

US Equity Research

27 April 2015

BUY

unchanged

PRICE TARGET US\$35.00

unchanged

Price (27-Apr) US\$28.24

Ticker VTL-NASDAQ

52-Week Range (US\$): 10.66 - 35.20
 Avg Daily Vol (M) : 68.3
 Shares Out. (M) : 21.8
 Market Cap (US\$M): 614

FYE Dec	2013A	2014A	2015E
Revenue (US\$M)	0.0	0.0	0.0
EPS Adj&Dil (US\$)	(1.85)	(3.56)	(2.56)

Quarterly Revenue	Q1	Q2	Q3	Q4
2013A	0.0	0.0	0.0	0.0
2014A	0.0	0.0	0.0	0.0
2015E	0.0	0.0	0.0	0.0

Quarterly EPS Adj&Dil	Q1	Q2	Q3	Q4
2013A	(0.49)	(0.34)	(0.43)	(0.59)
2014A	(24.49)	(0.91)	(0.59)	(0.59)
2015E	(0.73)	(0.77)	(0.81)	(0.85)



Vital Therapies is a biotherapeutic company focused on its ELAD system for treatment of acute liver disease and failure.

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Company Update

Phase 3 VTI-208 baseline characteristics representative of AILD population, tight standard deviation, positive

Baseline characteristics reflective of AILD patients with high 90-day mortality

VTL presented a poster today on the baseline characteristics of patients in the VTI-208 trial with tight standard deviations, which we believe is reflective of their target AILD patient population. First, the mean Model of End-stage Liver Disease (MELD) score was 27.2 +/- 3.8 (representing a 90-day survival rate of 49% [64% - 34%]) and the Maddrey Discrimination Function was 72.9 +/- 25 (scores of >32 indicate severe alcoholic hepatitis), which we believe captures AILD patients with high mortality rate. Second, mean INR was 2.0 +/- 0.5 and platelets of 152 +/- 82.4, which demonstrates that these patients are not actively bleeding and will not die imminently, a positive in preventing very sick patients that can muddle the survival endpoints. Finally, the average liver size was 19.1 cm +/- 4.4 (well above 10 cm) and Tbili was 25.0 +/- 9.2, which demonstrates that these patients are not spontaneously getting better, decreasing another confounding variable around the ELAD technology.

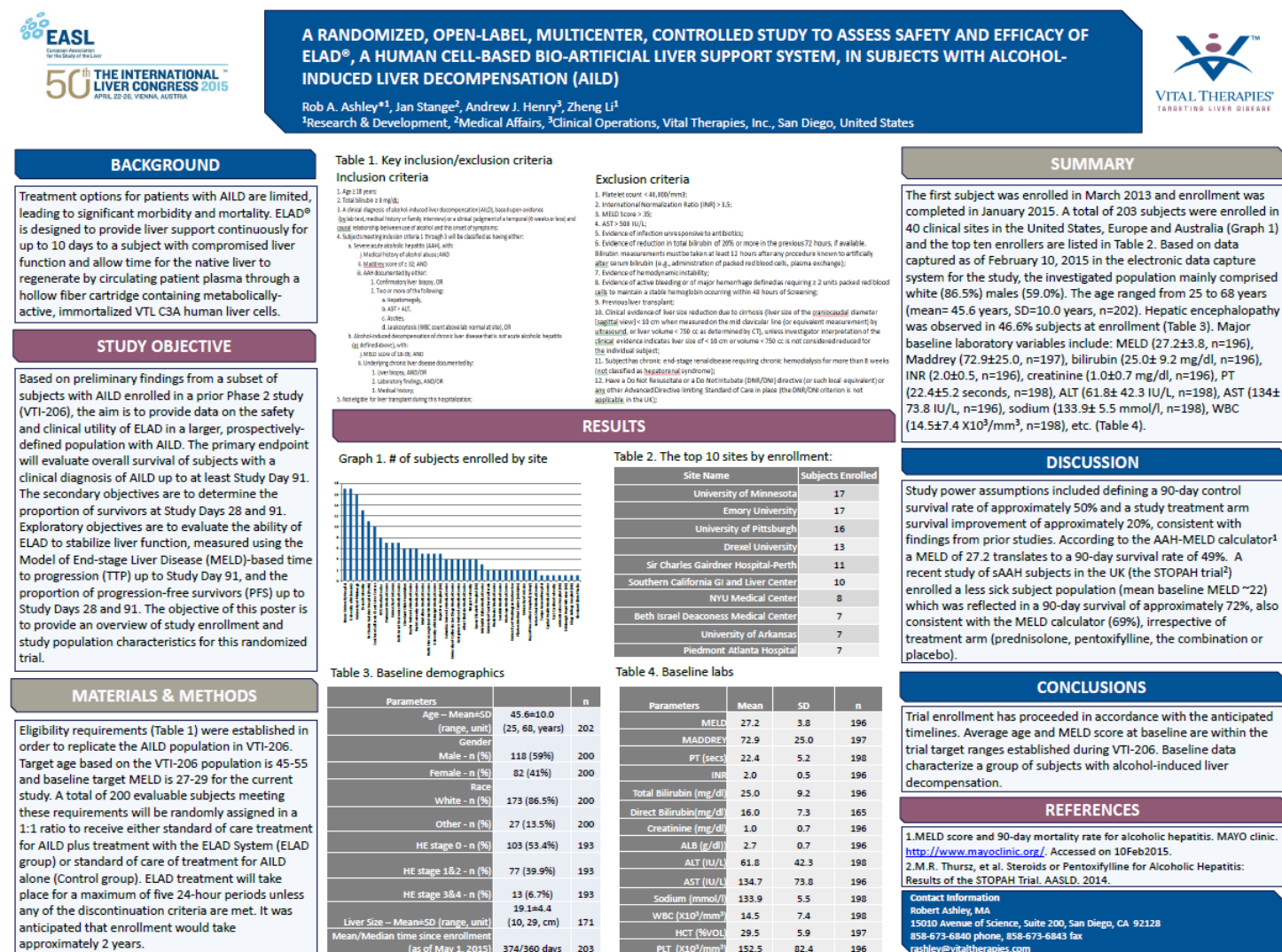
Expression of CYP450 liver enzymes high in ELAD system, affirms mechanism of action

Specific CYP450 enzymes, including CYP1A2, 2C9, 2D6, 2C19, and 3A4, were highly expressed in the ELAD cartridges vs. monolayer cultures, a positive in clarifying the mechanism of action for AILD livers since these enzymes are responsible for liver detoxification. Additionally, up-regulation of these enzymes (CYP11B2, CYP2A6, CYP2A7, CYP2C19, and CYP1A2) was observed after the ELAD cells were given to subject treatments, illustrating that the activity is not seen only in vitro, but in patients as well.

Expect top-line data for VTI-208 3Q15, significant catalyst

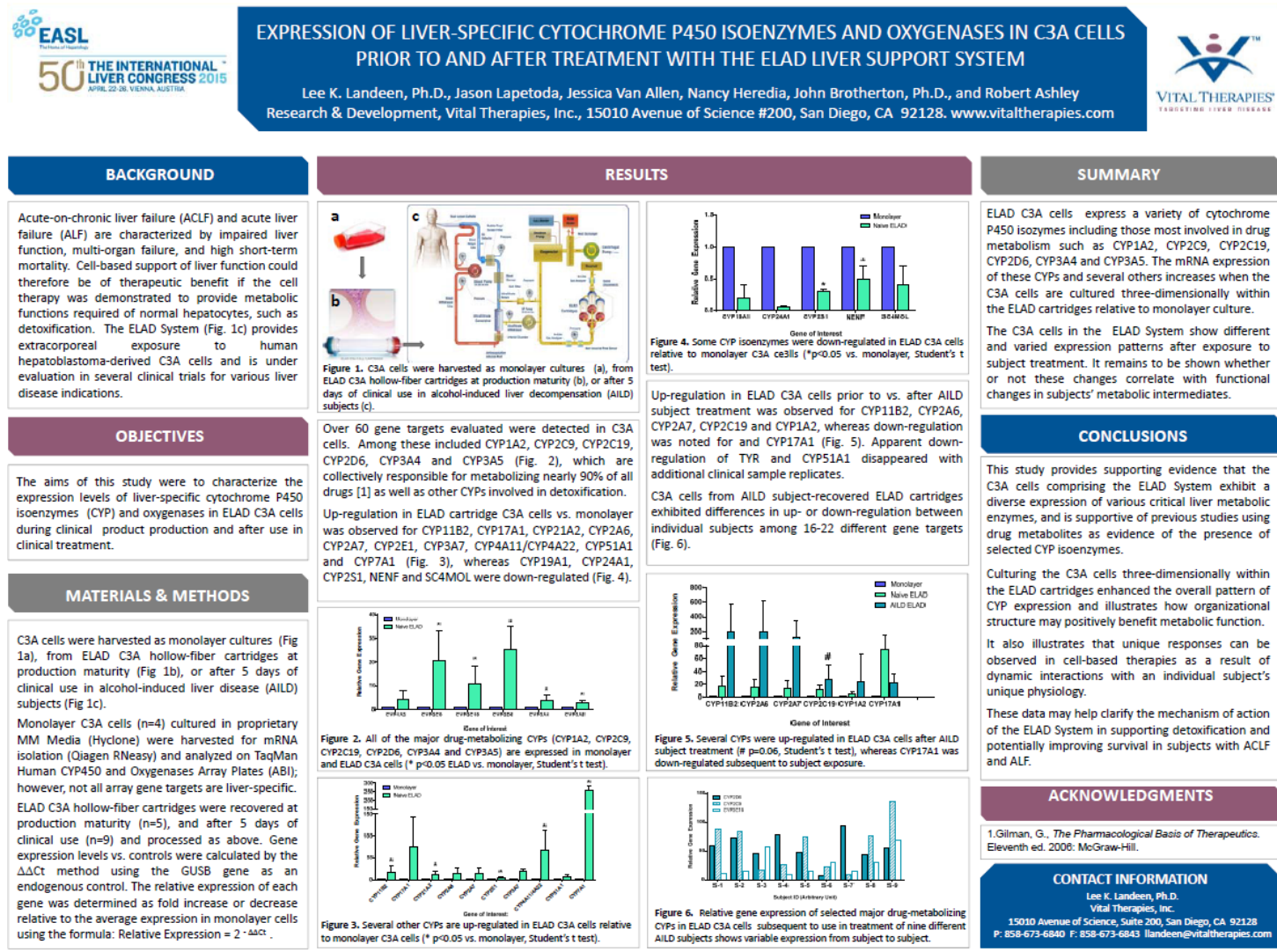
Top-line data results for VTI-208 expected to be released in 3Q15, a significant catalyst for the stock if results remain positive. Given the baseline characteristics that were presented today at EASL conference, we have higher conviction for positive data in the ELAD technology in demonstrating 91-day survival benefit vs. placebo. We maintain our BUY position and \$35 price target.

Figure 1: Baseline characteristics of VTI-208



Source: EASL poster presentation

Figure 2: CYP450 liver expression high prior to and after ELAD treatment



Source: EASL poster presentation

Figure 3: VTL income statement

(\$000's) [FY-DEC]												
Revenues	2013A	2014A	1Q15E	2Q15E	3Q15E	4Q15E	2015E	2016E	2017E	2018E	2019E	2020E
ALD								-	79,591	286,980	447,563	493,626
SILF								-	10,612	38,264	47,740	55,691
FHF								-	26,015	93,803	117,033	136,524
Total								-	116,218	419,047	612,335	685,841
Income Statement	2013A	2014A	1Q15E	2Q15E	3Q15E	4Q15E	2015E	2016E	2017E	2018E	2019E	2020E
Revenue												
Total Revenue	-	-	-	-	-	-	-	-	116,218	419,047	612,335	685,841
Cost of Revenue	-	-	-	-	-	-	-	-	17,433	62,857	91,850	102,876
Gross Profit	-	-	-	-	-	-	-	-	98,785	356,190	520,485	582,965
Operating Expenses												
Stock-based Compensation in SGA	537	722	286	301	316	332	1,235	1,482	3,225	3,566	4,078	4,821
Stock-based Compensation in R&D	411	675	286	301	316	332	1,235	1,482	1,743	1,928	2,204	2,606
Research & Development	21,376	39,479	9,751	10,078	10,582	11,111	41,521	37,045	43,582	40,480	38,577	37,790
General & Administrative	9,078	10,863	4,011	4,362	4,580	4,809	17,762	34,082	38,352	50,118	65,030	84,701
Total Operating Expense	31,402	50,342	14,335	15,041	15,793	16,583	59,283	71,127	81,934	90,598	103,607	122,491
EBITDA												
Operating Income		(50,342)	(14,335)	(15,041)	(15,793)	(16,583)	(59,283)	(71,127)	16,852	265,592	416,878	460,474
Interest Income	5	-	-	-	-	-	-	-	-	-	-	-
Interest Expenses	0	-	-	-	-	-	-	-	-	-	-	-
Other (expense) income, net	(15)	-	-	-	-	-	-	-	-	-	-	-
Revaluation of preferred stock warrant liabilities	0	-	-	-	-	-	-	-	-	-	-	-
Revaluation of future purchase rights liabilities	(1,306)	-	-	-	-	-	-	-	-	-	-	-
Pretax income	(32,718)	(50,342)	(14,335)	(15,041)	(15,793)	(16,583)	(59,283)	(71,127)	16,852	265,592	416,878	460,474
Provision for Income Taxes	-	-	-	-	-	-	-	-	6,235	98,269	154,245	170,375
Tax Rate	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%
Net Income	(32,718)	(50,342)	(14,335)	(15,041)	(15,793)	(16,583)	(59,283)	(71,127)	10,617	167,323	262,633	290,099
Amortization of deemed dividend												
Accretion to redemption value of convert preferred												
Net Income (Non-GAAP)	(39,085)	(56,821)	(14,335)	(15,041)	(15,793)	(16,583)	(59,283)	(71,127)	10,617	167,323	262,633	290,099
GAAP EPS (Diluted)	\$ (1.55)	\$ (3.56)	\$ (0.73)	\$ (0.77)	\$ (0.81)	\$ (0.85)	\$ (2.56)	\$ (2.56)	\$ 0.38	\$ 6.03	\$ 9.46	\$ 10.45
Non-GAAP EPS (Diluted)	\$ (1.85)	\$ (3.56)	\$ (0.73)	\$ (0.77)	\$ (0.81)	\$ (0.85)	\$ (2.56)	\$ (2.56)	\$ 0.38	\$ 6.03	\$ 9.46	\$ 10.45
Diluted Weighted Average Shares		15,975	19,547	19,547	19,547	19,547	23,118	27,761	27,761	27,761	27,761	27,761

Source: Company reports, Canaccord Genuity estimates

Figure 4: VTL valuation

	Peak Sales	Year	Current Value	Probability	Value Per Share
US					
AILD	\$564	2021	\$867	60%	\$25
SILF	\$158	2021	\$266	25%	\$3
FHF	\$64	2021	\$109	25%	\$1
EU - Royalty					
AILD	\$90	2021	\$215	45%	\$5
SILF	\$23	2021	\$55	25%	\$1
FHF	\$9	2021	\$21	25%	\$0
Total			\$1,532		\$35
Risk Free Rate	2%				
Beta	1.45	Shares (M)			
Risk Premium	6%				
Discount Rate	11%				

Source: Company reports, Canaccord Genuity estimates

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Target Price / Valuation Methodology:

Vital Therapies - VTL

Our price target is based on a probability-adjusted NPV valuation.

Risks to achieving Target Price / Valuation:

Vital Therapies - VTL

Risks to our outlook and price target include the following: Vital Therapies' clinical studies may fail, requiring additional clinical trials and further capital; clinical trials may be terminated altogether, decreasing the overall value of the company's pipeline; competitors may attain the technology surrounding the ELAD system, increasing the likelihood of a competitive/generic product. Even if the ELAD system is approved, resulting revenues may be below investor expectations due to lack of efficacy, competition, complexity, or all three. Safety issues may also emerge after FDA approval that could limit the usage of the ELAD system, also reducing sales. Competitors could gain access to the ELAD systems technology and potentially create a competitor product. Vital Therapies' keeps much of its IP as trade secrets, creating the opportunity for competitors to poach employees for intelligence. In addition, competitors may be able to gather ELAD's technology through reverse engineering the ELAD system after appropriating it from a hospital. Congress has recently questioned high pricing for biotech drugs, which could become a trend, creating broad downward pressure across the biotech sector. Although we believe oncology drugs will receive less pricing pressure due to the seriousness of the disease, lawmakers may eventually make public calls for lower pricing.

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Global Stock Ratings (as of 04/27/15)

Rating	Coverage Universe		IB Clients
	#	%	%
Buy	578	58.21%	32.70%
Hold	331	33.33%	17.22%
Sell	40	4.03%	2.50%
Speculative Buy	44	4.43%	61.36%
	993*	100.0%	

*Total includes stocks that are Under Review

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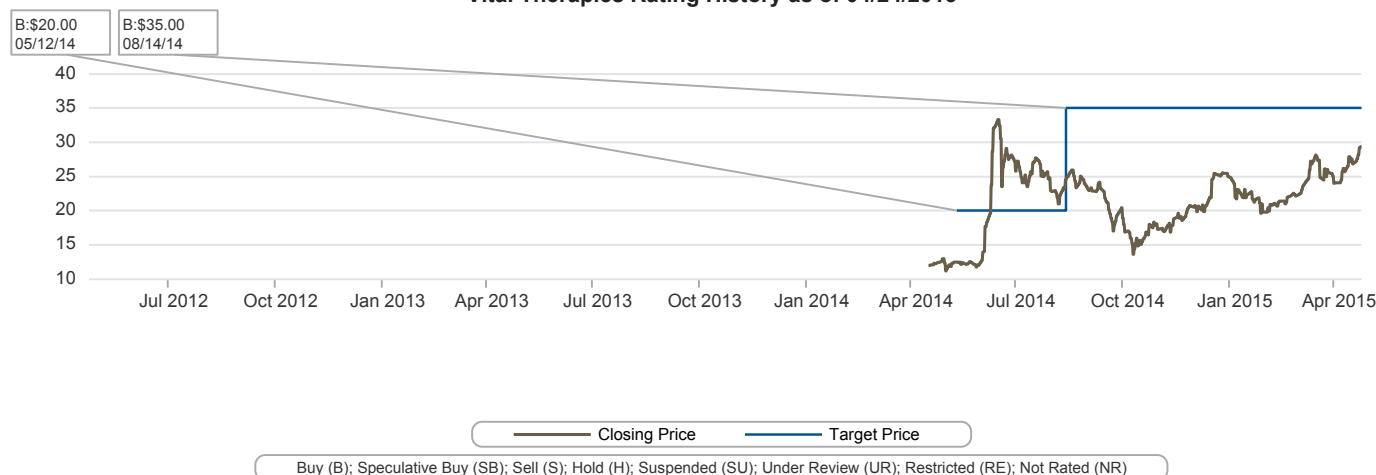
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