	**(13.1)**	**(47.0)**	**(30.0)**	**(64.9)**	**(45.9)**	**(39.5)**
Net Income	(2.2)	(1.1)	(2.1)	(8.6)	(11.7)	(23.5)	(11.2)	(12.2)	(13.2)	(14.3)	(51.0)	(36.0)	(72.0)	(54.2)	(48.7)
Deferred revenue	(14.0)		(5.6)	-	-	(5.6)	-	-	-	-	-	-	-	-	-
SOE	0.2		0.1	0.5	0.2	0.8	0.9	1.0	1.0	1.1	4.0	6.0	7.1	8.4	9.1
	0.7	1.1	(1.2)	1.5	-	1.5	-	-	-	-	-	-	-	-	-
Cash from investing	**9.7**		**(3.0)**	**(0.8)**	**-**	**(3.8)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.0**	**1.0**
CapEx	(0.5)		-	0.2	-	0.2	-	-	-	-	-	-	-	1.0	1.0
Other	10.2	-	(3.0)	(1.0)	-	(4.0)	-	-	-	-	-	-	-	-	-
Cash from financing	**0.0**		**18.3**	**3.9**	**5.0**	**27.2**	**63.6**	**-**	**-**	**-**	**63.6**	**81.7**	**(3.3)**	**76.7**	**-**
Issuance (buyback) shares	-		18.8	-	-	18.8	63.6	-	-	-	63.6	85.0	-	80.0	-
Issuance (repay) debt	-		-	4.8	5.0	9.8	-		-	-	-	(3.3)	(3.3)	(3.3)	-
Other	0.0	-	(0.5)	(0.9)	-	(1.5)	-	-	-	-	-	-	-	-	-

Source: SEC filings and Leerink Swann Estimates

DCF	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	TV
EBITDA	(47)	(30)	(65)	(46)	(40)	(66)	(87)	(48)	8	67	109	178	214	179	208	239	271	136
CapEx	-	-	-	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-
FCF	(47)	(30)	(65)	(47)	(41)	(67)	(88)	(49)	7	66	108	177	213	178	208	239	271	136
Discount periods	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Discount Rate	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*
PV FCF	(47)	(27)	(52)	(33)	(26)	(38)	(44)	(22)	3	24	35	51	55	41	43	44	44	296
NPV	**345**																	

TG	5%
DR	12%
Shares Outstanding 2Q13E	27.5
NPV/Share	12.55

SOTP DCF	NPV	**val/shr**
KB001-A *Pa* VAP	109	$ 4
KB001-A *Pa* CF	101	$ 4
KB003 asthma	136	$ 5
Net Cash	64	$ 2
VALUATION	409	$ 15

Source: Company reports and Leerink Swann LLC estimates

KB001-A for *Pa* VAP	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
U.S. (Pop: 312MM)												
MVP Prevalence	899,685	908,322	917,042	925,845	934,733	943,707	952,766	961,913	971,147	980,470	989,883	999,386
Pa colonization prevalence (30% MVP < 4 days): 2%	5,398	5,450	5,502	5,555	5,608	5,662	5,717	5,771	5,827	5,883	5,939	5,996
Pa colonization prevalence (70% MVP >= 4 days): 7%	44,085	44,508	44,935	45,366	45,802	46,242	46,686	47,134	47,586	48,043	48,504	48,970
Total patients	49,483	49,958	50,437	50,921	51,410	51,904	52,402	52,905	53,413	53,926	54,444	54,966
Mkt Penetration	*2.5%*	*5.0%*	*7.5%*	*10.0%*	*12.5%*	*15.0%*	*17.5%*	*20.0%*	*22.5%*	*25.0%*	*27.5%*	*30.0%*
Patients on drug	1237	2498	3783	5092	6426	7786	9170	10581	12018	13481	14972	16490
Price ('000)	30	30	30	30	30	30	30	30	30	30	30	30
Sales ($MM)	**37**	**75**	**113**	**153**	**193**	**234**	**275**	**317**	**361**	**404**	**449**	**495**
ROW (mainly EU + Japan)												
Sales ($MM)	**9**	**28**	**57**	**115**	**193**	**292**	**344**	**397**	**451**	**506**	**561**	**618**
Worldwide												
Potential sales ($MM)	**46**	**103**	**170**	**267**	**386**	**526**	**619**	**714**	**811**	**910**	**1011**	**1113**
Royalty Rate	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*
Approval prob	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*
Probability adjusted WW Sales ($MM)	**3**	**8**	**13**	**20**	**29**	**39**	**46**	**54**	**61**	**68**	**76**	**83**

Source: Company reports and Leerink Swann LLC estimates

KB001-A for Cystic Fibrosis	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
U.S. (Pop: 312MM)															
CF Prevalence	30,872	31,169	31,468	31,770	32,075	32,383	32,694	33,008	33,325	33,644	33,967	34,294	34,623	34,955	35,291
Infants Pa prevalence (< 2): 25%	413	417	421	425	429	433	437	441	446	450	454	458	463	467	472
Children Pa (2-10): 35%	2,311	2,333	2,356	2,379	2,401	2,424	2,448	2,471	2,495	2,519	2,543	2,567	2,592	2,617	2,642
Adolescents Pa (10-20): 60%	4,953	5,000	5,048	5,097	5,146	5,195	5,245	5,295	5,346	5,398	5,449	5,502	5,554	5,608	5,662
Adults Pa (20-37.4): 80%	11,490	11,601	11,712	11,825	11,938	12,053	12,168	12,285	12,403	12,522	12,642	12,764	12,886	13,010	13,135
Total patients	19,167	19,351	19,537	19,725	19,914	20,105	20,298	20,493	20,690	20,888	21,089	21,291	21,496	21,702	21,910
Mkt Penetration	*0.0%*	*0.0%*	*0.0%*	*2.5%*	*5.0%*	*7.5%*	*10.0%*	*12.5%*	*15.0%*	*17.5%*	*20.0%*	*22.5%*	*25.0%*	*27.5%*	*30.0%*
Patients on drug	-	-	-	794	996	1,508	2,030	2,562	3,103	3,655	4,218	4,791	5,374	5,968	6,573
Price ('000)	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Sales ($MM)	**-**	**-**	**-**	**40**	**50**	**75**	**101**	**128**	**155**	**183**	**211**	**240**	**269**	**298**	**329**
ROW (mainly EU + Japan)															
Sales ($MM)	**-**	**-**	**-**	**10**	**17**	**34**	**56**	**83**	**116**	**155**	**211**	**252**	**309**	**373**	**411**
WW sales	**-**	**-**	**-**	**50**	**67**	**109**	**157**	**211**	**272**	**338**	**422**	**491**	**578**	**671**	**739**

Source: Company reports and Leerink Swann LLC estimates

Scenario 1: SNY Opt-in; WW license w/ US copromote	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
US sales	-	-	-	40	50	75	101	128	155	183	211	240	269	298	329
ROW sales	-	-	-	10	17	34	56	83	116	155	211	252	309	373	411
Royalties on ROW sales (18%)	-	-	-	2	3	6	10	15	21	28	38	45	56	67	74
R&D expenses after opt-in	10	30	30	20	10	5	-	-	-	-	-	-	-	-	-
R&D expenses paid by KBIO (25%)	3	8	8	5	3	1	-	-	-	-	-	-	-	-	-
US Profit share															
COGS	-	-	-	6	7	11	13	15	17	18	21	24	27	30	33
SG&A	-	-	-	25	27	29	32	35	38	41	44	48	52	57	61
US profit	-	-	-	9	15	35	56	78	101	124	146	168	190	212	234
KBIO US Profit share (50%)	-	-	-	4	8	18	28	39	50	62	73	84	95	106	117
Total KBIO Income	**(3)**	**(8)**	**(8)**	**1**	**8**	**23**	**38**	**54**	**71**	**90**	**111**	**129**	**150**	**173**	**191**

Scenario 2: SNY Opt-in; Ex-US only license	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
US sales	-	-	-	26	32	49	66	83	101	119	137	156	175	194	214
ROW sales	-	-	-	7	12	24	39	58	81	109	148	176	216	261	288
Royalties on ROW sales (18%)	-	-	-	1	2	4	7	10	15	20	27	32	39	47	52
R&D expenses after opt-in	10	30	30	20	10	5	-	-	-	-	-	-	-	-	-
R&D expenses paid by KBIO (50%)	5	15	15	10	5	3	-	-	-	-	-	-	-	-	-
US Profit share															
COGS	-	-	-	4	5	7	9	10	11	12	14	16	17	19	21
SG&A	-	-	-	25	27	29	32	35	38	41	44	48	52	57	61
US profit	-	-	-	(3)	0	13	25	39	52	66	79	92	105	118	131
KBIO US Profit share (100%)	-	-	-	(3)	0	13	25	39	52	66	79	92	105	118	131
Total KBIO Income	**(5)**	**(15)**	**(15)**	**(12)**	**(2)**	**14**	**32**	**49**	**67**	**86**	**106**	**124**	**144**	**165**	**183**

Scenario 3: go it alone; no SNY license	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
US sales	-	-	-	20	25	38	51	64	78	91	105	120	134	149	164
ROW sales	-	-	-	5	9	17	28	42	58	78	105	126	155	187	205
Royalties on ROW sales (15%)	-	-	-	1	1	3	4	6	9	12	16	19	23	28	31
R&D expenses after Phase II	10	30	30	20	10	5	-	-	-	-	-	-	-	-	-
R&D expenses paid by KBIO (100%)	10	30	30	20	10	5	-	-	-	-	-	-	-	-	-
US Profit share															
COGS	-	-	-	3	4	5	7	8	9	9	11	12	13	15	16
SG&A	-	-	-	25	27	29	32	35	38	41	44	48	52	57	61
US profit	-	-	-	(8)	(6)	3	12	22	31	41	51	60	69	78	87
KBIO US Profit share (100%)	-	-	-	(8)	(6)	3	12	22	31	41	51	60	69	78	87
Total KBIO Income	**(10)**	**(30)**	**(30)**	**(27)**	**(15)**	**1**	**16**	**28**	**40**	**53**	**66**	**79**	**92**	**106**	**117**

Scenario 4: negative P3 data	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
US sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROW sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Royalties on ROW sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R&D expenses after opt-in	10	30	30	-	-	-	-	-	-	-	-	-	-	-	-
R&D expenses paid by KBIO	10	30	30	-	-	-	-	-	-	-	-	-	-	-	-
US Profit share															
COGS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SG&A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US profit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KBIO US Profit share	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total KBIO Income	**(10)**	**(30)**	**(30)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Source: Company reports and Leerink Swann LLC estimates

KB003 for Asthma	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
US patients with asthma (MM)	27	27	27	28	28	28	28	29	29	29	30
% severe asthma	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
US patients with asthma (1000s)	1,340	1,354	1,367	1,381	1,395	1,409	1,423	1,437	1,451	1,466	1,480
% treated with KB003	0.1%	0.5%	0.9%	1.3%	1.7%	2.1%	2.2%	2.4%	2.5%	2.6%	2.8%
US patients treated with KB003	1,667	6,472	12,568	18,303	23,693	29,731	31,752	33,910	36,214	38,675	41,304
Avg annual sales/patient ($)	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	20,159
US sales	**25**	**100**	**200**	**300**	**400**	**517**	**569**	**626**	**688**	**757**	**833**
approval probability	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*
Probability adjusted US Sales ($MM)	**13**	**50**	**100**	**150**	**200**	**259**	**284**	**313**	**344**	**378**	**416**

Ex-US sales	**13**	**50**	**100**	**150**	**200**	**259**	**284**	**313**	**344**	**378**	**416**
approval probability	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*
Probability adjusted Ex-US Sales ($MM)	6	25	50	75	100	129	142	156	172	189	208
Royalty on Ex-US Sales	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*	*15%*
Probability adjusted Ex-US Royalty ($MM)	**1**	**4**	**8**	**11**	**15**	**19**	**21**	**23**	**26**	**28**	**31**

Source: Company reports and Leerink Swann LLC estimates

Program	Status	Expected Next Step(s)	Screen	Responsible Party
KB001-A (Anti-PcrV of *Pa*)				
Prevention of *Pa* VAP	Phase 1/2 complete with KB001; high dose Phase 1 with KB001-A ongoing	Sanofi to initiate Phase 2b post-CMC development in late 2014	*Pa* colonization	Sanofi
CF Patients Infected with *Pa*	Phase 1/2 complete with KB001; Phase 2 with KB001-A ongoing	Phase 2 data expected by mid-2014	*Pa* infection	KaloBios subject to Sanofi option
KB003 (Anti-GM-CSF)				
Severe Asthma	Phase 1/2 complete with KB002; Phase 2 with KB003 ongoing	Phase 2 data expected by early 2014	Reversibility	KaloBios
KB004 (Anti-EphA3)				
Hematologic Malignancies	Phase 1 ongoing	Initiate expansion phase in third quarter of 2013	EphA3 expression	KaloBios

Source: Company reports and Leerink Swann LLC estimates

Drug	Indication	Event	Timing
KB001A (SNY)	VAP	High dose Phase I ongoing (IV)	
		Phase I data	1H14
		Initiate Phase IIb/III	4Q14
		Phase IIb/III data	4Q16
		EMA/FDA approved	1Q18
		Commercial launch	2H18
KB001A	CF	Phase II ongoing since Jan. 2013 (IV)	
		Phase II data (IV)	**mid-14**
		SNY opt-in	2H14
		Initiate IV-SQ bridging study	2014
		IV-SQ bridging data	2015
		Initiate 2 Phase IIIs (SQ)	4Q15
		Phase III data (SQ)	4Q16
		EU/FDA approved	4Q17
		Commercial launch	1H18
KB003	Asthma	Phase II ongoing since Aug. 2012 (IV)	
		Initiate IV-SQ bridging study	2013
		IV-SQ bridging data	2014
		Phase II data (IV)	**1H14**
		Ex-US partnership	2H14
		Initiate 2 Phase IIIs (SQ)	2H15
		Phase III data (SQ)	2H17
		EU/FDA approved	2H18
		Commercial launch	1H19
KB004	Cancer	Initiate Phase I expansion phase	3Q13

Source: Company reports and Leerink Swann LLC estimates

Disclosures Appendix

Analyst Certification

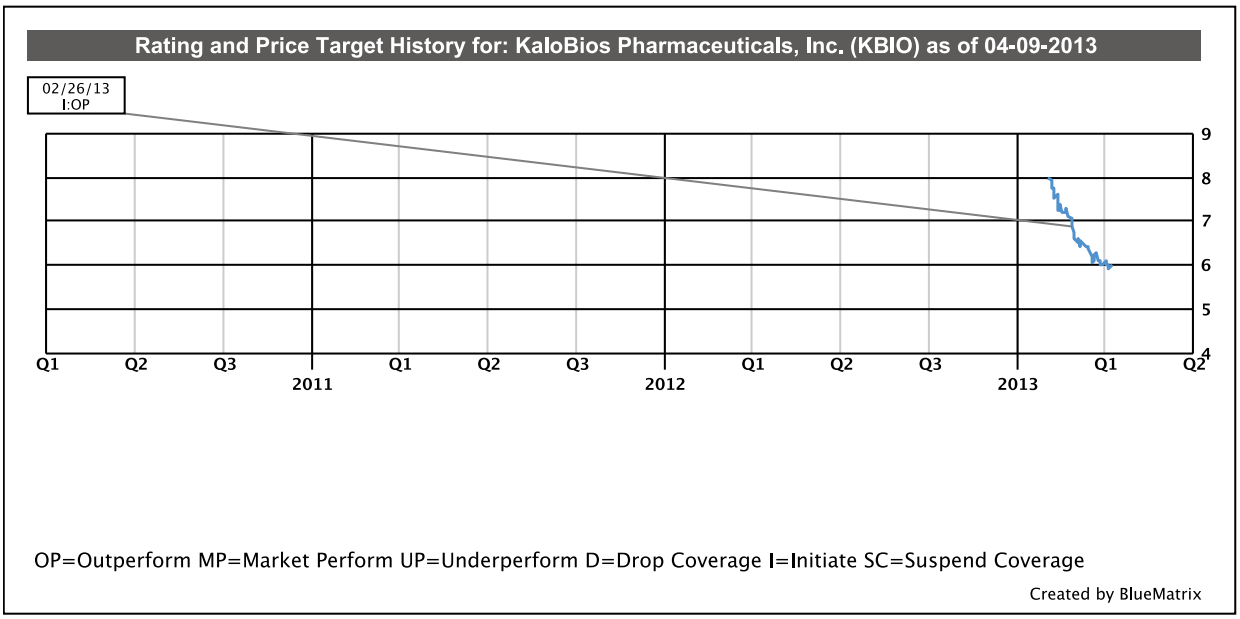
I, Joseph P. Schwartz, certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

Valuation

We estimate a risk-adjusted per share value for KBIO of $15 in 12 months. We use a sum-of-the-parts discounted cash flow (DCF) methodology, attributing ~$4 to KB001-A in Pa VAP, ~$4 to KB001-A in Pa CF, ~$5 to KB003 in asthma, and ~$2 to net cash. We use a 12% WACC as our discount rate since the risks involved with drug development and regulatory approval have already been handicapped by probability-weighting our revenues. Over the longer term, we assume a 5% terminal growth rate, which we believe is conservative, given that no generic mAbs have ever been approved and KBIO may expand its mAb pipeline and recognize revenues from therapeutics that are not yet in development. In probability weighting our projected revenue streams from each program, we risk-adjust all sales estimates at 50%, since KB001-A and KB003 have thus far only been examined in Phase I/II trials.

Risks to Valuation

Risks include the potential for disappointing clinical data, regulatory setbacks, and commercial shortfalls. Since KBIO is presently unprofitable and only has products that have completed early-stage clinical trials, any of the possible aforementioned setbacks may impact the stock significantly.



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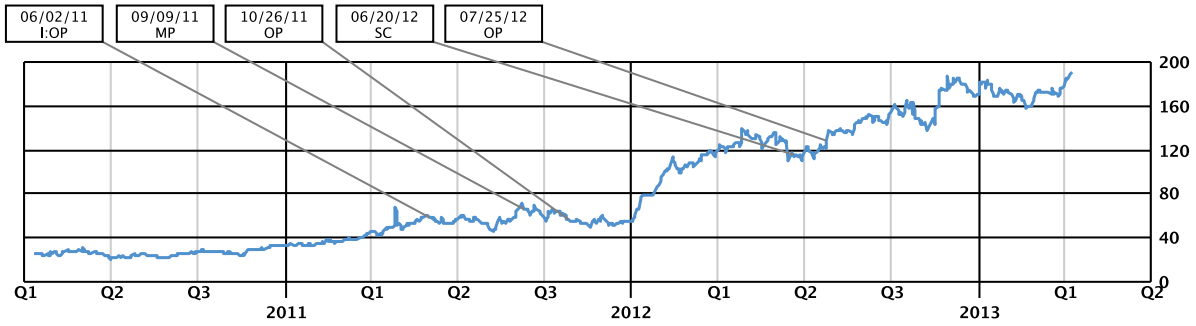
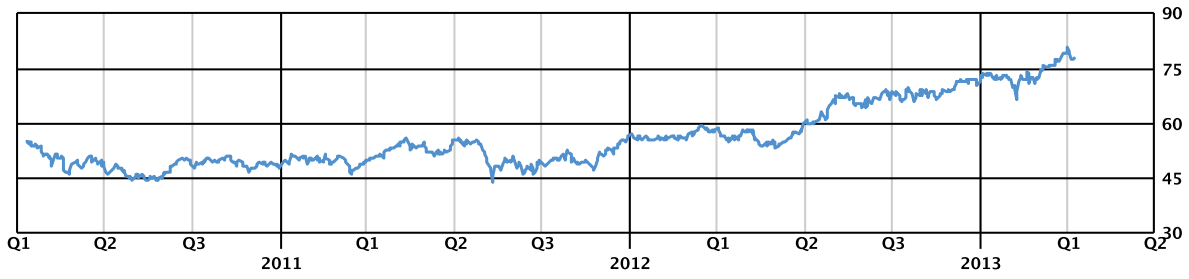
Rating and Price Target History for: Regeneron Pharmaceuticals, Inc. (REGN) as of 04-09-2013



OP=Outperform MP=Market Perform UP=Underperform D=Drop Coverage I=Initiate SC=Suspend Coverage

Created by BlueMatrix

Rating and Price Target History for: Sanofi (SAN FP) as of 04-09-2013



Leerink Swann initiated coverage of SAN FP with an Outperform rating on February 26, 2010.

OP=Outperform MP=Market Perform UP=Underperform D=Drop Coverage I=Initiate SC=Suspend Coverage

Created by BlueMatrix

Distribution of Ratings/Investment Banking Services (IB) as of 12/31/12				
			IB Serv./Past 12 Mos.	
Rating	Count	Percent	Count	Percent
BUY [OP]	105	61.76	32	30.48
HOLD [MP]	64	37.65	2	3.12
SELL [UP]	1	0.59	0	0.00

Explanation of Ratings

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

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

Underperform (Sell): 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.

From October 1, 2006 through January 8, 2009, the relevant benchmarks for the above definitions were the Russell 2000® 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.

Definitions of Leerink Swann Ratings prior to October 1, 2006 are shown below:

Outperform (Buy): We expect this stock to outperform its benchmark by more than 10 percentage points over the next 12 months.

Market Perform (Hold/Neutral): We expect this stock to perform within a range of plus or minus 10 percentage points of its benchmark over the next 12 months.

Underperform (Sell): We expect this stock to underperform its benchmark by more than 10 percentage points over the next 12 months.

For the purposes of these definitions, the relevant benchmark were the Russell 2000® Health Care Index for issuers with a market capitalization of less than $2 billion and the S&P 500® Index for issuers with a market capitalization over $2 billion.

Important Disclosures

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Leerink Swann Consulting LLC, an affiliate of Leerink Swann LLC, is a provider of evidence-based strategy and consulting to the healthcare industry.

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

Leerink Swann LLC makes a market in KaloBios Pharmaceuticals, Inc. and Regeneron Pharmaceuticals, Inc.

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

Leerink Swann LLC has acted as the manager for a public offering of KaloBios Pharmaceuticals, Inc. in the past 12 months.

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