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Changes	Previous	Current
Rating:		Buy
Fundamental Trend:		Improving
Price Target:		$25.00
FY14E Rev M:		$0.0
FY15E Rev M:		$2.3
FY16E Rev M:		$44.0
FY14E EPS:		($1.47)
FY15E EPS:		($2.04)
FY16E EPS:		($1.77)

Profile		
Price:		$16.91
52 Wk Range:	$8.75	- $26.99
Avg Daily Vol:		173,700
Shares Out M:*		19.7
Market Cap M:*		$332.7
Insiders Own:		24%
Short Interest:		4.2%
BV/Sh:		$3.61
Est LT EPS Gr:		15%
Net Cash/Sh:*		$6.03
Debt / Capital:		0%
Year Ends:		Dec.

*Fully diluted share include recent secondary equity offering on 4/8/14

Rev (M)	2014E	2015E	2016E
Mar	$0.0A	-	-
Jun	$0.0	-	-
Sep	$0.0	-	-
Dec	$0.0	-	-
FY	$0.0	$2.3	$44.0

EPS	2014E	2015E	2016E
Mar	($0.38)A	-	-
Jun	($0.34)	-	-
Sep	($0.36)	-	-
Dec	($0.39)	-	-
FY	($1.47)	($2.04)	($1.77)
FY P/E	NA	NA	NA
FY EV/S	NA	NA	4.9x

Management	
CEO	Richard H. Chin
CFO	Stephen S. Galliker

Kindred Biosciences, Inc. — BUY

(KIN - $16.91) Price Target: $25

High Quality Management Team Executing On Large, Emerging Growth Opportunities In Pet Pharmaceuticals. Initiating Coverage Of KIN With A BUY Rating And $25 Price Target.

Kindred Biosciences develops innovative small molecule and biologic therapeutics for cats, dogs and horses.

OUR CALL

Valuation of early stage companies is traditionally tied to three things: size of the ***Problem***, the elegance of the company's ***Solution,*** and the quality of ***Management***. We believe that Kindred Biosciences could potentially be a very valuable company because it scores well in each category.

Problem: The companion animal (dog and cat) population has grown at a 5% CAGR over the last decade. Over $55B is spent annually on pets, but only a small portion ($1.7B in 2013) is for pharmaceuticals (excluding flea/tick and vaccines). This is not for lack of demand; since pets are living longer they are developing more chronic diseases but there simply aren't drugs available yet for many of these diseases or conditions. We note that just two novel animal therapeutics were approved by the FDA's Center for Veterinary Medicine (CVM) in 2013. If appropriate drugs were available, we believe that pet owners would be extremely receptive and that the market can easily grow at least five-fold in size.

Solution: KIN has a low risk, low cost strategy to repurpose human drugs that are already approved and develop them as novel therapeutics to serve unmet needs in animals. They currently have 3 lead compounds in development representing 6 distinct new products intended for U.S. and European market launches. These initial products target post-surgical chronic pain, lack of appetite, and painful dermatitis for dogs and cats which address a domestic annual sales opportunity in excess of $800M via anticipated launches in late 2015.

Kindred Biosciences
Market Opportunity
(in millions)

	Est. Market Opportunity
CereKin	$ 400
AtoKin	$ 100
SentiKin	$ 320
Total	$ 820

Source: Industry reports, Kindred Biosciences, Craig-Hallum estimates

Management: CEO Richard Chin, MD has assembled an impressive team of experienced leaders who have deep backgrounds in pharmaceuticals and biotech, and in both human and veterinary products and services. Since KIN's core strategy is to repurpose already approved human drugs and customize them for animal use, we believe his team has the right combination here.

Management of KIN will be meeting with investors at the Craig-Hallum Institutional Investor Conference on May 28, 2014 in Minneapolis.

STOCK OPPORTUNITY

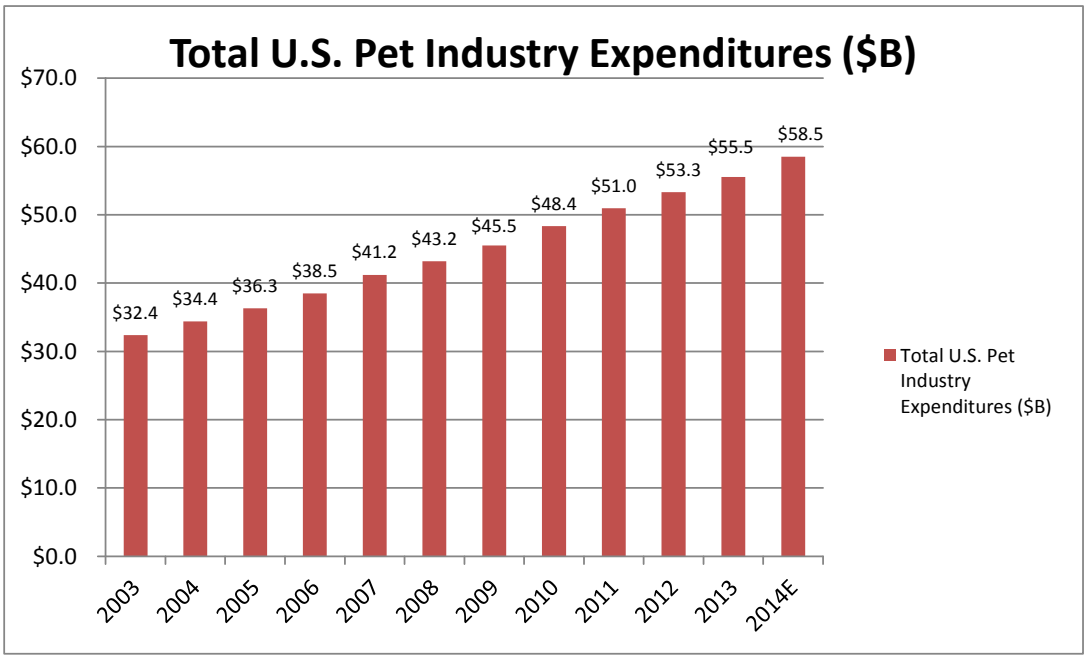
We believe that Kindred Bioscience is extremely well positioned to bring novel and specifically targeted specialty pharmaceuticals for companion animals to the veterinary market. Its differentiated strategy includes (1) utilizing chewable, beef-flavored pills; (2) performing all of their own clinical testing as opposed to using an outside CRO (contract research organization) which saves money and increases control; and (3) including horses in its target market (potentially quite lucrative because horses' larger size/weight requires higher dosages and owners' investment in horses is frequently more than dogs or cats, which leads to less product price sensitivity).

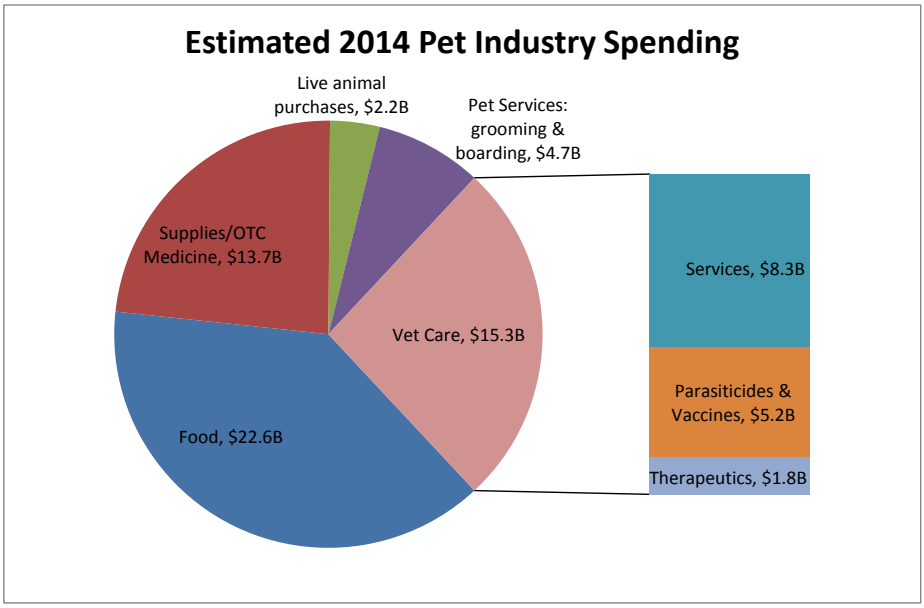
Our $25 target price is a function of a long term DCF analysis (see page 16).

An Attractive But Currently Underserved Market

Companion Animal Market

The United States companion animal market is large and lucrative, with over 75M (~68%) American households owning a cat or dog: there are ~96M cats and ~83M dogs in the United States. According to American Pet Products Association (APPA), pet owners in the U.S. spend ~$1,200 and ~$1,500 per year on the basic needs of their cats and dogs (in 2013, U.S. pet owners spent $55.5 billion on their pets). Consumer spending on companion animals has been relatively immune to broader economic woes, growing every year since 2003, and is expected to surpass $58B in 2014 (APPA estimate). Companion animals are increasingly seen and treated as part of the family. Enhanced nutrition and easier lifestyles have extended the lives of pets in North America and Europe, increasing the population of companion animals which are affected by age related disorders. Veterinary care is expected to account for 26% ($15.3B) of the $58B in estimated companion animal expenditures in 2014. Within the veterinary care segment, it is estimated that roughly 48% ($7.3B) will be spent on medications with the remainder spent on services. However, the lion's share of this amount (~74%) is again expected to be directed toward parasiticides and vaccines with therapeutics representing the balance. For KIN, the market for pet pharmaceuticals is expected to total approximately $1.8B in 2014 ($10 per pet). We believe that this market can easily grow to at least 5X this size as an increasing number of species targeted, novel therapeutics become available and grab a greater and greater share of veterinary spending.





Source: American Pet Products Association

Lower Risk, Lower Cost Clinical Path

The regulations surrounding the development and marketing clearance of human and animal therapeutics are substantially different. Because of these differences, the path for veterinary drugs is significantly shorter and cheaper (especially when a product has moved through phase I or II human clinical trials). Generally, KIN's uses drugs that have been already approved in humans and then modifies those compounds in order to conduct clinical trials on specific species. The existence of well-developed toxicology and efficacy data as well as the favorable dynamics surrounding the clinical development protocols for pet pharmaceuticals allows the Company to significantly de-

risk development projects in the early phases, prior to the majority of investment.

In stark contrast to human drug development, which often takes >10 years and more than $1 billion per drug, the timeline from initiating proof of concept to gaining approval of a New Animal Drug Application (NADA) is generally around 5 years and costs approximately $10M.

Development of pet therapeutics is significantly less onerous due to a number of major factors. First, rather than a multi-species clinical trial process, veterinary drug development uses a direct species approach, where initial proof of concept and safety studies are conducted in laboratory animals of the end target species. This both significantly reduces cost and enhances visibility and confidence of trial investigators. Additionally, unlike human clinical trials where new therapies are required to show efficacy comparable to (with improved safety) or better than the accepted standard of care, pivotal field studies in veterinary pharmaceutical trials are required to show efficacy versus placebo.

Lower Reimbursement Risk

Spending for pet pharmaceuticals is almost entirely out-of-pocket which makes this category less exposed to reimbursement pressures than other segments in healthcare. There is a small amount of pet insurance (less than 5% of total) and pricing trends within that follow general out-of-pocket payments. We believe having healthcare products with lower reimbursement risk will present an attractive dynamic to investors of KIN.

Product Pipeline

Molecule	Indication	Pilot / Formulation	INAD Filed	Pivotal Study	NADA
Small Molecule Product Candidates					
CereKin – IL-1 inhibitor	Osteoarthritis pain in dogs				Anticipated filing in 2014
	Osteoarthritis pain in horses				
AtoKin – Anti-allergic drug	Atopic dermatitis in dogs				Anticipated filing in 2014
SentiKin – Centrally acting analgesic	Postoperative pain in dogs				Anticipated filing in 2014
	Postoperative pain in horses				
KIND-007 – BTK inhibitor	Cancer/immune disease in dogs				
	Cancer/immune disease in cats				
KIND-006 – Pro-motility agent	Gastrointestinal disease in cats				
Molecule	**Indication**	**Discovery/ Process Development**	**Mfg. Process Development**	**Pivotal Study**	**PLA**
Biologic Product Candidates					
KIND-502 – Anti-IgE antibody	Allergic diseases in dogs				
KIND-506 – TNFR-Ig fusion protein	Inflammatory diseases in dogs				
KIND-507 – CLTA4-Ig fusion protein	Autoimmune diseases in dogs				
KIND-504 – Cancer vaccine	Cancer in dogs				
KIND-501 – Anti-VEGF fusion protein	Cancer in dogs				

Source: Company presentation

Large Potential Markets

CereKin ($400M market opportunity)

CereKin is an oral, chewable, beef-flavored formulation of diacerein, an interleukin-1 beta (IL-1) inhibitor that is being developed for osteoarthritis pain and inflammation in dogs. KIN initiated a pivotal trial for CereKin in August 2013 under a Protocol Concurrence with the FDA. The Company expects to have data from the pivotal trial in mid-2014 and, if positive, Management intends to submit a NADA soon after and with the potential of marketing approval in 2H15. Additionally, the Company anticipates starting a pivotal trial with CereKin for osteoarthritis in horses in 2014. The compound has demonstrated efficacy comparable to non-steroidal anti-inflammatory drugs (NSAIDs) without the associated gastrointestinal tract risks.

Osteoarthritis occurs with increasing prevalence in dogs and cats over nine years old and is diagnosed by veterinarians using clinical signs and radiographs. While osteoarthritis is not curable it is often treated through proper exercise, adequate rest, weight loss and pain and anti-inflammatory medication. It is estimated that ~4M dogs per year receive 20 days of NSAID therapies – generating ~$220M in NSAID sales in the U.S. in 2012. The leading product in this category is Rimadyl®, a COX-2 inhibitor which generated ~$90M domestically in 2012 and holds ~40% of the total NSAID market share.

We estimate that the potential revenue opportunity for Kindred's CereKin in the U.S. canine market alone is over of $100M per year. We believe that due to the limitations of the currently available treatments (gasterointestinal issues), a large proportion of dogs suffering from osteoarthritis pain either don't receive therapy or are being undertreated. The table below illustrates the potential opportunity for CereKin under different market share assumptions. Based on Vetnosis Market Research, osteoarthritis in dogs has a ~20% prevalence in elderly dogs and that the average treatment course lasts 30 days.

US CereKin Market Opportunity			
Market Share	Number of Dogs	Avg. Cost Per Treatment Course	Revenue Opportunity
5%	332,000	$60.00	$19,920,000
10%	664,000	$60.00	$39,840,000
15%	996,000	$60.00	$59,760,000
20%	1,328,000	$60.00	$79,680,000
25%	1,660,000	$60.00	$99,600,000
35%	2,324,000	$60.00	$139,440,000
45%	2,988,000	$60.00	$179,280,000
55%	3,652,000	$60.00	$219,120,000

Source: Craig-Hallum Estimates

We believe that the OUS market for canine osteoarthritis is roughly equal to the U.S. market. Studies estimate that the incidence of osteoarthritis in cats is as high as 90% of cats over age 12. Given that coxibs cannot be used in cats due to harmful side effects and there is a general lack of suitable pain management therapeutics for felines, we expect the opportunity for CereKin in cats could be accretive as well.

AtoKin ($100M market opportunity)

AtoKin is a high-dose, oral, chewable, beef-flavored formulation of fexofenadine that is being developed for atopic dermatitis in dogs. The active ingredient in AtoKin is a potent and selective antihistamine that is approved for allergic diseases in humans. Published data indicate that the active ingredient is as effective as steroids in treating canine atopic dermatitis. KIN has been granted a Protocol Concurrence by the FDA for the pivotal trial of AtoKin and the Company initiated the trial in February 2014. KIN expects to receive data from this trial in late 2014 and, if positive, intends to submit a NADA in late 2014, with potential marketing approval in late 2015. We estimate that the total market for AtoKin in U.S. dogs is $100M per year, assuming an average length of treatment of ~30 days.

US AtoKin Market Opportunity			
Market Share	Number of Dogs	Avg. Cost Per Treatment Course	Revenue Opportunity
5%	166,000	$30.00	$4,980,000
10%	332,000	$30.00	$9,960,000
15%	498,000	$30.00	$14,940,000
20%	664,000	$30.00	$19,920,000
25%	830,000	$30.00	$24,900,000
35%	1,162,000	$30.00	$34,860,000
45%	1,494,000	$30.00	$44,820,000
55%	1,826,000	$30.00	$54,780,000

Source: Craig-Hallum Estimates

We believe that the OUS market for canine atopic dermatitis is roughly equal to the U.S. market. If KIN were to launch AtoKin in cats, this would present upside to our model.

SentiKin ($320M market opportunity)

SentiKin is an oral, non-NSAID, non-opiod analgesic formulation of flupirtine and is a therapeutic being developed to manage post-operative pain in dogs, cats and horses. KIN initiated a pivotal study for SentiKin in dogs in March 2014 and has submitted for pivotal study protocol for a Protocol Concurrence with the FDA. KIN expects to receive data from the trial in late 2014 and, if positive, intends to submit a NADA in late 2014 with potential marketing approval in late 2015. The Company is also developing SentiKin for post-operative pain in horses and, in the future, expects to develop SentiKin for post-operative pain in cats, along with seizures in both cats and dogs. There are ~19M surgical procedures on dogs (16M of which are prescribed pain medication) and ~14M surgical procedures on cats done in the US annually. These include spays and neuters, declaws, soft tissue repair, fracture repair, and cancer surgeries. Spays and neuters account for over half of the ~33M dog and cat surgeries each year. Treatment of post-operative pain varies widely by individual veterinarian and procedure. Given the dynamics of this market place, we believe that initially the product will predominantly be adopted in complex procedures and those perceived by veterinarians to be especially painful, and thus we estimate that the initial potential market for SentiKin will be roughly $320M per year.

Potential Catalysts

Kindred Biosciences

Expected Impact	Event	Date
+	AtoKin trial initiation	complete
+	SentiKin trial initiation	complete
+	Management addition of Chief commercial officer	complete
+	CereKin pivotal trial full enrollment	complete
+	CereKin pivotal data and NADA filing	mid-2014
+	AtoKin and SentiKin pivotal data released	2H14
+	Atokin NADA filing	2H14
+	SentiKin NADA filing	late 2014
+	Filing of INADs for additional drug candidates	ongoing
++	CereKin potential approval and product launch	2H15
+	AtoKin potential approval and product launch	late 2015
+	SentiKin potential approval and product launch	late 2015
+	Additional indications for Cerekin and SentiKin	2016

Conclusion

We believe that Kindred Bioscience is extremely well positioned as a first mover with a differentiated strategy to bring novel and specifically targeted specialty pharmaceuticals for companion animals to the veterinary market. A premier management team lead by CEO Dr. Richard Chin contains industry leading scientific and commercial talent focused on capturing the large opportunity in companion animal therapeutics. The Company has taken a novel approach in the development of animal therapeutics, utilizing approved human medicines that have shown signs of safety and efficacy in preliminary animal models. They are now adapting those medicines to the companion animal market to address large unmet needs. With three compounds already in development representing over $800M of potential annual domestic revenue, we believe that Kindred Biosciences will be able to build a small direct salesforce and utilize large existing veterinary distributors to commercialize these products. We believe Kindred Biosciences represents a high reward opportunity for emerging growth stock investors.

WHAT DO THEY DO

Kindred Bioscience's core strategy is to identify human drugs and targets which have already demonstrated safety and efficacy, and then modify them for companion animals. We believe that this approach will lead to shorter development timelines and approval rates versus developing new targets. Their introductory products involve five small molecule drugs for companion pet and veterinary markets.

CereKin is being developed for osteoarthritis in dogs. CereKin is a chewable, beef-flavored, oral interleukin-1 inhibitor. It lowers levels of major inflammatory cytokines (including tumor necrosis factor) that play important roles in several diseases. It has been demonstrated to be effective for osteoarthritis in both humans and dogs, and is approved for humans in multiple countries.

Hip dysplasia is one common cause of osteoarthritis and affects all types of dog breeds and is not solely based on the size. However large breeds have shown an 18% incidence of hip dysplasia vs. 14% and 13% for the medium and small breeds, respectively.

Rates Of Hip Dysplasia By Breed Size

Breeds having at least 100 evaluations
January 1974 - December 2013

Breed Size	Average	Median	Range
Large	18%	15%	57%-2%
Medium	14%	10%	72%-1%
Small	13%	11%	68%-0%

Source: www.offa.org/stats_hip.html and Craig-Hallum Captial Group

Up to 50% of dogs cannot tolerate NSAIDs because of GI bleeding, liver toxicity, or kidney toxicity. CereKin is expected not to exhibit the side effects associated with NSAIDs. In addition, it has been demonstrated in several studies to have disease-modifying effects in osteoarthritis in both humans and dogs.

AtoKin is chewable, beef-flavored, high-dose antihistamine being developed for atopic dermatitis in dogs. It is a second generation, nonsedating antihistamine that has been demonstrated to have efficacy comparable to steroids in canine atopic dermatitis. It is approved in multiple countries for allergic diseases in humans and is safe at even very high doses.

Unlike currently available drugs for canine atopic dermatitis, AtoKin is not an immunosuppressive agent, and is expected to not to cause infections or other side effects associated with immunosuppressive agents.

SentiKin is a rapid-acting, non-NSAID, non-opioid analgesic being developed for post-operative pain in dogs. It is a drug with demonstrated analgesic effects, with potency similar to some of the opioids but without the liabilities associated with controlled substances. It has demonstrated efficacy in both humans and dogs.

Unlike some of the currently available drugs for post-operative pain, SentiKin is not expected to cause bleeding or create potential for dependency or diversion.

KIN also has two additional small molecule drugs in their pipeline which include:

1. KIND-006 which is a pro-motility agent for gastrointestinal disease in cats. We model revenues of $0.5M and $7M in 2016 and 2017, respectively.
2. KIND-007 which is a BTK inhibitor autoimmune disease in dogs. We model revenues of $3M in 2017.

Earlier approvals for either of these two drugs would represent upside to our model.

Development Stage Biologic Product Candidates

KIN has a pipeline of several promising biologics which include:

1. KIND-501, an antiangiogenic biologic for cancer in dogs.
2. KIND-502, a new biologic that targets canine counterpart of the human target for Xolair, for allergic and immune-associated diseases.
3. KIND-504, a cancer vaccine, in which the active ingredient has demonstrated efficacy in certain types of cancers in humans and in dogs.
4. KIND-506, a new biologic that targets the canine counterpart of the human target for Enbrel, for inflammatory and autoimmune diseases.
5. KIND-507, a new biologic that targets the canine counterpart of the human target for Orencia, for immune-mediated diseases.

In addition, KIN is pursuing several strategies to produce 100% dog, cat and horse antibodies which do not have any mouse or other exogenous amino acids. Management believes the fully canine, feline, and equine antibodies may be less immunogenic than antibodies that have been canonized, felinized, or equinized via more traditional methods, since those typically are composed of 10% or greater mouse amino acids. This strategy is beginning to be realized with the recent announcement with X-BODY Biosciences, as KIN signed an agreement to utilize their technology on an exclusive, worldwide basis to identify fully canine, fully feline and fully equine antibodies.

Because KIN's biologic portfolio does not currently have any drugs in the clinical trial stage, we have excluded all biologics from our model. Any biologic approvals would represent upside to our model.

Sales & Marketing Strategies

We believe that KIN plans to commercialize its products in the United States primarily through a direct sales model. We would estimate that KIN would establish a 50-person salesforce and they recently hired Blake Hawley as Chief Marketing Officer. We have forecasted Sales & Marketing expenses by estimating how many salesreps we expect the company to add in each quarter. If KIN is unable to hire enough reps in-time, they may be able to hire CSOs. A CSO, or clinical sales organization, is an entity that most pharmaceutical companies use for temporary staffing needs. We believe that KIN will also selectively utilize vet distributors such as Henry Schein (HSIC) and Patterson (PDCO).

FINANCIAL PERFORMANCE & OUTLOOK

First Quarter Fiscal Year 2014 (March)

For 1Q14, Kindred spent $4.5M in Research and Development associated with development activities surrounding its 3 currently disclosed compounds and earlier stage pipeline. The Company operations burned $4.8M in cash during 1Q. GAAP net loss attributable to common shares was $6.2M for 1Q, compared to a loss of $2.4M in 4Q13.

Second Quarter Fiscal Year 2014 (June)

In 2Q, we estimate Kindred's cash burn to be $5.3M. We expect that the Company's investments in its development programs will increase sequentially in 2Q ($4.8M vs. $4.5M in 1Q14). On the bottom line we estimate the Company's net loss will be $6.8M or ($0.34) per diluted share.

Outlook

We believe that Kindred has significantly de-risked its 3 lead development programs. Consistent with the Company's planned development and commercialization schedule, we expect Kindred to receive initial NADA approvals and begin selling its products in 2015. The Company's products are likely to carry gross margins similar to those of other highly profitable specialty pharmaceuticals, 60-75%.

KIN	2014	2015	2016	2017	2018
Gross Margin	NM	NM	52.5%	60.2%	65.0%
Less: Sales & Mktg.	NM	-200%	-20%	-8%	-4%
Less: R&D	NM	-1080%	-67.8%	-28.2%	-18.3%
Add: Depriciaton Exp.	NM	1.7%	0.2%	0.1%	0.1%
EBITDA	NM	NM	-80.8%	5.2%	28.1%

Source: Craig-Hallum estimates

We expect there will be an anticipatory ramp of significance for commercial infrastructure and we are accordingly forecasting net losses in FY14 of $28M followed by $40.7M in FY15 and $35.5M in FY16. We've taken what we believe is a relatively conservative approach with our assumptions regarding total cash burn and revenue generation over the next several years (see DCF model on page 16). We also note that additional product in-licensing agreements could meaningfully accelerate the timeline to initial commercial revenue.

Balance Sheet

KIN's balance sheet at the end of 1Q featured $60.5M in cash and no debt. On April 8, 2014 Kindred raised an additional $58.1M with a secondary offering. We estimate Kindred currently has a proforma cash balance of $118.6M ($6.03 per share). We anticipate that the Company will utilize a substantial portion of this cash position continuing development and garnering regulatory approval for its currently disclosed product pipeline. We believe Kindred does not expect to raise additional funds for the full blown commercialization efforts around these launches. However, we believe that opportunities for non-dilutive financing (such as out-licensing specific

geographic or alternate species rights in exchange for meaningful upfront cash payments and royalties) are likely to be present for KIN.

MANAGEMENT

We believe a group of top notch senior managers with deep roots in numerous historical successes within the companion animal therapeutics industry has gathered at Kindred Biosciences. This team includes domain experts from both the human and pet pharmaceutical and biotech companies, USDA, contract research organizations, specialized pet food industry, and other related companies.

CEO

Richard Chin, M.D. is Harvard-trained physician and a former Rhodes Scholar with a track record of almost a dozen drug approvals and over 50 INDs. Some of the drugs Dr. Chin developed include Lucentis®, Xolair®, Tysabri® and Rituxan® for immune diseases, drugs which currently have aggregate sales of well over $10 billion per year. Previously, Dr. Chin was Head of Clinical Research for the Biotherapeutics Unit at Genentech where he oversaw all of Genentech's drug development programs except oncology products. Richard was also Senior VP of Global Development at Elan, CEO of Oxigene and CEO of OneWorld Health, a Gates-funded nonprofit developing drugs for impoverished patients in developing countries. Dr. Chin also authored several major textbooks on clinical development and teaches drug development at UCSF.

CSO

Kevin Schultz previously served as the Chief Scientific Officer and Head of R&D for Merial, one of the largest veterinary pharmaceutical companies in the world. Mr. Schultz is one of the foremost drug developers in the veterinary industry and has developed dozens of products over his career including Frontline Plus®, a blockbuster with over a billion dollars in annual sales, as well as multiple other products such as Oncept®, a skin cancer vaccine for dogs; Previcox®, a pain medicine for dogs; and Gastrogard®, an anti-ulcer drug for horses. Kevin trained in immunology, oncology, and dermatology, and served as Professor at University of Wisconsin before joining Merck.

COO

Denise Bevers is an expert in clinical operations, medical affairs and scientific communications. Denise has over 20 years of pharmaceutical and research experience, and has managed dozens of projects and development programs from Phase I through Phase IV. Ms. Bevers was previously at Elan Pharmaceuticals, Scripps Clinic and Research Foundation, Quintiles and SkyePharma. Most recently, Denise was President and Founding Partner of SD Scientific, a full-service medical affairs and communications company.

SVP of Regulatory Affairs

Steve Sundlof previously served as the Director of the Center for Veterinary Medicine at the FDA from 1994 to 2008 where he oversaw all veterinary products regulated by the FDA. Mr. Sundlof also served as Director of the

Center for Food Safety and Applied Nutrition at the FDA from 2008 to 2010. Steve began his career in 1980 on the faculty of the University of Florida's College of Veterinary Medicine.

CFO

Steve Galliker most recently served as Chief Financial Officer of Dyax, a pioneering biopharmaceutical company. During his nine years at Dyax, Mr. Galliker helped raise a substantial amount of capital, including a successful IPO. Prior to Dyax, Steve was the CFO of Excel Switching Corporation and Ultracision. Mr. Galliker is a Certified Public Accountant and received a B.S. from Georgetown University and an M.B.A. from the University of Chicago.

CMO

Blake Hawley previously served as the Managing Director of the United Kingdom and Ireland, the General Manager of Australasia, and the Regional General Manager of Russia and Central Eastern Europe (consisting of 22 countries) for Hill's Pet Nutrition, a Colgate-Palmolive company. Blake's experience includes ten years of profit and loss responsibilities in these territories. Mr. Hawley has a background in e-commerce, data analytics, and social media and most recently served as Worldwide Director of Global Digital for Hill's Pet Nutrition. Blake received his B.S. in Zoology and D.V.M from North Carolina State University and earned an M.B.A. in marketing from the University of Kansas.

Executive Management Team

	Title	Previous Experience
Richard H. Chin M.D.	President & CEO	OneWorld Health, Oxigene, Elan, Genentech
Stephen Galliker, CPA	CFO	Dyax Corp., Excel Switching Corp.
Denise Bevers	COO & Corporate Secretary	SD Scientific, Elan, Skyepharma, Quintiles
Stephen Sundlof D.V.M, Ph.D.	VP, Regulatory Affairs	FDA-Director of the Center of Vet Medicine
Kevin Schultz D.V.M., Ph.D.	CSO & Head of Research	Sanofi (Merial), Merck, TyraTech, Inc.
Blake Hawley D.V.M	CMO	Colgate-Palmolive (Hill's Pet Nutrition)

Board of Directors

	Title	Previous Experience
Richard H. Chin M.D.	President & CEO	OneWorld Health, Oxigene, Elan, Genentech
Ernesto Mario Ph.D.	Director	Capnia, Glaxo Holdings plc, ALZA Corp., Reliant Pharmaceuticals
Oleg Nodelman	Director	EcoR1 Capital, BVF Partners L.P.
Raymond Townsend Pharm.D.	Director	Wasatch Health Outcomes, Inc., Upjohn Co., GlaxoSmithKline, Elan
Ervin Veszpremi	Director	Medichem, Novartis Animal Health

RISKS

We believe an investment in Kindred involves the following risks:

- **Government Regulation**

  The animal therapeutic industry is highly regulated by the Center for Veterinary Medicine at both the state and federal level. Changes to existing regulation or new legislation could have a material adverse effect on KIN's business and financial performance.

- **Dependence On Suppliers**

  The Company's business model relies on third parties to manufacture its products. Any malfunctions in the manufacturing processes of its suppliers or other sources of interruption to the supply of products could have an adverse impact on the Company's financial results.

- **Generic Products**

  Generic products may be viewed as more cost effective than branded therapeutics. While the Company's IP should protect its products from generic entry in the near term, substantially cheaper generic versions of competing products, even if they are less efficacious, may represent a challenge to the commercialization of the Company's products.

- **Intellectual Property And Trade Secrets**

  The Company's financial success is in part dependent on its ability to secure and enforce its substantial intellectual property. If KIN is forced to defend its intellectual property through litigation or if it is unable to maintain propriety of its trade secrets, the Company may incur extra expenses and financial results may be adversely affected.

- **Ongoing Need To Finance Growth**

  While the Company currently has proforma ~$118M of net cash on its balance sheet and estimates that its current capital is sufficient to fund its operations for the foreseeable future. The Company may seek additional capital in order to continue to fund its operations in the future. Such financing could be dilutive to stockholders.

Financials

Kindred Biosciences Financial Model

FISCAL YEAR ENDS DECEMBER

($ thousands)	Fiscal 2013A	Mar Q1-14A	Jun Q2-14E	Sep Q3-14E	Dec Q4-14E	Fiscal 2014E	Mar Q1-15E	Jun Q2-15E	Sep Q3-15E	Dec Q4-15E	Fiscal 2015E	Fiscal 2016E	Fiscal 2017E
Total Revenue	-	-	-	-	-	-	-	-	500	1,800	2,300	43,950	124,100
Cost of Sales	-	-	-	-	-	-	-	-	425	1,350	1,775	20,895	49,429
Total Gross Margin	-	-	-	-	-	-	-	-	75	450	525	23,055	74,671
Operating Expenses													
Research and Development	3,141	4,498	4,800	5,000	5,500	19,798	5,800	6,100	6,350	6,600	24,850	29,805	35,001
General and Administrative	1,079	1,679	2,000	2,200	2,400	8,279	2,600	2,800	3,000	3,200	11,600	19,745	22,853
Sales and Marketing	0	0	0	0	0	0	0	1,200	1,600	1,800	4,600	8,600	9,784
Total GAAP Operating Expenses	4,219	6,177	6,800	7,200	7,900	28,077	8,475	10,175	11,025	11,675	41,350	58,550	68,238
GAAP Income (Loss) from Operations	(4,219)	(6,177)	(6,800)	(7,200)	(7,900)	(28,077)	(8,475)	(10,175)	(10,950)	(11,225)	(40,825)	(35,495)	6,433
Non-GAAP Income (Loss) from Operations	(4,219)	(6,177)	(6,800)	(7,200)	(7,900)	(28,077)	(8,475)	(10,175)	(10,950)	(11,225)	(40,825)	(35,495)	6,433
Interest income	0	9	16	16	16	57	13	13	13	13	52	40	24
Interest Expense	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Income	6	0	0	0	0	0	0	0	0	0	0	0	0
Pre-tax GAAP Income	(4,213)	(6,168)	(6,784)	(7,184)	(7,884)	(28,020)	(8,462)	(10,162)	(10,937)	(11,212)	(40,773)	(35,455)	6,457
Income Tax (benefit)	0	-	-	-	-	0	-	-	-	-	0	0	4,234
GAAP Net Income	(4,213)	(6,168)	(6,784)	(7,184)	(7,884)	(28,020)	(8,462)	(10,162)	(10,937)	(11,212)	(40,773)	(35,455)	2,223
EPS Attributable to Common Stockholders	($1.32)	($0.38)	($0.34)	($0.36)	($0.39)	($1.47)	($0.42)	($0.51)	($0.55)	($0.56)	($2.04)	($1.77)	$0.11
Weighted Avg. Shares Outstanding DILUTED	3,183	16,222	19,950	19,965	19,980	19,029	19,995	20,010	20,025	20,040	20,018	20,078	20,138
Margin Analysis % of Sales													
Total Gross Margin	NM	NM	NM	NM	NM	NM	NM	NM	15.0%	25.0%	NM	52.5%	60.2%
Research and Development	NM	NM	NM	NM	NM	NM	NM	NM	1270%	367%	1080%	67.8%	28.2%
General and Administrative	NM	NM	NM	NM	NM	NM	NM	NM	600%	178%	504%	44.9%	18.4%
Sales and Marketing	NM	NM	NM	NM	NM	NM	NM	NM	320%	100%	200%	20%	8%
Total GAAP Operating Expense	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	133.2%	55.0%
GAAP Operating Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-80.8%	5.2%
GAAP Pre-tax Income	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-80.7%	5.2%
Tax Rate (Effective)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GAAP Net Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-80.7%	1.8%
Percent Change (Yr/Yr)													
Total Revenue	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	182.4%
Research and Development	NM	NM	NM	NM	214.9%	530.4%	28.9%	27.1%	27.0%	20.0%	25.5%	19.9%	17.4%
General and Administrative	NM	NM	NM	NM	274.0%	667.5%	54.9%	40.0%	36.4%	33.3%	40.1%	70.2%	15.7%
Sales and Marketing	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	87.0%	13.8%
Total GAAP Operating Expense	NM	NM	NM	NM	230.8%	565.4%	37.2%	49.6%	53.1%	47.8%	47.3%	41.6%	16.5%
GAAP Operating Income	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
GAAP Pre-tax Income	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
GAAP Net Income	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
GAAP Earnings Per Share	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

Revenue Build

Kindred Biosciences, Inc.
FISCAL YEAR ENDS DECEMBER

Revenue Build ($ millions)	Fiscal 2013E	Mar Q1-14A	Jun Q2-14E	Sep Q3-14E	Dec Q4-14E	Fiscal 2014E	Mar Q1-15E	Jun Q2-15E	Sep Q3-15E	Dec Q4-15E	Fiscal 2015E	Fiscal 2016E	Fiscal 2017E
Small Molecule Product Candidates													
CereKin - IL-1 Inhibitor Osteoarthritis (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	500	1,500	2,000	26,000	49,025
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	89%
AtoKin - Atopic dermatitis (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	300	300	13,700	48,450
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	254%
SentiKin - Post-operative pain (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	3,750	16,625
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	343%
KIND-006 - Pro-motility [constipation] agent (cats)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	500	7,000
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KIND-007 - BTK inhibitor autoimmune (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	0	3,000
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biologic Product Candidates													
KIND-501 - Anti-VEGF fusion protein (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KIND-502 - Anti-IgE antibody (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KIND-504 - Cancer vaccine (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KIND-507 - CLTA4-Ig fusion protein (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
KIND-506 - TNFR-Ig fusion protein (dogs)													
Total Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Revenue	0	0	0	0	0	0	0	0	500	1,800	2,300	43,950	124,100
Growth (% yr/yr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	182%

Discounted Cash Flow Model

Kindred Biosciences, Inc.
Discounted Cash Flow Model

($ in Thousands)	Estimates 2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Sales	0	2,300	43,950	124,100	226,270	285,100	342,120	390,017	421,218	433,855
Operating Profit	(28,077)	(40,825)	(35,495)	6,433	63,471	108,338	136,848	159,907	176,912	171,373
Less: Cash Taxes Paid	0	0	0	4,234	22,220	0	20,527	56,767	62,804	63,408
Operating Profit After Tax	(28,077)	(40,825)	(35,495)	2,199	41,251	108,338	116,321	103,140	114,108	107,965
Depreciation & Amortization	23	176	548	616	693	780	878	987	1,111	1,250
Fixed Cap Expenditures	107	2,114	1,163	1,244	1,331	1,424	1,524	1,630	1,745	1,867
Working Cap Increase	2,000	2,140	5,206	10,019	12,771	7,354	7,128	5,987	3,900	1,580
FCF	*(30,161)*	*(44,904)*	*(41,316)*	*(8,447)*	*27,842*	*100,340*	*108,547*	*96,510*	*109,574*	*105,768*
PV FCF	*(26,457)*	*(34,552)*	*(27,887)*	*(5,001)*	*14,460*	*45,714*	*43,379*	*33,832*	*33,695*	*28,530*

Perpetual FCF	
Base FCF	105,768
Weighted Avg. Cost of Capital (k)	14.0%
Perpetual Growth Rate (g)	3.0%
Base Year	2013
Perpetual Start Year	2023
Perpetual Value	990,373
PV of Perpetual Growth Period	267,147
Total FCF	
Value of FCF	372,860
Intrinsic Value	
Cash*	118,628
Debt	0
After Tax ESO Liability	2,213
Value of Equity	489,275
Shares Outstanding*	19,677

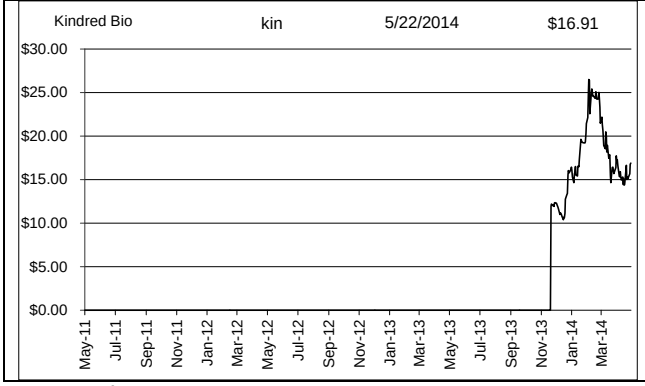
*proforma shares out & cash after recent secondary equity raise on 4/8/14.

Intrinsic Value per Share	**$24.87**

Sensitivity Analysis

Terminal Period Variables	FCF Growth				
	24.87	2.5%	3.0%	3.5%	4.0%
	12.5%	$29.19	$30.17	$31.26	$32.48
	13.0%	$27.36	$28.21	$29.15	$30.20
	13.5%	$25.70	$26.45	$27.27	$28.17
Cost of Capital	14.0%	$24.21	**$24.87**	$25.58	$26.37
	14.5%	$22.86	$23.43	$24.06	$24.75
	15.0%	$21.62	$22.13	$22.69	$23.29

REQUIRED DISCLOSURES



Initiate: May 23, 2014 – Rating: Buy - Price Target: $25

Source: Thomson

Ratings definitions:

Buy rated stocks generally have twelve month price targets that are more than 20% above the current price. **Hold** rated stocks generally have twelve month price targets near the current price. **Sell** rated stocks generally have no price target and we would sell the stock.

Fundamental trend definitions:

Improving means growth rates of key business metrics are generally accelerating. **Stable** means growth rates of key business metrics are generally steady. **Mixed** means growth rates of some key business metrics are positive but others are negative. **Declining** means growth rates of key business metrics are generally decelerating.

Ratings Distribution (3/31/2014)

Rating	% Of Companies Covered	% With Investment Banking Relationships
Buy	73%	26%
Hold	24%	9%
Sell	3%	0%
Total	100%	21%

Information about valuation methods and risks can be found in the "STOCK OPPORTUNITY" and "RISKS" sections, respectively, of this report.

CHLM makes a market in this security.

CCHLM expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

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OTHER DISCLOSURES

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