

## KINDRED BIOSCIENCES, INC.

### Pipeline On Track; Accelerating Pivotal Development of Add'l Agents in 2H14

• **Bottom Line:** KIN reported an EPS loss of \$0.38 for 1Q14, \$0.20 and \$0.21 lower than the Street and our estimates, respectively, reflecting both accelerated development costs associated with the company's first three pivotal agents (CereKin for osteoarthritis, AtoKin for atopic dermatitis, and SentiKin for post-op pain) as well as initial commercial efforts. Consistent with the higher near-term costs and the pullback in comparable small-cap biotech valuations, we are reducing our DCF valuation to \$29/shr from \$32/shr previously reflective of higher R&D and SG&A as KIN builds its corporate infrastructure and rapidly advances its clinical pipeline. Our valuation reflects a conservative earnings multiple of 14x 2020 forecasted EPS of \$4.24 and discounting it back 5 years at 15%. Given the pace at which management is executing on its first three initial pivotal studies, we applaud the plan to accelerate the start of additional pivotal studies in the 2H14. We remain focused on the validation of this pet therapeutics model following the outcome of the CereKin pivotal study this coming summer (July/August).

• **Additional small molecule pivotal study initiations on the horizon in 2H14 followed by biologics.** Kindred remains on track to launch two to four products annually as management plans to advance additional discovery pipeline agents to late development stage. Feline assets KIN-007 BTK Inhibitor in lymphoma and pro-motility KIN-006 for GI disease are the most likely to enter the clinic in 2H14. Given extensive human health expertise in biologics. The initiation of studies with biologics is still on track for 2015. KIN mgmt remains extraordinarily enthusiastic about the number of developed human targets they could advance in pivotal animal studies, but remain focused first on the success its first-three pivotal targets.

• **Next Major Catalyst is CereKin (Diacerein) top-line data announcement by late July/early August.** Consistent with prior discussions, mgmt highlighted a 70% probability of success assumed in its overall model, but also noted that it believes this assumption likely is conservative given available safety and efficacy data of its first three compounds in dogs and humans. We estimate a 85% probability of success for CereKin as well as AtoKin (atopic dermatitis) and SentiKin (post-operative pain) indicated for canines. CereKin remains on track for NADA submission later this year assuming market entry by 3Q15.

#### Key Stats:

(NASDAQ:KIN)

<b>S&amp;P 600 Health Care Index:</b>	<b>1,237.84</b>
<b>Price:</b>	<b>\$16.63</b>
Price Target:	\$29.00 from \$32.00
Methodology:	DCF, 12% discount rate, 2% terminal growth
52 Week High:	\$26.99
52 Week Low:	\$8.75
Shares Outstanding (mil):	19.2
Market Capitalization (mil):	\$319.3
Book Value/Share:	\$0.00
Cash Per Share:	\$5.62
Dividend (ann):	NA
Est LT EPS Growth:	NM



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	P/E
2013A	--	--	--	--	0.0	--	--	--	--	(\$1.13)	NM
2014E - New	0.0A	0.0	0.0	0.0	0.0	(\$0.38)A	(\$0.34)	(\$0.40)	(\$0.51)	(\$1.63)	NM
2014E - Old	0.0A	0.0	0.0	0.0	0.0	(\$0.17)	(\$0.18)	(\$0.22)	(\$0.27)	(\$0.86)	NM
2015E - New	0.0	0.0	\$0.1	\$1.6	\$1.7	(\$0.55)	(\$0.69)	(\$0.92)	(\$1.00)	(\$3.16)	NM
2015E - Old	0.0	0.0	\$0.1	\$1.6	\$1.7	(\$0.31)	(\$0.51)	(\$0.78)	(\$0.83)	(\$2.44)	NM
2016E - New	--	--	--	--	\$55.6	--	--	--	--	(\$2.78)	NM
2016E - Old	--	--	--	--	\$55.6	--	--	--	--	(\$2.04)	NM

Source: Company Information and Leerink Partners LLC Research  
Revenues (\$ 'MM); GAAP EPS; IPO closed 12/17/17; secondary closed 4/8/14

## INVESTMENT THESIS

**We rate KIN Outperform.** KIN is a development stage biopharmaceutical company exclusively focused on bringing novel therapies for the treatment of pets (dogs, cats, & horses) to market. With three products in pivotal studies poised to read out before the end of 2014, an additional 7 products in development, and some further 30+ potential products identified, KIN is well-positioned to become a leader in the multi-billion dollar pet therapeutics market. Our DCF-based price target for KIN of \$29/shr assumes an 85% probability of technical success for CereKin, AtoKin, & SentiKin.

## CHANGES TO 2014-2022 MODEL FORECASTS

Total Revenue Forecasts									
	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
New	\$0	\$1,740	\$55,628	\$132,148	\$205,639	\$294,527	\$380,246	\$433,068	\$473,209
Old	<u>0</u>	<u>1,740</u>	<u>55,628</u>	<u>132,148</u>	<u>205,639</u>	<u>294,527</u>	<u>380,246</u>	<u>433,068</u>	<u>473,209</u>
Difference	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Total Adjusted EPS Forecasts									
	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
New	(\$1.63)	(\$3.16)	(\$2.78)	(\$1.07)	\$0.04	\$2.91	\$4.24	\$5.00	\$5.58
Old	<u>(\$0.86)</u>	<u>(\$2.44)</u>	<u>(\$2.04)</u>	<u>(\$0.54)</u>	<u>\$0.66</u>	<u>\$2.95</u>	<u>\$4.33</u>	<u>\$5.12</u>	<u>\$5.72</u>
Difference	(\$0.77)	(\$0.72)	(\$0.74)	(\$0.53)	(\$0.62)	(\$0.04)	(\$0.09)	(\$0.12)	(\$0.14)

Source: Company Information and Leerink Partners LLC Research

## P&L Forecast Changes

Total SG&A Forecasts									
	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
New	\$9,279	\$35,525	\$50,300	\$54,150	\$69,950	\$74,450	\$81,050	\$85,750	\$89,350
Old	<u>3,450</u>	<u>31,525</u>	<u>46,300</u>	<u>54,150</u>	<u>69,950</u>	<u>74,450</u>	<u>81,050</u>	<u>85,750</u>	<u>89,350</u>
Difference	\$5,829	\$4,000	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0

SG&A Forecasts (% of Total Sales)									
	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
New	nm	nm	90.4%	41.0%	34.0%	25.3%	21.3%	19.8%	18.9%
Old	<u>nm</u>	<u>nm</u>	<u>83.2%</u>	<u>41.0%</u>	<u>34.0%</u>	<u>25.3%</u>	<u>21.3%</u>	<u>19.8%</u>	<u>18.9%</u>
Difference			7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Company Information and Leerink Partners LLC Research

R&D Forecasts									
	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
New	\$21,498	\$28,000	\$32,200	\$37,030	\$44,436	\$51,101	\$58,767	\$62,880	\$66,024
Old	<u>13,000</u>	<u>18,500</u>	<u>22,200</u>	<u>26,640</u>	<u>31,968</u>	<u>36,763</u>	<u>42,278</u>	<u>45,237</u>	<u>47,499</u>
Difference	\$8,498	\$9,500	\$10,000	\$10,390	\$12,468	\$14,338	\$16,489	\$17,643	\$18,525

R&D Forecasts (% of Total Sales)									
	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
New	nm	nm	57.9%	28.0%	21.6%	17.4%	15.5%	14.5%	14.0%
Old	<u>nm</u>	<u>nm</u>	<u>39.9%</u>	<u>20.2%</u>	<u>15.5%</u>	<u>12.5%</u>	<u>11.1%</u>	<u>10.4%</u>	<u>10.0%</u>
Difference			18.0%	7.8%	6.1%	4.9%	4.4%	4.1%	4.0%

Source: Company Information and Leerink Partners LLC Research

## VALUATION

We value KIN at \$29/share. Our price target is based on our DCF valuation, which assumes a 12% discount rate on sales and profits through 2022 and applying a 2% terminal growth rate. This equates to 14x 2020 EPS of \$4.24 discounted back 5 years at a 15% discount rate. Our analysis of a wide range of potential comparable companies suggests a price range from \$27/shr (animal health comps excluding Aratana) to \$48/shr (small biotech comps) on 2018 consensus sales forecasts.

## RISKS TO VALUATION

Kindred is a late stage pet therapeutics company with no revenues and clinical assets.

- **Clinical and Regulatory Risk:** its success is dependent on the clinical and regulatory outcome of its pipeline assets which positive data and approvability is not assured.
- **Commercial Risk:** KIN plans to independently sell its products in the US, which will require significant capital, effort, and expertise that still needs to be developed for its 2015 launches.
- **Competitive Landscape:** Given limited IP protection and lower regulatory hurdles in pet therapeutics, KIN may face intensifying competition either from new product entrants or from generics.
- **Financing Risk:** Although Kindred has completed a secondary raise and currently has >\$100M of cash on the balance sheet, the company may need to raise additional capital to fund additional clinical development or to complete product acquisitions before becoming substantially cash flow positive, possibly diluting existing shareholders.

## Kindred - Income Statement Analysis 2013-2022E

(\$ in Thousands, Except EPS)															
(Year Ended December 31)	2013	1Q14A	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	CAGR '17-22
Revenue															
Canine (Dogs) Rx Medicines	-	-	-	-	-	-	1,740	55,482	127,488	189,495	260,930	330,698	366,895	397,332	26%
CereKin	-	-	-	-	-	-	651	23,192	47,366	66,163	89,882	103,474	107,693	111,631	19%
AtoKin	-	-	-	-	-	-	1,088	23,095	39,760	53,811	66,177	79,810	82,983	85,969	17%
SentiKin	-	-	-	-	-	-	-	9,195	27,862	37,521	47,370	57,413	65,719	72,232	21%
Other small molecule									12,500	25,000	40,000	55,000	65,000	75,000	43%
Other biologics										7,000	17,500	35,000	45,500	52,500	NM
Equine (Horses) Rx Medicines									-	5,435	17,679	27,630	38,395	45,058	NM
CereKin	-	-	-	-	-	-	-	-	-	3,317	13,399	21,145	30,754	36,238	NM
SentiKin	-	-	-	-	-	-	-	-	-	2,119	4,280	6,484	7,641	8,819	NM
Other small molecule															
Other biologics															
Feline (Cats) Rx Medicines															
KIND-006															
Other small molecule															
Other biologics															
EU Royalties (12% on EU sales)	-	-	-	-	-	-	-	146	4,660	10,709	15,918	21,918	27,779	30,819	46%
Total Revenue	-	-	-	-	-	-	1,740	55,628	132,148	205,639	294,527	380,246	433,068	473,209	29%
Growth (% y/y)									138%	56%	43%	29%	14%	9%	
COGS	-	-	-	-	-	-	422	27,814	62,110	90,481	120,756	152,098	173,227	189,284	25%
COGS (% of sales)							24%	50%	47%	44%	41%	40%	40%	40%	
Gross Profit	-	-	-	-	-	-	1,318	27,814	70,039	115,158	173,771	228,147	259,841	283,925	32%
						nm	76%	50%	53%	56%	59%	60%	60%	60%	
SG&A	1,079	1,679	1,800	2,300	3,500	9,279	35,525	50,300	54,150	69,950	74,450	81,050	85,750	89,350	11%
SG&A (% of sales)						nm	nm	90%	41%	34%	25%	21%	20%	19%	
R&D	3,141	4,498	5,000	5,500	6,500	21,498	28,000	32,200	37,030	44,436	51,101	58,767	62,880	66,024	12%
R&D (% of sales)						nm	nm	58%	28%	22%	17%	15%	15%	14%	
Operating Income	(4,219)	(6,177)	(6,800)	(7,800)	(10,000)	(30,777)	(62,207)	(54,686)	(21,141)	772	48,219	88,331	111,210	128,551	NM
Operating Margin (% of sales)										0.4%	16.4%	23.2%	25.7%	27.2%	
Total Other Income/ (Expense)	6	9	22	22	22	90	84	38	10	10	46	119	214	323	
Pre-tax Income	(4,213)	(6,168)	(6,778)	(7,778)	(9,978)	(30,687)	(62,123)	(54,648)	(21,131)	782	48,265	88,450	111,424	128,874	
Taxes										0	(9,054)	4,985	12,993	19,062	NM
Rate (% of pre-tax income)									0%	-1%	-19%	6%	11%	15%	
Net Income	(4,213)	(6,168)	(6,778)	(7,778)	(9,978)	(30,687)	(62,123)	(54,648)	(21,131)	782	57,319	83,465	98,431	109,812	NM
EPS	(\$1.13)	(\$0.38)	(\$0.34)	(\$0.40)	(\$0.51)	(\$1.63)	(\$3.16)	(\$2.78)	(\$1.07)	\$0.04	\$2.91	\$4.24	\$5.00	\$5.58	NM
Average Shares Outstanding	3,732	16,222	19,672	19,672	19,672	18,810	19,672	19,672	19,672	19,672	19,672	19,672	19,672	19,672	

Source: Leerink Partners and Company Reports

## Kindred - Income Statement Analysis 2013-2022E

(\$ in Thousands, Except EPS)											CAGR
(Year Ended December 31)	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	'17-22
<b>Revenue</b>											
<b>Canine (Dogs) Rx Medicines</b>	-	-	1,740	55,482	127,488	189,495	260,930	330,698	366,895	397,332	26%
CereKin	-	-	651	23,192	47,366	66,163	89,882	103,474	107,693	111,631	19%
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<b>Total Revenue</b>	-	-	1,740	55,628	132,148	205,639	294,527	380,246	433,068	473,209	29%
<b>Growth (% y/y)</b>					138%	56%	43%	29%	14%	9%	
COGS	-	-	422	27,814	62,110	90,481	120,756	152,098	173,227	189,284	25%
<b>COGS (% of sales)</b>			24%	50%	47%	44%	41%	40%	40%	40%	
<b>Gross Profit</b>	-	-	1,318	27,814	70,039	115,158	173,771	228,147	259,841	283,925	32%
		nm	76%	50%	53%	56%	59%	60%	60%	60%	
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<b>SG&amp;A (% of sales)</b>		nm	nm	90%	41%	34%	25%	21%	20%	19%	
R&D	3,141	21,498	28,000	32,200	37,030	44,436	51,101	58,767	62,880	66,024	12%
<b>R&amp;D (% of sales)</b>		nm	nm	58%	28%	22%	17%	15%	15%	14%	
<b>Operating Income</b>	(4,219)	(30,777)	(62,207)	(54,686)	(21,141)	772	48,219	88,331	111,210	128,551	NM
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Taxes						0	(9,054)	4,985	12,993	19,062	NM
<b>Rate (% of pre-tax income)</b>					0%	-1%	-19%	6%	11%	15%	
<b>Net Income</b>	(4,213)	(30,687)	(62,123)	(54,648)	(21,131)	782	57,319	83,465	98,431	109,812	NM
<b>EPS</b>	(\$1.13)	(\$1.63)	(\$3.16)	(\$2.78)	(\$1.07)	\$0.04	\$2.91	\$4.24	\$5.00	\$5.58	NM
Average Shares Outstanding	3,732	18,810	19,672	19,672	19,672	19,672	19,672	19,672	19,672	19,672	

Source: Leerink Partners and Company Reports

## Disclosures Appendix

### Analyst Certification

I, Seamus Fernandez, 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.

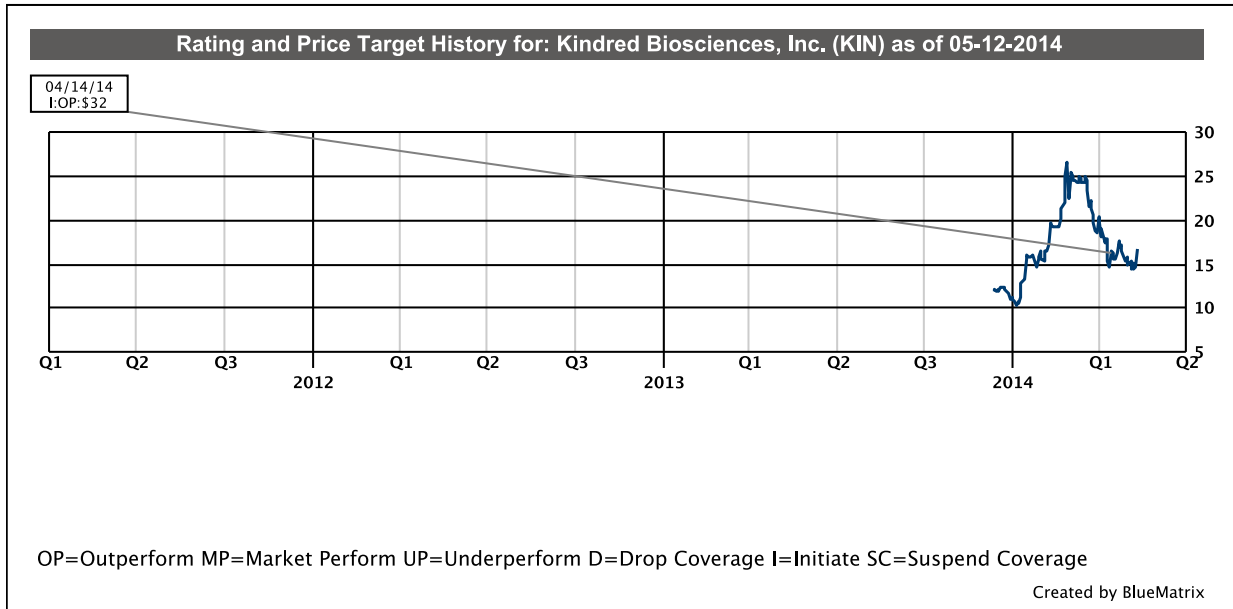
### Valuation

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### Risks to Valuation

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Distribution of Ratings/Investment Banking Services (IB) as of 03/31/14				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OP]	131	68.23	46	35.11
HOLD [MP]	61	31.77	3	4.92
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.

**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.

## Important Disclosures

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Like all Firm employees, analysts receive compensation that is impacted by, among other factors, overall firm profitability, which includes revenues from, among other business units, Institutional Equities, and Investment Banking. Analysts, however, are not compensated for a specific investment banking services transaction.

MEDACorp is a network of healthcare professionals, attorneys, physicians, key opinion leaders and other specialists accessed by Leerink and it provides information used by its analysts in preparing research.



**In the past 12 months, the Firm has received compensation for providing investment banking services to Kindred Biosciences, Inc. .**

**Leerink Partners LLC makes a market in Kindred Biosciences, Inc.**

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

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