

	Annual EPS	Annual Revenue	Rating/Target	
Today's Changes	2014E \$(2.99) from \$(2.82) 2015E \$0.87 from \$1.49	No changes	No changes	

Trevena

TRVN: NASDAO: US\$4.72

BUY

Target: US\$17.00

Ritu Baral - Canaccord Genuity Inc. (US)

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COMPANY STATISTICS:

 Forecast Return:
 197%

 Shares Out (M):
 26.4

 Market Cap (M):
 US\$124.4

 52-week Range:
 US\$4.50 - 9.95

EARNINGS SUMMARY:

FYE Dec		2013A	2014E	2015E
Revenue:		0.1	0.0	65.0
EPS:		(1.18)	(2.99)	0.87
Revenue:	Q1	0.0	0.0	
	Q2	0.0	0.0	
	Q3	0.0	0.0	
	Q4	0.0	0.0	
Total		0.1	0.0	65.0
EPS:	Q1	(0.30)	(0.59)	
	Q2	(0.30)	(0.69)	
	Q3	(0.30)	(0.82)	
	Q4	(0.28)	(0.88)	
Total		(1.18)	(2.99)	0.87

SHARE PRICE PERFORMANCE:



Source: Interactive Data Corporation

COMPANY DESCRIPTION:

TRVN is a clinical stage biotechnology company focused on new chemical entities that selectively target G protein coupled receptors. TRVN has advanced two product candidates into the clinic: TRV130 for postoperative pain and TRV027 in acute heart failure. TRVN is also quickly moving its lead preclinical products for various CNS diseases into the clinic.

All amounts in US\$ unless otherwise noted.

Life Sciences -- Biotechnology

Q1/14: QUICK PROGRESS OUT OF THE GATES, BOTH '027 AND '130 TO YIELD PHASE 2 DATA IN 2015

Investment recommendation

Reiterate BUY, \$17 target on potential of TRV027 in AHF and TRV130 in first-line post-op pain. TRVN's lead product is a Ph2b next-generation inotrope for AHF that has positive Phase 2a data and new Phase 2b data due mid-2015. Phase 2-ready TRV130 has generated Phase 1b data suggesting superior efficacy and safety data to IV PCA morphine standard of care. We expect Phase 2 data in 2015 to be positive. Our \$17.00 target is based on a pNPV analysis.

Investment highlights

- Q1 Q1/14 EPS \$(0.59) vs consensus \$(0.40), our estimates (0.59).
- TRV130 dose finding continues, as positive safety and efficacy data rack up Phase 2 bunionectomy trial initiated. TRVN indicated the new Phase 1b MAD Pt 1 safety and efficacy results were consistent with earlier studies showing good PK, safety and tolerability. Pt 2 will look at MAD in slow and normal metabolizers. TRVN has also started a 2-part Phase 2 bunionectomy dose finding study with a complex, adaptive design which should yield data in Q1/15. It also plans on starting another Phase 2, this time in soft tissue using ondemand Tx soon with data later in 2015.
- Phase 2 '130 BLAST-AHF and Phase 1b in oral '734 both expected to have data H2/15. TRV027 Ph2b dosed first patient in January for acute heart failure. Results are expected in H2/15 and we think Actavis likely remains committed to the option on this program with acquired with FRX.'734 is an oral version of '130 that is starting its Phase 1b PK trials. We think '130 success bodes well for this program.

Canaccord Genuity is the global capital markets group of Canaccord Genuity Group Inc. (CF: TSX | CF.: LSE)

The recommendations and opinions expressed in this research report accurately reflect the Investment Analyst's personal, independent and objective views about any and all the Designated Investments and Relevant Issuers discussed herein. For important information, please see the Important Disclosures section in the appendix of this document.



TRIAL DESIGN

Figure 1: TRV130 Phase 2 trial design

Ph2 Study of TRV130 for the T	reatment of Pain After Bunionectomy (Data Q1/15)
Estimated Enrollment	400
Drimany Endnaints	Reduction of pain intensity following bunionectoby (11-point scale administered
Primary Endpoints	intermittently over 48 hrs)
Inclusion Criteria	Has undergone primary, unilateral, first metatarsal bunionectomy with no additional
inclusion Criteria	collateral procedures
	Pain intensity rating ≥4 on 11 point NRS
Exclusion Criteria	ASA Physical Status Classification System classification of P3 or worse
	Has surgical or post-surgical complications
Arm	Intervention
	Part A (N=150)
Experimental (N=25)	TRV130 1 mg IV Q4H x 48 h
Experimental (N=25)	TRV130 2 mg IV Q4H x 48 h
Experimental (N=25)	TRV130 3 mg IV Q4H x 48 h
Experimental (N=25)	TRV130 4 mg IV Q4H x 48 h
Active Comparator (N=25)	Morphine 4 mg IV Q4H x 48 h
Placebo (N=25)	Dextrose 5% in water, IV Q4H x 48h
	Part B (N=250)
10 cohorts (N=25 each)	Placebo, morphine, 2 doses TRV 130
	Doses are adaptive, based on the results of each cohort. TRV130 doses can be changed in
	the next cohort to find dose yielding optimal analgesia and tolerability.

Source:Canaccord Genuity and clinicaltrials.gov



Figure 2: TRV027 Phase 2 trial design

Estimated Enrollment Stimated Enrollment Time from randomization to death through day 30 Time from randomization to the rehapsilatation through day 30 Time from randomization to heart failure e-hospilatation through day 5 Change in dyspined VAS score from bisseline through day 5 Length of initial biopotist say (days) from randomization Pre-existing diagnosis of heart failure Systolic blood pressure ±120 mm/lg and ± 200 mm/lg within 30 minutes of randomization Ventricular rate £125 bips. Palients with rate controlled persistent or permanent atrial fibrillation (arib) at screening are permitted. Presence of ADHT defined by: BNP = 400 pg/ml. or NT proBNP > 1000 pg/ml. or NT-proBNP > 800 pg/ml. or NT-proBNP >	nase 2 trial design	
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ine expectancy of less than o months		life expectancy of less than 6 months

Source: Canaccord Genuity and clinicaltrials.gov



Figure 3: TRV027 Phase 2 trial design cont'd

A Study to Explore the Efficacy of TRV027 in Patients Hospitalized for BLAST-AHF Data H2/2015						
Arm	Intervention					
Experimental	TRV027 continuous dose #1 IV					
Experimental	TRV027 continuous dose #2 IV					
Experimental	TRV027 continuous dose #3 IV					
Placebo	Placebo IV infusion					

Source:Canaccord Genuity and clinicaltrials.gov

Figure 4: TRVN P&L

	2011A	2012A	2013E	Q1/14A	Q2/14E	Q3/14E	Q4/14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
TRV130	-	-	-	-	-	-	-	-	-	-	-	28.1	113.6	204.
Product revenues	-	-	-	-	-	-	-	-	-	-	-	28.1	113.6	204.
Grant revenue	2.4	0.8	0.1	-	-	-	-	-	65.0	15.0	-	50.0	15.0	75.
Total revenues	2.4	0.8	0.1	-	-	-	-	-	65.0	15.0	-	78.1	128.6	279.
Cost of goods sold		-	-	-	_	-	-							
Gross Profit	2.4	0.8	0.1	-	-	-	-	-	65.0	15.0	-	78.1	128.6	279.
R&D expense	15.1	13.3	18.2	7.6	9.0	11.0	12.0	39.6	45.0	50.0	40.0	40.0	40.0	40.
SG&A expense Other operating expense	3.1	3.1	4.0	2.0	2.1	2.2	2.3	8.7	6.0	6.6	50.0	60.0	63.0	66.
Total operating expense	18.2	16.4	22.3	9.7	11.1	13.2	14.3	48.3	51.0	56.6	90.0	100.0	103.0	106.
Operating income	(15.8)	(15.6)	(22.1)	(9.7)	(11.1)	(13.2)	(14.3)	(48.3)	14.0	(41.6)	(90.0)	(21.9)	25.6	172.
Net Interest/Investment income	0.0	-	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.
(interest expense)	(0.1)	(0.2)	0.0	-	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.
Other non-operating income (expense) Change in fair value of warrant liability	0.0	0.2	-	0.2 0.1				-	-	-	-	-	-	
Interest and other, Net	(0.1)	(0.0)	-	0.3	-	-	-	0.3	0.6	1.1	2.2	4.5	8.7	17.
Pre-tax income	(15.8)	(15.6)	(22.1)	(9.4)	(11.1)	(13.2)	(14.3)	(48.3)	14.1	(41.5)	(89.9)	(21.9)	25.7	172.
Income tax expense (benefit)	-	-	-	0.0				-	-	-	-	-	-	-
Net income (loss)	(15.8)	(15.6)	(22.1)	(9.4)	(11.1)	(13.2)	(14.3)	(48.3)	14.1	(41.5)	(89.9)	(21.9)	25.7	172.
Basic EPS	(0.96)	(0.95)	(1.18)		(0.69)	(0.82)	(0.88)	(2.99)	0.87	(2.55)	(5.49)	(1.33)	1.55	10.3
Diluted EPS	(0.96)	(0.95)	(1.18)	(0.59)	(0.69)	(0.82)	(88.0)	(2.99)	0.87	(2.55)	(5.49)	(1.33)	1.55	10.3
Basic shares outstanding	16.5	16.5	18.8	16.0	16.1	16.2	16.3	16.1	16.2	16.3	16.4	16.5	16.6	16
Diluted shares outstanding	16.5	16.5	18.8	16.0	16.1	16.2	16.3	16.1	16.2	16.3	16.4	16.5	16.6	16

Source: Canaccord Genuity and company reports



Figure 5: TRVN pNPV analysis

Product Development

Drug name	Indication	Status	Launch	Success Sa	iles (US\$m)	Royalty	Profitability	NPV (US\$)
TRV130	Acute postoperative pain	Phase 2a	2018	55%	791.3	100%	90%	15.36
TRV027	Acute heart failure	Phase 2b	2020	45%	643.5	18%	100% Total	2.04 17.40

Source: Canaccord Genuity estimates and company reports



Investment risks

Clinical risk -- TRVN's planned Phase 2 trials may not be successful. TRV027: The Phase 1b trial did not reach statistical significance in key efficacy measures due to an unexpected benefit experienced by the placebo group. There is no guarantee Ph2b or Phase 3 data could not be similarly confounded. Further, the current Phase 2b trial uses a substantially different endpoint. TRV130: We note that all pain trials have a high risk of unusual placebo response which can frequently confound statistics.

Clinical risk -- Additional trials may show TRV027 and TRV130 to have an unacceptable safety and/or tolerability profiles. One patient in the first healthy volunteer study had a severe episode of syncope. This was thought to be procedurally related, and this side effect was never seen again. Drops in blood pressure have been seen in clinical development, necessitating drug discontinuation in one patient. While moderate drops in pressure are beneficial in heart failure, large drops can be problematic. TRV130: Should the drug's nausea, vomiting and respiratory depression profile prove to be no different than that of current drugs, its commercial potential would be greatly curtailed.

Regulatory risk -- TRV130 may not be approved by the FDA and/or EMA despite Phase 3 success, or scheduling/REMS restriction may greatly impair the drug's chance of success. TRV130 will likely be designated schedule II like morphine, which complicates distribution and use of the therapy, limiting commercial potential. TRV must be able to address this in its commercial efforts.

Competitive risk --TRV027: '027 may compete with first-generation inotropes for use in AHF. However unpopular and dangerous these drugs are in select patients, they are still cheap and effective in the short term. Further, while we believe Novartis' serelaxin (under FDA review for heart failure) efficacy data is weak thus far, if approved it would have a head start on '027. We believe Amgen/Cytokinetics' omecamtiv, also in development for AHF, has a complementary mechanism to '027. TRV130: '130 will be up against established and newer competitors. IV PCA morphine for front line is a cheap standard of care with high clinician familiarity and comfort. TRVN will have to generate proof of cost savings to compete. Further, AcelRx is developing a new sufentanil tablet for hospital base post-operative use that we think will be associated with fewer administration errors than IV PCA morphine. While we think the product will be premium priced, it may have appealing cost-saving features and will very likely have a head-start in marketing.

Commercial risk --.Both TRV027 and TRV130 will likely mainly be used in the hospital setting, a very cost conscious environment. We believe it is critical for TRVN to general cost-savings-to-the-hospital data (usually around length of stay or recovery unit time) to generate healthy adoption by hospitals.



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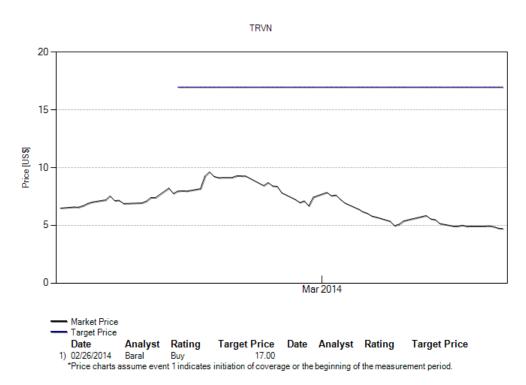
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Price Chart:*



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^{*}Total includes stocks that are Under Review



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