OUTPERFORM

Reason for report: **EARNINGS**

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HEALTHCARE EQUITY RESEARCH

(Symbol:KBIO)

S&P 600 Health Care Index: 1.233.73 Price: \$4.19 Price Target: \$15.00 Methodology: Sum of the parts DCF 52 Week High: \$8.25 52 Week Low: \$3.69 Shares Outstanding (mil): 36.3 Market Capitalization (mil): \$152.1 Book Value/Share: \$0.00 Cash Per Share: \$177 Dividend (ann): \$0.00 Dividend Yield: 0.0%

Cash Per Share: net cash

Key Stats:



KALOBIOS PHARMACEUTICALS, INC.

3Q13 Recap: Multiple Key Readouts in Next 12 Months

- Bottom Line: This morning KBIO announced 3Q13 EPS of (\$0.47) which beat our estimate of (\$0.55). We are updating our model to reflect 3Q13 results and continue to view KBIO shares as undervalued ahead of data from the company's cancer, asthma, and cystic fibrosis programs which are all expected in the next 12 months. We are updating our model to reflect 3Q13 results and KBIO's updated guidance on the timing of upcoming data readouts. Reiterate Outperform on KBIO and \$15 price target in 12 months.
- KB003 severe asthma data expected in 1Q14. KB003 is an enhanced version of KB002, a mAb with specificity to granulocyte macrophage colony stimulating factor (GMC-SF). As GM-CSF is a "master" immunological of the inflammatory cascades involved in the pathogenesis of both allergic and non-allergic asthma, we believe that KB003 presents a uniquely promising clinical profile when compared to other antibodies in development. We anticipate that positive Phase II data could render this program very appealing to potential partners. Phase I data showed an impressive KB003 effect on Forced expiratory volume in 1 second (FEV1) that was even more compelling in patients deemed "reversible" on a bronchodilator, a group that improved 13% on FEV1 at from day 1 to day 42 versus just 3% for their placebo-treated counterparts during this timeframe.
- KB004 Phase I hematological malignancies data to be presented at American Society of Hematology (ASH) on December 7th, and Phase II studies in Acute Myeloid Leukemia (AML) and Myelodysplastic Syndrome (MDS) will also be initiated before YE13. In Phase I, a single complete response was generated in an EphA3 positive late stage AML patient at just a 20mg KB004 dose, and doses as high as 250mg will be examined in Phase II. Approximately 75% and 70% of AML and MDS patients are EphA3 positive, and only patients expressing this antigen on at least 10% of nucleated cells will be included in the upcoming trials.
- 90 of 180 patients are now enrolled in KBIO's KB001-A cystic fibrosis (CF) Phase II, which is expected to produce top-line data by YE14. SNY (OP) holds the rights to opt-in to KBIO's CF program and has already licensed KB001-A rights for Pseudomonas Aeruginosa in ventilator-assisted pneumonia (Pa. VAP). Unlike standard-of-care CF antibiotics such as NVS's (OP) Tobi, KB001-A targets the type-III secretion system of Pa bacteria, an area that can incur both inflammation and alveoli apoptosis. By hitting this target, KB001-A may be able to produce an anti-infective effect without precipitating bacterial resistance.

1 Y	ear Price His	tory/Ave. Daily	y Vol. (mil) for KB I O	
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2013	Q1	Q2		Q3	201
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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 - New	0.0A	0.0A	0.0	0.0	0.0	(\$0.55)A	(\$0.49)A	(\$0.47)	(\$0.36)	(\$1.79)	NM
2013E - Old	0.0A	0.0A	0.0	0.0	0.0	(\$0.55)A	(\$0.49)A	(\$0.55)	(\$0.59)	(\$2.17)	NM
2014E - New	0.0	\$12.5	0.0	0.0	\$12.5	(\$0.35)	(\$0.02)	(\$0.44)	(\$0.41)	(\$1.11)	NM
2014E - Old					\$25.0					(\$1.19)	NM

Source: Company Information and Leerink Swann LLC Research

Revenues in \$MM.

GAAP EPS; IPO 1/10/13.



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 late 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 150patient 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 its 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 ~\$3 to KB001-A in Pa VAP, ~\$3 to KB001-A in Pa CF, ~\$7 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	2012	1Q13	2Q13	3Q13	4Q13E	2013E	1Q14E	2Q14E	3Q14E	4Q14E	2014E
Contract revenue (p/w)	20.3	6.1	0.0	0.0	0.0	-	0.0	-	12.5	-	-	12.5
Royalties (p/w)	-	-	-	-	-	-	-	-	-	-	-	-
Product sales (p/w)	-	-	-	-	-	-	-	-	-	-	-	-
Revenue	20.3	6.1	0.0	0.0	0.0	-	0.0	-	12.5	-	-	12.5
COGS	-	-	-	-	-	-	-	-	-	-	-	-
R&D	18.5	24.5	6.3	9.6	9.0	9.0	34.0	9.0	10.0	11.0	12.0	42.0
SG&A	4.0	5.1	2.0	1.9	2.1	2.5	8.6	2.5	3.0	3.5	4.0	13.0
Operating expenses	22.5	29.6	8.3	11.6	11.1	11.5	42.5	11.5	13.0	14.5	16.0	55.0
Operating income	(2.3)	(23.5)	(8.3)	(11.6)	(11.1)	(11.5)	(42.5)	(11.5)	(0.5)	(14.5)	(16.0)	(42.5)
Interest income	0.0	0.0	0.0	-	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.4
Interest expense	-	0.1	0.3	0.2	0.3	0.3	1.1	0.3	0.3	0.3	0.2	1.1
Other income (expense)	(0.0)	0.1	-	(0.0)	(0.0)	-	(0.0)	-	-	-	-	-
EBT	(2.2)	(23.5)	(8.6)	(11.8)	(11.3)	(11.7)	(43.4)	(11.7)	(0.7)	(14.7)	(16.1)	(43.2)
Tax expense (benefit)	-	-	-	-	-	-	-	-	-	-	-	-
Net income (loss)	(2.2)	(23.5)	(8.6)	(11.8)	(11.3)	(11.7)	(43.4)	(11.7)	(0.7)	(14.7)	(16.1)	(43.2)
Diluted EPS	(1.15)	(11.22)	(0.55)	(0.49)	(0.47)	(0.36)	(1.79)	(0.35)	(0.02)	(0.44)	(0.41)	(1.11)
Basic shares outstanding	1.9	2.1	15.6	24.2	24.3	32.9	24.2	33.0	33.2	33.4	39.4	38.9
Diluted shares outstanding			19.0	27.6	27.7	36.3	27.6	36.3	36.5	36.7	42.7	42.3

Source: SEC filings and Leerink Swann Estimates

KBIO BS	2011	2012	1Q13	2Q13	3Q13	4Q13E	2013E	1Q14E	2Q14E	3Q14E	4Q14E	2014E
Cash + MS	17.8	20.3	76.9	63.7	52.8	74.0	72.1	62.6	71.9	48.6	141.5	141.5
Debt	-	9.8	9.9	9.9	9.9	9.9	9.9	9.9	9.1	8.3	7.4	7.4
Term Loan (MidCap Financial)	-	9.8	9.9	9.9	9.9	9.9	9.9	9.9	9.1	8.3	7.4	7.4
Other	-	-	-	-	-	-	-	-	-	-	-	-

KBIO CFS	2011	2012	1Q13E	2Q13	3Q13	4Q13E	2013E	1Q14E	2Q14E	3Q14E	4Q14E	2014E
Change in cash	(5.6)	(3.4)	55.2	(13.2)	(10.9)	21.2	51.8	(11.4)	(0.2)	(14.0)	69.6	44.0
Cash from operations	(15.3)	(26.8)	(8.4)	(11.4)	(10.9)	(10.8)	(41.5)	(10.5)	0.6	(13.2)	(14.5)	(37.7)
Net Income	(2.2)	(23.5)	(8.6)	(11.8)	(11.3)	(11.7)	(43.4)	(11.7)	(0.7)	(14.7)	(16.1)	(43.2)
Deferred revenue	(14.0)	(5.6)	-	-	-	-	-	-	-	-	-	-
SOE	0.2	0.8	0.2	0.4	0.5	0.9	1.9	1.2	1.3	1.5	1.6	5.5
	0.7	1.5	-	-	-	-	-					-
Cash from investing	9.7	(3.8)	-	(2.3)	-	-	(2.3)	-	-	-	-	-
CapEx	(0.5)	0.2	-	-	-	-	-	-	-	-	-	-
Other	10.2	(4.0)	-	(2.3)	-	-	(2.3)	-	-	-	-	-
Cash from financing	0.0	27.2	63.6	-	-	32.0	95.6	(0.8)	(0.8)	(0.8)	84.2	81.7
Issuance (buyback) shares	-	18.8	63.6	-	-	32.0	95.6	-	-	-	85.0	85.0
Issuance (repay) debt	-	9.8	-		-	-	-	(0.8)	(0.8)	(0.8)	(0.8)	(3.3)
Other	0.0	(1.5)	-	-	-	-	-	-	-	-	-	-

Source: SEC filings and Leerink Swann Estimates

KBIO Product Sales (P/W)	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
KB001A (CF) profit share	-	-	-	-	-	-	-	4.1	11.3	18.9	26.7	34.8	44.0	54.3	64.5	75.2	86.6	95.6
KB003 Asthma US Sales	-	-	-	-	-	-	-	12.5	50.0	100.0	150.0	200.0	258.5	284.4	312.8	344.1	378.5	416.3
Total product sales	-	-	-	-	-	-	-	16.6	61.3	118.9	176.7	234.8	302.5	338.7	377.3	419.3	465.0	511.9
Royalties (P/W)	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
KB001A VAP (Sanofi)	-	-	-	-	-	-	3.5	7.7	12.8	20.1	28.9	39.4	46.4	53.6	60.8	68.2	75.8	83.5
KB003 Asthma (ex-US partner)	-	-	-	-	-	-	-	0.9	3.8	7.5	11.3	15.0	19.4	21.3	23.5	25.8	28.4	31.2
Total royalties	-	-	-	-	-	-	3.5	8.7	16.5	27.6	40.2	54.4	65.8	74.9	84.3	94.1	104.2	114.7
Milestone Payments (P/W)	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
KB001A (VAP)	-	-	-	5.0	-	50.0	40.0	20.0	20.0	20.0	20.0							
probability	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
KB001A (CF)	-	-		20.0	10.0	10.0	-	-	-	-	-							
probability	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
KB003 (Asthma)			25.0	-	25.0	25.0	20.0	20.0	20.0	20.0	20.0							
probability	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total milestone payments	-	-	12.5	12.5	17.5	42.5	30.0	20.0	20.0	20.0	20.0	-	-	-	-	-	-	-

33.5

12.5

12.5

17.5

97.8

166.4

236.9

289.2

368.3

413.6

461.6

513.4

569.2

626.6

Source: Leerink Swann Estimates

Total Revenue (P/W)

DCF	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	TV
EBITDA	(42)	(38)	(45)	(53)	(36)	(68)	(88)	(50)	5	63	103	170	205	178	206	238	270	135
CapEx	-	-	-	1	1	1	1	1	1	1	1	1	1	1	-	-	-	
FCF	(42)	(38)	(45)	(54)	(37)	(69)	(89)	(51)	4	62	102	169	204	177	206	238	270	135
Discount periods	-	0.25	1.25	2.25	3.25	4.25	5.25	6.25	7.25	8.25	9.25	10.25	11.25	12.25	13.25	14.25	15.25	16.25
Discount Rate	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
PV FCF	(10)	(37)	(40)	(42)	(26)	(43)	(50)	(26)	2	25	37	55	60	47	49	50	51	371
NPV	474																	

TG	5%
DR	12%
Shares Outstanding YE13	36.3
NPV/Share	13.06

SOTP DCF	NPV	val,	/shr
KB001-A <i>Pa</i> VAP	114	\$	3
KB001-A <i>Pa</i> CF	100	\$	3
KB003 asthma	259	\$	7
Net Cash	64	\$	2
VALUATION	538	\$	15

Source: Company reports and Leerink Swann LLC estimates

1H14 1Q15 4Q16 1Q18 2H18
1Q15 4Q16 1Q18
4Q16 1Q18
1Q18
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4Q13
2Q15

Source: Company reports and Leerink Swann LLC estimates



Disclosures Appendix Analyst Certification

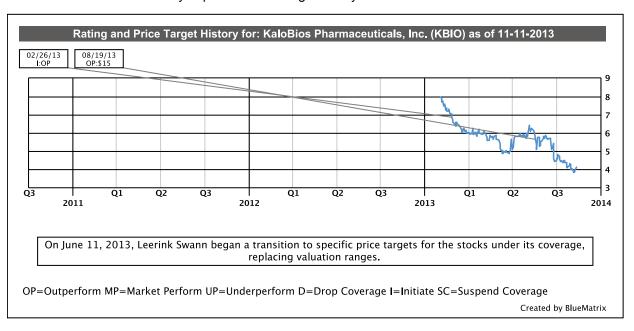
I, Joseph P. Schwartz, certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

Valuation

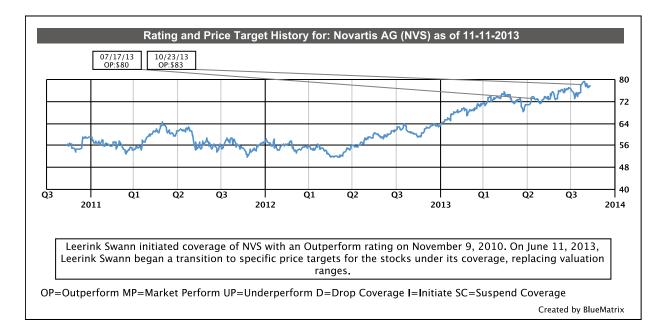
We estimate a risk-adjusted per share value for KBIO of \$15 in 12 months. We use a sum-of-the-parts discounted cash flow (DCF) methodology, attributing ~\$3 to KB001-A in Pa VAP, ~\$3 to KB001-A in Pa CF, ~\$7 to KB003 in asthma, and ~\$2 to net cash. We use a 12% WACC as our discount rate since the 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.

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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.









	Distribution of Ratings/l	nvestment Bankin	g Services (IB) a		rv./Past 12 Mos.
Rating		Count	Percent	Count	Percent
BUY [OP]		111	64.90	27	24.00
HOLD [MP]		60	35.10	0	0.00
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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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.

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

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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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