

## Viking Therapeutics (VKTX - \$ 6.25)

### Management Updates with VK2809 in Cholesterolemia and Fatty Liver Disease Phase II Trial Ready to Start in 4Q15

After a recent management meeting, we are encouraged by the advancement of the two Phase II studies (VK2809 in cholesterolemia and fatty liver disease and VK5211 in post hip fracture surgery rehabilitation) with top-line results potentially available 2H16 and 1Q17, respectively. Major takeaways include:

- **VK2809 in cholesterolemia and fatty liver disease Phase II trial to start in late 4Q15.** Management provided more details about the Phase II trial design. It is a randomized, double-blind, dose-finding, placebo-controlled trial designed to evaluate three doses (20 patients per arm) of VK2809 in ~100 patients with elevated LDL cholesterol (>130) and fatty liver (min. 10%) disease. Eligible patients also have at least three NCEP ATP III guideline risk factors. Biopsy would be conducted in ~25% patients. Treatment duration is three months with four weeks follow-up. The primary endpoint is to measure LDL cholesterol reduction after 12 weeks dosing. We anticipate the study to be completed in 2H16 with top-line results shortly thereafter (4Q16/1Q17). Based on mechanism of action and prior clinical data, it is very encouraging, in our opinion, that VK2809 could have potential for treating early stage NASH as the drug has exhibited significant reduction of fasting triglyceride (major fat component in the liver).
- **VK5211 in post hip fracture surgery rehabilitation Phase II study is expected to dose first individual in 4Q15.** It will start with the PK study in healthy elderly subjects, followed by the Phase II portion of the study to evaluate efficacy, safety and tolerability in patients recovering from recent non-elective hip fracture surgery (n=120). The primary endpoint is the change of lean body mass after 12 weeks of treatment, and top-line results are expected in 2H16. VKTX is scheduled to report a primate pre-clinical data in 4Q15.
- **X-linked adrenoleukodystrophy (X-ALD) therapy development update.** VKTX is scheduled to start a pre-clinical study in ABCD knock-out rodent. Results could be available in 1H16, and the clinical study potentially starting in 2H16.
- **Action.** We are reiterating our Buy rating and \$20 target price based on peer comparable, probability adjusted DCF and sum-of-the-parts analyses. With results of two Phase II studies available in the next 4-5 quarters, and if positive; VKTX shares could appreciate significantly, in our opinion.

#### Earnings Estimates: (per share)

(Dec)	1Q	2Q	3Q	4Q	FY	P/E
<b>FY-15E</b>	-1.40A	-1.07A	-0.28	-0.31	-2.50	N.A.
<b>FY-14A</b>	-0.07	3.88	-3.01	-2.01	-5.23	N.A.
<b>FY-13A</b>	0.00	-20.39	-5.57	-0.33	-0.07	N.A.
<b>FY-12A</b>	NA	NA	NA	NA	-0.07	N.A.

Source: Laidlaw & Company estimates

Healthcare/Biotechnology

Ticker:	<b>VKTX</b>
Rating:	<b>Buy</b>
Price Target:	<b>\$ 20.00</b>

#### Trading Data:

Last Price (09/11/2015)	\$ 6.25
52-Week High (5/5/2015)	\$ 10.23
52-Week Low (8/7/2015)	\$ 5.30
Market Cap. (MM)	\$ 61
Shares Out. (MM)	10

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## Anticipated milestones in 2015 and beyond

Product	Indication	Event	Timing	Importance
VK5211	Hip fracture	Dose first patient of Phase IIa study	4Q15	***
		Report pre-clinical primate data at Society on Sarcopenia, Cachexia and Wasting Disorders (SCWD) meeting	Dec. 4-6, 2015	***
		Report Phase IIa study results	2H16	****
VK0214/VK2809	X-Linked Adrenoleukodystrophy (X-ALD)	Complete pre-clinical POC studies	1H16	***
		Initiate Phase I POC study	2H16	***
		Potentially report Phase I study top-line results	2017	****
VK2809	Cholesterolemia / NASH	Potentially start Phase II study	4Q15	***
		Potentially complete Phase II study	2H16	***
		Potentially report Phase II study results	4Q16/1H17	****

\*\*\*\* / \*\*\*\*\* Major catalyst event that could impact share price very significantly while \*\*\* event is more informative

Source: Laidlaw & Company and company presentation

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## Major Risks

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**Risks of clinical study failure could have a major impact on VKTX share value.** Despite promising aspects of the company's lead products, VK5211 in the post hip fracture surgery rehabilitation and thyroid- $\beta$  agonists (VK2809 / VK0214) in X-ALD, it remains too early to predict the safety and efficacy from the two upcoming Phase I and Phase II studies. Given that clinical validation or POC for these programs has not been established, it would be critical for these studies to demonstrate a positive outcome in order to increase the asset and shareholder value. Negative results of either clinical study could potentially impair their value and have a materially negative impact on shareholder value, especially since success of each study could illustrate the value of VK5211 in hip fracture rehabilitation and thyroid- $\beta$  agonists in X-ALD. Further, it remains too early to predict any potential future success of clinical trials should these programs further advance into next stage clinical stage development. In thyroid- $\beta$  agonists in X-ALD, although it is possible that the drug could reduce or eliminate VLCFA, it remains too early to forecast that the drug could slow and stop the progression of symptoms to provide clinical benefits.

**Product may not be approved or reach anticipated sales.** Although Viking's current pipeline products have exhibited the potential to generate positive clinical outcomes from current and future trials; it remains too early to project whether any of these products would be approved by regulatory agencies. Even if the products were to enter the market, sales could be significantly below projections due to the specific product label under approval, physician consensus for prescribing the drug, changes of treatment paradigms, entrance of competitors, and possibly the changes in pricing flexibility and payer reimbursement. A revenue outlook below expectations could also negatively affect VKTX shareholder value.

**Positive relationship with Ligand is important.** Given that Viking is substantially dependent on technologies and drug candidates licensed from Ligand for further development, it would be important for the company to maintain a positive relationship with Ligand. If Viking loses the right to license these technologies and drug candidates or the Master License Agreement with Ligand is terminated for any reason, VKTX's ability to develop existing and new drug candidates would be harmed.

**Additional financings could dilute shareholder value.** Although the company currently has ~\$23MM cash after recent IPO financing, VKTX could need more financial resources going forward if they want to expand and further develop its pipeline. Should the product not receive FDA approval, or product revenue does not reach expectations; the company might need to issue new equity to raise additional cash. Under such a scenario, the share value of existing shareholders could be diluted.

**Limited trading liquidity limits shareholder options.** Given VKTX shares only entered the public market recently; daily trading volume and name recognition are relatively modest. With relatively illiquid trading volume, shareholders wanting to increase or reduce their positions in a volatile stock market may face constraints.

Figure 1: Income Statement

Viking Therapeutics – Income Statement														
(\$',000)	2012	2013	2014	1Q15	2Q15	3Q15E	4Q15E	2015E	2016E	2017E	2018E	2019E	2020E	2021E
<b>Revenue</b>														
Product revenue	0.0	0.0	0.0	-	-	-	-	0	0	0	0	88,989	297,528	626,498
Other revenue	0.2	0.0	0.0	-	-	-	-	0	0	0	0	0	0	0
Total revenue	0.2	0.0	0.0	-	-	-	-	0	0	0	0	88,989	297,528	626,498
<b>Costs of goods</b>														
Gross sales												10,679	35,703	75,180
Research and development	(69)	(12)	(22,223)	(139)	(1,101)	(1,134)	(1,136)	(3,509)	(6,914)	(11,961)	(16,625)	(18,121)	(19,571)	(20,941)
General and administrative	(41)	(89)	(1,245)	(322)	(1,526)	(1,450)	(1,493)	(4,791)	(7,139)	(9,566)	(10,044)	(10,546)	(11,073)	(11,627)
Marketing and sales												(31,000)	(54,250)	(59,675)
<b>Total Operating Expenses</b>	(110)	(101)	(23,468)	(461)	(2,627)	(2,584)	(2,629)	(8,300)	(14,052)	(21,526)	(26,669)	(59,668)	(84,895)	(92,243)
<b>Operating Incomes (losses)</b>	(109)	(101)	(23,468)	(461)	(2,627)	(2,584)	(2,629)	(8,300)	(14,052)	(21,526)	(26,669)	29,321	212,634	534,255
Change in fair value of accrued license fees	0	0	(1,822)	4,961	4,421	0	0	9,382	0	0	0	0	0	0
Change in fair value of debt conversion features	0	21	(391)	83	546	(100)	100	629	(200)	(500)	(500)	(500)	(500)	(500)
Amortization of debt discount	0	18	558	172	241	241	241	894	480	0	0	0	0	0
Interest expense	1	6	71	35	30	30	30	125	62	0	0	0	0	0
Total other (income) expenses	1	45	(1,584)	5,250	5,238	170	370	11,029	342	(500)	(500)	(500)	(500)	(500)
Loss before tax	(111)	(146)	(21,884)	(5,711)	(7,865)	(2,754)	(2,999)	(19,330)	(14,395)	(21,026)	(26,169)	29,821	213,134	534,755
Tax	0	0	0	-	-	-	-	0	0	0	0	(11,034)	(78,859)	(197,859)
<b>Net Income (Loss)</b>	(111)	(146)	(21,884)	(5,711)	(7,865)	(2,754)	(2,999)	(19,330)	(14,395)	(21,026)	(26,169)	18,787	134,274	336,896
Net Income (Loss) Applicable to Common Shareholders	(111)	(146)	(21,884)	(5,711)	(7,865)	(2,754)	(2,999)	(19,330)	(14,395)	(21,026)	(26,169)	18,787	134,274	336,896
Net Earnings (Losses) Per Share—Basic	(\$0.07)	(\$0.07)	(\$5.23)	(\$1.40)	(\$1.07)	(\$0.28)	(\$0.31)	(\$2.50)	(\$1.04)	(\$1.33)	(\$1.47)	\$0.82	\$5.89	\$14.78
Net Earnings (Losses) Per Share—Diluted	(\$0.07)	(\$0.07)	(\$5.23)	(\$1.40)	(\$1.07)	(\$0.28)	(\$0.31)	(\$2.50)	(\$1.04)	(\$1.33)	(\$1.47)	\$0.82	\$5.89	\$14.78
Shares outstanding—basic	1,483	2,043	4,187	4,074	7,332	9,783	9,785	7,743	13,785	15,785	17,785	22,785	22,788	22,790
Shares outstanding—diluted	1,483	2,043	4,187	4,074	7,332	9,783	9,785	7,743	13,785	15,785	17,785	22,785	22,788	22,790
<b>Margin Analysis (% of Sales/Revenue)</b>														
Costs of goods												12%	12%	12%
R&D	-33433%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-20%	-7%	-3%
SG&A	-19791%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-12%	-4%	-2%
Operating Income (loss)	-53124%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33%	71%	85%
Pretax	-537.9223	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34%	72%	85%
Tax Rate										0%	37%	37%	37%	37%
Net Income	-53792%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21%	45%	54%
<b>Financial Indicator Growth Analysis (YoY%)</b>														
Total Revenue	NA	-100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	234%	111%
R&D	NA	-83%	191264%	178%	NA	NA	-95%	-84%	97%	73%	39%	9%	8%	7%
SG&A	NA	119%	1292%	102%	NA	NA	56%	285%	49%	34%	5%	5%	5%	5%
Marketing and sales					NA	NA							75%	10%
Operating Income (Losses)	NA	-8%	23118%	120%	NA	NA	-89%	-65%	69%	53%	24%	-210%	625%	151%
Pretax Income	NA	32%	14864%	2395%	NA	NA	-86%	-12%	-26%	46%	24%	-214%	615%	151%
Net Income	NA	32%	14864%	2395%	NA	NA	-86%	-12%	-26%	46%	24%	-172%	615%	151%
EPS	NA	-4%	7202%	1855%	NA	NA	-85%	-52%	-58%	28%	10%	-156%	615%	151%

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Source: Bloomberg LP; Company reports; Laidlaw &amp; Company estimates

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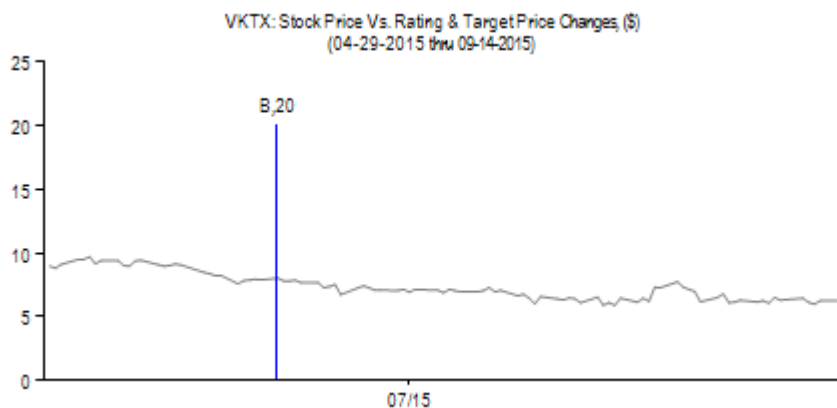
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#### 3 Year Rating Change History

Date	Rating	Closing Price (\$)
06/08/2015	Buy (B)	8.02

#### 3 Year Price Change History

Date	Target Price (\$)	Closing Price, (\$)
06/08/2015	20.00	8.02

Source: Laidlaw & Company

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			Investment Banking	Brokerage
<b>Strong Buy (SB)</b>	Expected to significantly outperform the sector over 12 months.	0.00%	0.00%	0.00%
<b>Buy (B)</b>	Expected to outperform the sector average over 12 months.	77.42%	29.03%	6.45%
<b>Hold (H)</b>	Expected returns to be in line with the sector average over 12 months.	3.23%	0.00%	0.00%
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