

## Healthcare: Pharmaceuticals

# Kindred Biosciences, Inc. | KIN - \$15.12 - NYSE | *Neutral*

### Quarterly Update

Estimates Changed

#### Stock Data

52-Week Low - High	\$8.75 - \$26.99
Shares Out. (mil)	19.71
Mkt. Cap.(mil)	\$298.0
3-Mo. Avg. Vol.	84,217
12-Mo.Price Target	\$17.00
Cash (mil)	\$112.4
Tot. Debt (mil)	\$0.0

#### EPS \$

Yr Dec	—2013—	—2014E—		—2015E—	
		Curr	Prev	Curr	Prev
1Q	(0.07)A	(0.38)A	(0.38)A	-	-
2Q	(0.13)A	(0.42)A	(0.37)E	-	-
3Q	(0.26)A	(0.48)E	(0.42)E	-	-
4Q	(0.40)A	(0.50)E	(0.44)E	-	-
YEAR	(1.13)A	(1.79)E	(1.62)E	(1.80)E	(1.30)E
P/E	NM	NM	NM	NM	NM

#### Revenue (\$ millions)

Yr Dec	—2013—	—2014E—	
		Curr	Curr
1Q	0.0A	0.0A	-
2Q	0.0A	0.0A	-
3Q	0.0A	0.0E	-
4Q	0.0A	0.0E	-
YEAR	0.0A	0.0E	0.5E

**KIN One-Year Price and Volume History**



## KIN: 2Q14 Recap - Clinical Catalyst Coming Next Week

KIN reported a 2Q14 EPS loss of \$0.42 versus our target of a loss of \$0.37. The greater loss largely reflected higher spending levels to expedite investment. The company has important clinical canine data next week for CereKin. We expect it to be positive, but remain on the sidelines due to concerns on revenues. We maintain our Neutral rating with a \$17/share price target.

- **2Q recap - Ramping up spending.** Quarterly results basically just track the rate of spending at KIN at this point in time. Higher SG&A negatively impacted EPS by ~\$0.05 and R&D was in-line. Net, the 2Q14 EPS loss of \$0.42 was greater than our targeted \$0.37 EPS loss. The company appears to be ramping up investment rapidly as the company is "all-in" on animal health.
- **Takeaway #1 - CereKin data next week (Should be good).** The company targets clinical data for CereKin to treat canine osteoarthritis and inflammation next week (August 18-22). It's dog data with an established molecule so we expect it to be good (75%+ probability). However, it will require a p value <0.025 due to two doses being tested versus placebo, which does add a little risk. The stock likely trades up on positive data, but we believe that the real risk is in marketing animal health drugs - and achieving revenue forecasts. Again, we expect this data to be positive.
- **Takeaway #2 - Pipeline remains active.** The rest of the pipeline remains active with positives (new molecules at the PK level for cats and horses) and negatives (KIND-007 program placed on hold). Overall, we viewed this as expected with the key events still on target including AtoKin/SentiKin clinical data in 4Q14.
- **Model changes.** We upped spending levels based on the company's outlook, which modestly reduced our EPS targets. This did not impact our price target.
- **Maintain Neutral rating.** Kindred Bio is a well run company that appears to be ramping up for a land grab in the animal health development space by rapidly increasing spending levels. However, we remain concerned that product revenues may fail to match expectations. Price target remains \$17/share.

## VALUATION

We value KIN shares at \$17. Our price target of \$17/share is arrived at by applying a 40X multiple to forecasted 2018 EPS of \$0.60, and discounting back three years by 30% per year (we also add \$6/share to reflect the cash balance). We support this multiple by evaluating comparable animal health companies (limited sample size). Our choice of 40X reflects an earlier stage of the EPS growth trajectory curve. We note that our price target falls slightly outside of ROTH's stated rating system for a Neutral rated stock.

Impediments to our price target include clinical development risk, regulatory risk, forecasting risk and sentiment risk.

## RISKS

In addition to the risks inherent in developing, manufacturing, and distributing animal health drugs, key investment risks for Kindred Bio include:

- **Clinical development risk** – Kindred Bio will need to demonstrate both efficacy and safety for its current product pipeline. Failure of pending clinical data to match expectations could have a material adverse impact on company shares.
- **Regulatory risk** – Kindred Bio advances its pipeline through the FDA (CVM), USDA (biologics), and EMA. Failure of the company to navigate these channels in line with investor expectations could have a material adverse impact on company shares.
- **Forecasting risk** – We forecast substantial revenues for multiple products within Kindred Bio's pipeline. Failure of actual revenues to match our forecasts could have a material adverse impact on company shares.
- **Sentiment risk** – Animal health companies are currently receiving heightened investor interest, and profits remain multiple years away. A change in investor sentiment away from animal health could have a material adverse impact on company shares.

## COMPANY DESCRIPTION

Kindred Biosciences, Inc., a clinical-stage biopharmaceutical company, focuses on the development of therapies for pets. The company provides small molecules and biologics that are in various stages of development for a range of indications in dogs, cats, and horses. Its products include CereKin, an oral interleukin-1 beta inhibitor for osteoarthritis pain and inflammation in dogs; AtoKin, a beef-flavored formulation of fexofenadine for atopic dermatitis in dogs; KIND-009, an oral analgesic formulation of flupirtine to manage post-operative pain in dogs and cats; KIND-007, an inhibitor of Bruton's tyrosine kinase; and KIND-006, an agent for gastrointestinal diseases in cats. The company's products also comprise KIND-502, a biologic for allergic and immune-mediated diseases; KIND-506, a biologic for inflammatory and autoimmune diseases; KIND-507, a biologic for immune-mediated diseases; KIND-504, a cancer vaccine; and KIND-501, an antiangiogenic biologic for cancer in dogs. Kindred Biosciences, Inc. was founded in 2012 and is headquartered in Burlingame, California.

Kindred Biosciences, Inc.																	
Earnings model	FY 2012 A	1Q13A	2Q13A	3Q13A	4Q13A	FY 2013 A	1Q14A	2Q14A	3Q14E	4Q14E	FY 2014 E	FY 2015 E	FY 2016 E	FY 2017 E	FY 2018 E	FY 2019 E	FY 2020 E
<b>Revenues:</b>																	
CereKin												484,602	12,849,108	33,187,508	51,379,675	63,967,375	69,918,903
AtoKin												-	3,849,995	13,429,295	23,447,784	34,405,808	39,154,586
SentiKin												-	1,787,498	6,235,030	10,886,471	15,974,125	18,178,915
Other indications (Cerekin/AtoKin/Sentiken)														10,000,000	20,000,000	25,000,000	30,000,000
Other small molecule drugs														15,000,000	25,000,000	35,000,000	45,000,000
Biologics														15,000,000	25,000,000	25,000,000	50,000,000
Distributor discount												(24,230)	(924,330)	(3,892,592)	(7,285,697)	(9,967,365)	(12,612,620)
Percentage via distributor												25%	25%	25%	25%	25%	25%
<b>Total Revenues</b>	-	-	-	-	-	-	-	-	-	-	-	<b>460,372</b>	<b>17,562,271</b>	<b>73,959,241</b>	<b>138,428,234</b>	<b>189,379,943</b>	<b>239,639,784</b>
COGS	-	-	-	-	-	-	-	-	-	-	-	460,372	10,537,363	36,979,621	69,214,117	90,902,372	109,275,741
Gross Profits	-	-	-	-	-	-	-	-	-	-	-	-	7,024,908	36,979,621	69,214,117	98,477,570	130,364,042
Gross margins												0%	40%	50%	50%	52%	54%
Research and Development	74,772	141,000	300,000	953,756	1,747,674	3,142,430	4,498,000	5,639,000	7,000,000	7,500,000	24,637,000	25,000,000	26,000,000	27,000,000	28,000,000	29,000,000	30,000,000
General and Administrative	44,864	83,000	96,000	259,153	639,339	1,077,492	1,679,000	2,499,000	2,500,000	2,500,000	9,178,000	10,000,000	10,500,000	11,000,000	11,500,000	12,000,000	12,500,000
Selling expenses												2,250,000	5,200,000	7,775,000	11,700,000	14,975,000	17,150,000
Loss from operations	(119,636)	(224,000)	(396,000)	(1,212,909)	(2,387,013)	(4,219,922)	(6,177,000)	(8,138,000)	(9,500,000)	(10,000,000)	(33,815,000)	(37,250,000)	(34,675,092)	(8,795,379)	18,014,117	42,502,570	70,714,042
Interest/other income	25	-	-	2,614	3,310	5,924	9,000	14,000	50,000	50,750	123,750	52,500	52,500	100,000	150,000	200,000	300,000
Pretax income (loss)	(119,611)	(224,000)	(396,000)	(1,210,295)	(2,383,703)	(4,213,998)	(6,168,000)	(8,124,000)	(9,450,000)	(9,949,250)	(33,691,250)	(37,197,500)	(34,622,592)	(8,695,379)	18,164,117	42,702,570	71,014,042
Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,542,976	8,540,514	20,381,030
Rate													0%	0%	14%	20%	29%
Net income (loss)	(119,611)	(224,000)	(396,000)	(1,210,295)	(2,383,703)	(4,213,998)	(6,168,000)	(8,124,000)	(9,450,000)	(9,949,250)	(33,691,250)	(37,197,500)	(34,622,592)	(8,695,379)	15,621,140	34,162,056	50,633,012
<b>EPS</b>	<b>(0.04)</b>	<b>(0.07)</b>	<b>(0.13)</b>	<b>(0.26)</b>	<b>(0.40)</b>	<b>(1.13)</b>	<b>(0.38)</b>	<b>(0.42)</b>	<b>(0.48)</b>	<b>(0.50)</b>	<b>(1.79)</b>	<b>(1.80)</b>	<b>(1.60)</b>	<b>(0.35)</b>	<b>0.60</b>	<b>1.15</b>	<b>1.65</b>
Shares outstanding	2,718,082	3,000,000	3,000,000	4,713,320	5,899,059	3,731,929	16,222,000	19,426,000	19,676,000	19,926,000	18,812,500	20,676,000	21,676,000	25,176,000	26,176,000	29,676,000	30,676,000

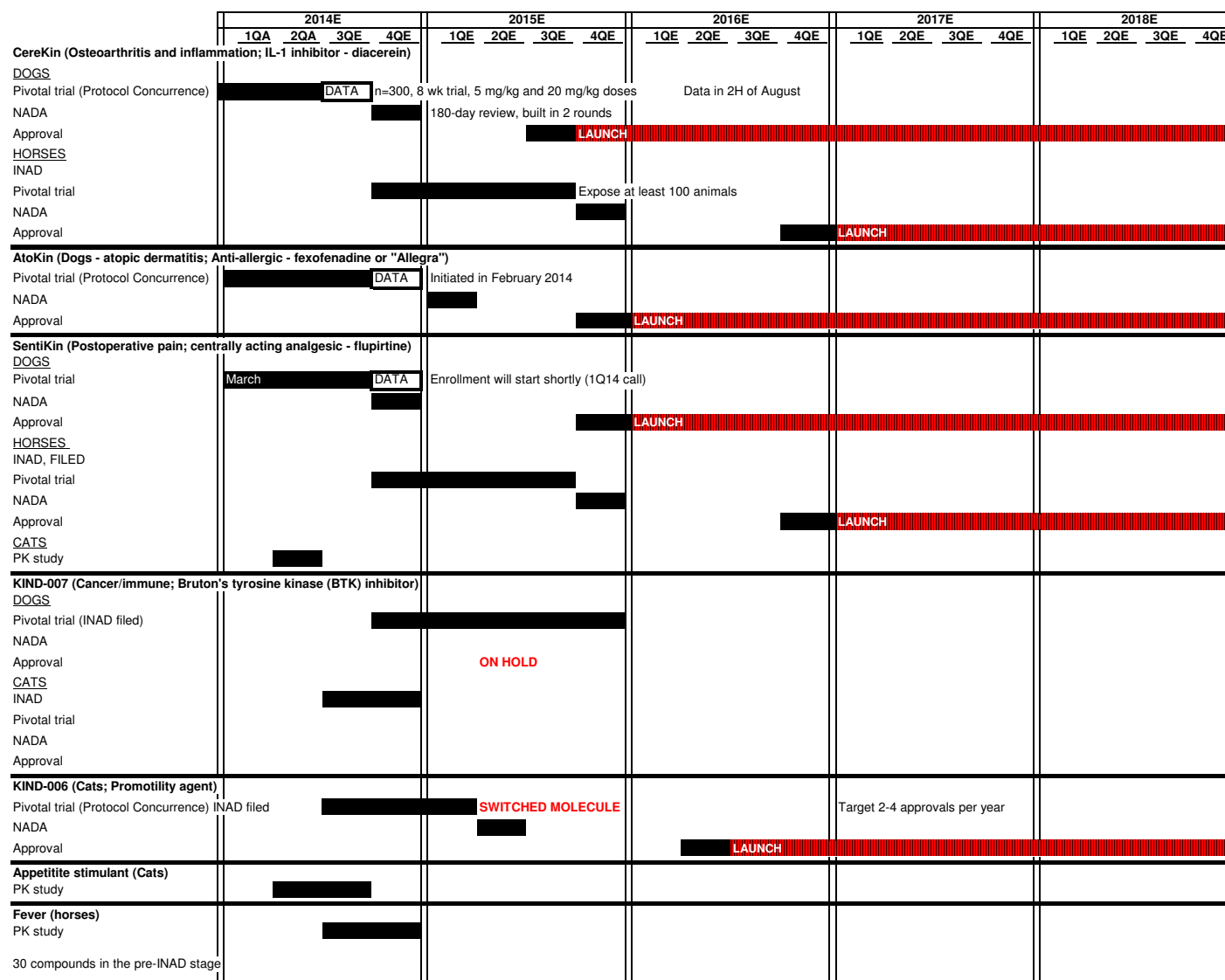
Source: ROTH Capital Partners and Company SEC filings

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## Kindred Biosciences, Inc. Small Molecule Pipeline



Source: ROTH Capital Partners Forecasts

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## Kindred Biosciences, Inc. Biologic Pipeline

	2015E				2016E				2017E				2018E			
	<u>1QE</u>	<u>2QE</u>	<u>3QE</u>	<u>4QE</u>	<u>1QE</u>	<u>2QE</u>	<u>3QE</u>	<u>4QE</u>	<u>1QE</u>	<u>2QE</u>	<u>3QE</u>	<u>4QE</u>	<u>1QE</u>	<u>2QE</u>	<u>3QE</u>	<u>4QE</u>
KIND-502 (Dogs, allergic diseases; Anti IgE antibody - Xolair)																
Manufacturing validation																
Pivotal study																
NADA																
Approval																
KIND-506 (Dogs, inflammatory diseases; TNFR-Ig fusion protein - Enbrel)																
Manufacturing validation																
Pivotal study																
NADA																
Approval																
KIND-507 (Dogs, autoimmune disease; CLTA4-Ig fusion protein - Orencia)																
Manufacturing validation																
Pivotal study																
NADA																
Approval																
KIND-504 (Dogs; Cancer vaccine)																
Manufacturing validation																
Pivotal study																
NADA																
Approval																
KIND-501 (Dogs, Cancer; Anti-VEGF fusion protein)																
Manufacturing validation																
Pivotal study																
NADA																
Approval																
Erythropoietin (Cats)																
In development																
Estimate - 3-5 years and \$3-\$5 million from INAD to approval																

Source: ROTH Capital Partners Forecasts

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Kindred Biosciences, Inc. CereKin model							RISK ADJUSTED AT		75%
Quarter	Canine NSAID market	Quarterly growth rate	MARKET SHARE			CereKin	CereKin revenues		
			Rimadyl	Carprofen	Other		Quarterly	Annual	
1Q14	\$56,250,000		40%	20%	40%	0%		\$0	
2Q14	\$57,375,000	2.0%	39%	21%	40%	0%		\$0	
3Q14	\$58,522,500	2.0%	38%	22%	40%	0%		\$0	
4Q14	\$59,692,950	2.0%	37%	23%	40%	0%		\$0	\$0
1Q15	\$60,886,809	2.0%	36%	24%	40%	0%		\$0	
2Q15	\$62,104,545	2.0%	35%	25%	40%	0%		\$0	
3Q15	\$63,346,636	2.0%	34%	26%	40%	0%		\$0	
4Q15	\$64,613,569	2.0%	33%	27%	39%	1%	\$484,602		\$484,602
1Q16	\$65,905,840	2.0%	32%	28%	38%	3%	\$1,482,881		
2Q16	\$67,223,957	2.0%	31%	28%	36%	5%	\$2,520,898		
3Q16	\$68,568,436	2.0%	30%	29%	35%	7%	\$3,599,843		
4Q16	\$69,939,805	2.0%	29%	29%	32%	10%	\$5,245,485		\$12,849,108
1Q17	\$71,338,601	2.0%	28%	30%	31%	12%	\$6,420,474		
2Q17	\$72,765,373	2.0%	27%	30%	29%	14%	\$7,640,364		
3Q17	\$74,220,680	2.0%	26%	31%	28%	16%	\$8,906,482		
4Q17	\$75,705,094	2.0%	25%	31%	26%	18%	\$10,220,188		\$33,187,508
1Q18	\$77,219,196	2.0%	24%	32%	25%	20%	\$11,582,879		
2Q18	\$78,763,580	2.0%	23%	32%	24%	21%	\$12,405,264		
3Q18	\$80,338,851	2.0%	22%	33%	24%	22%	\$13,255,910		
4Q18	\$81,945,628	2.0%	21%	33%	23%	23%	\$14,135,621		\$51,379,675
1Q19	\$83,584,541	2.0%	20%	34%	23%	24%	\$15,045,217		
2Q19	\$85,256,232	2.0%	19%	34%	22%	25%	\$15,985,543		
3Q19	\$86,961,356	2.0%	18%	35%	23%	25%	\$16,305,254		
4Q19	\$88,700,584	2.0%	17%	35%	23%	25%	\$16,631,359		\$63,967,375
1Q20	\$90,474,595	2.0%	16%	36%	24%	25%	\$16,963,987		
2Q20	\$92,284,087	2.0%	15%	36%	24%	25%	\$17,303,266		
3Q20	\$94,129,769	2.0%	14%	37%	25%	25%	\$17,649,332		
4Q20	\$96,012,364	2.0%	13%	37%	25%	25%	\$18,002,318		\$69,918,903

Source: ROTH Capital Partners estimates

Kindred Biosciences, Inc. AtoKin model						
Quarter	Market size	Quarterly growth rate	MARKET SHARE		RISK ADJUSTED A	
			Other	AtoKin	CereKin revenues Quarterly	Annual
1Q14	28,125,000		100%	0%	-	
2Q14	28,687,500	2.0%	100%	0%	-	
3Q14	29,261,250	2.0%	100%	0%	-	
4Q14	29,846,475	2.0%	100%	0%	-	-
1Q15	30,443,405	2.0%	100%	0%	-	
2Q15	31,052,273	2.0%	100%	0%	-	
3Q15	31,673,318	2.0%	100%	0%	-	
4Q15	32,306,784	2.0%	100%	0%	-	-
1Q16	32,952,920	2.0%	99%	1%	230,670	
2Q16	33,611,978	2.0%	97%	3%	705,852	
3Q16	34,284,218	2.0%	95%	5%	1,199,948	
4Q16	34,969,902	2.0%	93%	7%	1,713,525	3,849,995
1Q17	35,669,300	2.0%	90%	10%	2,496,851	
2Q17	36,382,686	2.0%	88%	12%	3,056,146	
3Q17	37,110,340	2.0%	86%	14%	3,636,813	
4Q17	37,852,547	2.0%	84%	16%	4,239,485	13,429,295
1Q18	38,609,598	2.0%	82%	18%	4,864,809	
2Q18	39,381,790	2.0%	80%	20%	5,513,451	
3Q18	40,169,426	2.0%	78%	22%	6,186,092	
4Q18	40,972,814	2.0%	76%	24%	6,883,433	23,447,784
1Q19	41,792,271	2.0%	74%	26%	7,606,193	
2Q19	42,628,116	2.0%	72%	28%	8,355,111	
3Q19	43,480,678	2.0%	70%	30%	9,130,942	
4Q19	44,350,292	2.0%	70%	30%	9,313,561	34,405,808
1Q20	45,237,298	2.0%	70%	30%	9,499,833	
2Q20	46,142,044	2.0%	70%	30%	9,689,829	
3Q20	47,064,884	2.0%	70%	30%	9,883,626	
4Q20	48,006,182	2.0%	70%	30%	10,081,298	39,154,586

Size relative to OA market

50.0%

Kindred Biosciences, Inc. SentiKin model						
					RISK ADJUSTED A	65%
Quarter	Market size	Quarterly growth rate	MARKET SHARE		CereKin revenues	
			Other	AtoKin	Quarterly	Annual
1Q14	28,125,000		100%	0%	-	
2Q14	28,687,500	2.0%	100%	0%	-	
3Q14	29,261,250	2.0%	100%	0%	-	
4Q14	29,846,475	2.0%	100%	0%	-	-
1Q15	30,443,405	2.0%	100%	0%	-	
2Q15	31,052,273	2.0%	100%	0%	-	
3Q15	31,673,318	2.0%	100%	0%	-	
4Q15	32,306,784	2.0%	100%	0%	-	-
1Q16	32,952,920	2.0%	100%	1%	107,097	
2Q16	33,611,978	2.0%	99%	2%	327,717	
3Q16	34,284,218	2.0%	98%	3%	557,119	
4Q16	34,969,902	2.0%	97%	4%	795,565	1,787,498
1Q17	35,669,300	2.0%	95%	5%	1,159,252	
2Q17	36,382,686	2.0%	94%	6%	1,418,925	
3Q17	37,110,340	2.0%	93%	7%	1,688,520	
4Q17	37,852,547	2.0%	92%	8%	1,968,332	6,235,030
1Q18	38,609,598	2.0%	91%	9%	2,258,661	
2Q18	39,381,790	2.0%	90%	10%	2,559,816	
3Q18	40,169,426	2.0%	89%	11%	2,872,114	
4Q18	40,972,814	2.0%	88%	12%	3,195,880	10,886,471
1Q19	41,792,271	2.0%	87%	13%	3,531,447	
2Q19	42,628,116	2.0%	86%	14%	3,879,159	
3Q19	43,480,678	2.0%	85%	15%	4,239,366	
4Q19	44,350,292	2.0%	85%	15%	4,324,153	15,974,125
1Q20	45,237,298	2.0%	85%	15%	4,410,637	
2Q20	46,142,044	2.0%	85%	15%	4,498,849	
3Q20	47,064,884	2.0%	85%	15%	4,588,826	
4Q20	48,006,182	2.0%	85%	15%	4,680,603	18,178,915

Size relative to OA market

50.0%



## Kindred Biosciences, Inc.

Balance Sheets  
December Year

Net cash  
Per share

112,438,000  
5.79

	2012	2013	1Q14	2Q14
<b>ASSETS</b>				
Cash and equivalents	937,516	65,328,787	60,528,000	112,438,000
Prepays and other	504	147,589	565,000	532,000
Total current assets	938,020	65,476,376	61,093,000	112,970,000
Property and equip, net	-	11,694	27,000	109,000
TOTAL ASSETS	938,020	65,488,070	61,120,000	113,079,000
<b>LIABILITIES AND SHAREHOLDERS EQUITY</b>				
Accounts payable	5,499	688,641	1,671,000	1,711,000
Due to related party	5,122	-	-	-
Accrued expenses	59,660	1,520,955	958,000	1,684,000
Total Liabilities	70,281	2,209,596	2,629,000	3,395,000
Convertible preferred stock	987,050	-	-	-
Common stock	300	1,621	2,000	2,000
APIC	-	67,609,832	68,990,000	128,307,000
Accumulated other comp loss				(14,000)
Deficit accumulated during the develop	(119,611)	(4,332,979)	(10,501,000)	(18,611,000)
Total liabs and SE	938,020	65,488,070	61,120,000	113,079,000

Source: Company SEC filings

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**Kindred Biosciences, Inc.**

Statement of cash flows

December year

values in \$000's

	2012	2013	1Q14	2Q14
<b>OPERATING ACTIVITIES</b>				
Net loss	(119,611)	(4,213,368)	(6,168,000)	(14,278,000)
Adjustments:				
Stock based comp	11,340	921,781	1,077,000	2,253,000
Depreciation and amortization	-	3,129	4,000	13,000
Change in asset and liab items:				
Prepaid expenses and other	(504)	(147,085)	(425,000)	(373,000)
Accounts payable	5,499	683,142	982,000	1,022,000
Due to related party	5,122	(5,122)	-	-
Accrued expenses	35,370	1,184,371	(263,000)	460,000
<b>CASH FROM OPERATIONS</b>	<b>(62,784)</b>	<b>(1,573,152)</b>	<b>(4,793,000)</b>	<b>(10,903,000)</b>
<b>INVESTING ACTIVITIES</b>				
Cash acquired from business combo, intangibles				
Purchase of short-term investments			(24,008,000)	(103,125,000)
Acquisition of PP&E	-	(14,823)	(19,000)	(110,000)
<b>CASH FROM INVESTING</b>	<b>-</b>	<b>(14,823)</b>	<b>(24,027,000)</b>	<b>(103,235,000)</b>
<b>FINANCING ACTIVITIES</b>				
Changes to debt	10,000	-	-	-
Stock entries	990,300	65,979,246	4,000	58,147,000
Other	-	-	-	-
<b>CASH FROM FINANCING</b>	<b>1,000,300</b>	<b>65,979,246</b>	<b>4,000</b>	<b>58,147,000</b>
Change in cash	937,516	64,391,271	(28,816,000)	(55,991,000)
Cash at beginning of year	-	937,516	65,328,787	65,328,787
Cash at end of the year	937,516	65,328,787	36,512,787	9,337,787

Source: Company SEC filings

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Regulation Analyst Certification ("Reg AC"): The research analyst primarily responsible for the content of this report certifies the following under Reg AC: I hereby certify that all views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

## Disclosures:

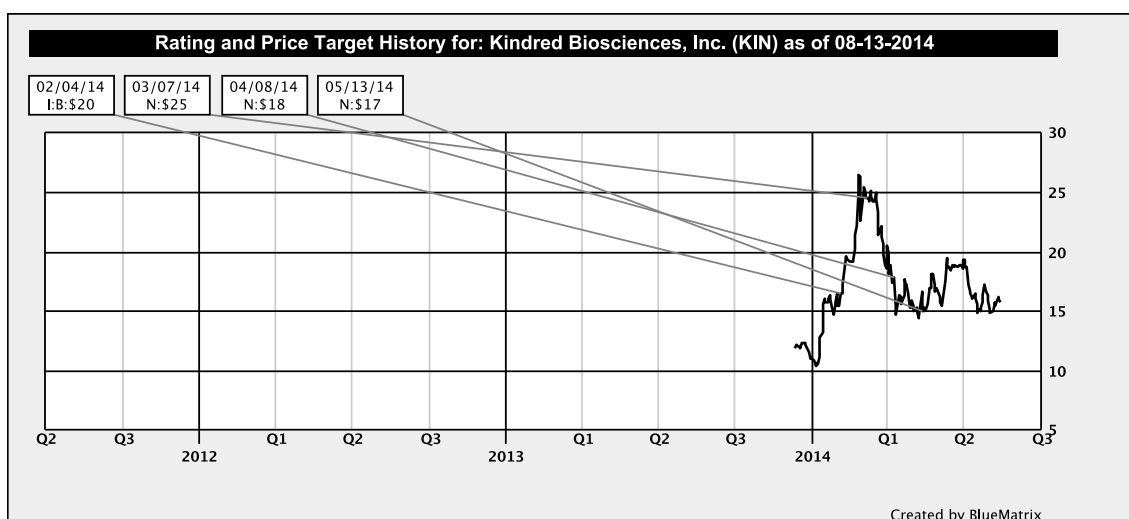
Within the last twelve months, ROTH has received compensation for investment banking services from Kindred Biosciences, Inc..

ROTH makes a market in shares of Kindred Biosciences, Inc. and as such, buys and sells from customers on a principal basis.

Within the last twelve months, ROTH has managed or co-managed a public offering for Kindred Biosciences, Inc..

**On September 28, 2010, ROTH changed its rating system in order to replace the Hold rating with Neutral.**

**On May 26, 2011, ROTH changed its rating system in order to incorporate coverage that is Under Review.**



Each box on the Rating and Price Target History chart above represents a date on which an analyst made a change to a rating or price target, except for the first box, which may only represent the first note written during the past three years.

**Distribution Ratings/IB Services** shows the number of companies in each rating category from which Roth or an affiliate received compensation for investment banking services in the past 12 month.

### Distribution of IB Services Firmwide

Rating	Count	Percent	IB Serv./Past 12 Mos. as of 08/14/14	
			Count	Percent
Buy [B]	190	80.85	107	56.32
Neutral [N]	22	9.36	8	36.36
Sell [S]	1	0.43	0	0
Under Review [UR]	21	8.94	12	57.14

Our rating system attempts to incorporate industry, company and/or overall market risk and volatility. Consequently, at any given point in time, our investment rating on a stock and its implied price movement may not correspond to the stated 12-month price target.

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**Buy:** A rating, which at the time it is instituted and or reiterated, that indicates an expectation of a total return of at least 10% over the next 12 months.

**Neutral:** A rating, which at the time it is instituted and or reiterated, that indicates an expectation of a total return between negative 10% and 10% over the next 12 months.

**Sell:** A rating, which at the time it is instituted and or reiterated, that indicates an expectation that the price will depreciate by more than 10% over the next 12 months.

**Under Review [UR]:** A rating, which at the time it is instituted and or reiterated, indicates the temporary removal of the prior rating, price target and estimates for the security. Prior rating, price target and estimates should no longer be relied upon for UR-rated securities.

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