

## Healthcare: Biotechnology

# TrovaGene, Inc. | TROV - \$5.36 - NASDAQ | Buy

### Company Update

#### Stock Data

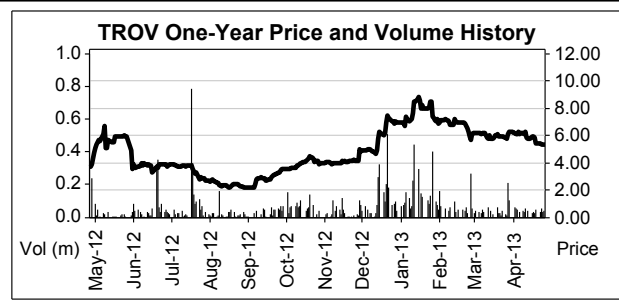
52-Week Low - High	\$2.09 - \$8.96
Shares Out. (mil)	15.60
Mkt. Cap.(mil)	\$83.6
3-Mo. Avg. Vol.	59,444
12-Mo.Price Target	\$11.00
Cash (mil)	\$10.8
Tot. Debt (mil)	\$0.0

#### EPS \$

Yr Jan	—2012—	—2013E—	—2014E—
		<b>Curr</b>	<b>Curr</b>
1Q	(0.09)A	(0.12)E	-
2Q	(0.28)A	(0.10)E	-
3Q	(0.05)A	(0.14)E	-
4Q	(0.43)A	(0.14)E	-
YEAR	(0.89)A	(0.49)E	(0.46)E
P/E	NM	NM	NM

#### Revenue (\$ millions)

Yr Jan	—2012—	—2013E—	—2014E—
		<b>Curr</b>	<b>Curr</b>
1Q	0.0A	0.1E	-
2Q	0.0A	0.2E	-
3Q	0.2A	0.2E	-
4Q	0.2A	0.3E	-
YEAR	0.5A	0.9E	1.6E



## TROV: PerkinElmer Deal Validates Transrenal Nucleic Acids (TrNA) Technology

On Friday, TROV reported via an 8K that it has entered into a R&D agreement with PerkinElmer Health Sciences to co-develop and design an assay, based on the TROV's TrNA technology for determining the risk of a patient to develop hepatocellular carcinoma (liver cancer).

#### Details:

Both companies will jointly validate the hepatocellular carcinoma assay and evaluate the potential of combining the TROV's TrNA technology with PerkinElmer's technology for automation of nucleic acid isolation. TROV is entitled to milestone payments from PerkinElmer. Should the product be successfully developed, PerkinElmer will have an exclusive option for the first right of negotiation for a royalty-bearing license.

#### Implications:

In our opinion, the collaboration with PerkinElmer is an important validation of the transrenal nucleic acids (TrNA) technology and the recognition that TROV is a dominant player in the space by a major industry heavyweight. Given its broad product offering and strength in marketing and sales, PerkinElmer could potentially develop TrNA-based products not only in the diagnostic arena but also in the research tool area as well. In addition to the product development in liver cancer, the two parties could potentially expand collaboration into other disease areas if the initial collaboration is fruitful.

The proposed liver cancer product has fully leveraged Trovagen's product development strength, in our opinion, as progression of this disease involving infectious agent (hepatitis B virus or HBV) and oncogene mutation (p53). Recalled that TROV recently just launched a HPV-HR DNA diagnostic test in March 2013 and expects to roll out several cancer diagnostics later this year, including KRAS potentially in 2Q13.

#### Action:

Since materialization of the encouraging outlook for TrNAs-based diagnostics could drive TROV share value beyond the current valuation, we reiterate our Buy rating and our \$11 price target, supported by peer comparable analysis, to long-term, risk tolerant investors.

Intraday price: \$5.96 at 3:01pm ET 4/26/2013

## VALUATION

Given TrovaGene's products are in mid-to-early development stage, it is more difficult to project the future revenue stream with sufficient accuracy. As such, we believe a peer comparable analysis is a more appropriate method to value TROV shares. Accordingly, we have derived a 12-month target price of \$11, based on a peer comparable analysis with molecular diagnostic peers.

Factors that could impede shares of TROV from achieving our price target include: 1) despite its novelty and potential benefits, TrNAs-based diagnostic test remain untested as a commercially-viable product; 2) despite promising outcomes from analytical and early clinical validation studies, it remains uncertain as to whether or not actual clinical utilities of these tests can be established by upcoming clinical validation studies; 3) other possible TrNAs-based diagnostic tests could outperform TrovaGene's products; 4) commercial outlook of TrNAs-based diagnostic tests might not meet expectations; 5) lack of sufficient cash could impede corporate development; and 6) limited trading liquidity limits shareholder options.

## RISKS

**Despite its novelty and potential benefits, the TrNAs-based diagnostic test remains untested as a commercially viable product.** Although the TrNAs-based diagnostic test has the potential to become one of the more sensitive diagnostic platforms, with possible broad clinical utility, the platform itself remains in a nascent development stage without any commercialization. As such, risks still exist as to whether or not TrNAs-based diagnostic tests could become a commercial alternative until a successful precedent has been established.

**Despite promising outcomes from analytical and early clinical validation studies, it remains uncertain as to whether or not actual clinical utility of these tests can be established by upcoming clinical validation studies.** It remains too early for the test to be rapidly adapted by large number of physicians until clinical utility has been established by additional successful clinical validation studies. Many of such prospective studies might take a while before a potential positive outcome is reported. It is difficult to handicap the outcome of potential future validation studies. If not robust, the commercial potential of the KRAS or any other tests could be limited.

**Other possible TrNAs-based diagnostic tests could potentially outperform TrovaGene's products.** Although TrovaGene's platform has comprised several superior technologies and is potentially protected by patents, it is possible that competitors could develop other similar or even better TrNAs-based diagnostic products without infringing TrovaGene's patents, since no company has a monopoly on the TrNAs-based platform.

**Commercial outlook of TrNAs-based diagnostic tests might not meet expectations.** Despite potentially successful clinical validation results that establish clinical utility for the test, the sales performance might be difficult to forecast, depending on the level of physician and payer buy-in as well as marketing and sales execution by the company or potential commercialization partners.

**Lack of sufficient cash could impede corporate development.** If the company cannot amass sufficient capital via non-dilutive sources to advance its pipeline development, TROV's shares could decline.

**Limited trading liquidity limits shareholder options.** With a relatively illiquid trading volume, shareholders wanting to increase or reduce positions may face constraints.

## COMPANY DESCRIPTION

TrovaGene is a development-stage molecular diagnostic company that focuses on the development and marketing of transrenal nucleic acids (TrNAs)-based diagnostic tests for patient / disease screening and monitoring. The company's internal development focuses on oncology with KRAS, BRAF and PIK3CA as lead diagnostic markers. The company expects to conduct multiple clinical validation studies in 2013 and beyond to further advance oncology diagnostic tests with revenue growth potentially to start in 2014.

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## Disclosures:

ROTH makes a market in shares of TrovaGene, Inc. and as such, buys and sells from customers on a principal basis.

On September 28, 2010, ROTH changed its rating system in order to replace the Hold rating with Neutral.

On May 26, 2011, ROTH changed its rating system in order to incorporate coverage that is Under Review.



Each box on the Rating and Price Target History chart above represents a date on which an analyst made a change to a rating or price target, except for the first box, which may only represent the first note written during the past three years. **Distribution Ratings/IB Services** shows the number of companies in each rating category from which Roth or an affiliate received compensation for investment banking services in the past 12 month.

### Distribution of IB Services Firmwide

Rating	Count	Percent	IB Serv./Past 12 Mos. as of 04/26/13	
			Count	Percent
Buy [B]	186	52.99	84	45.16
Neutral [N]	39	11.11	4	10.26
Sell [S]	2	0.57	1	50.00
Under Review [UR]	22	6.27	11	50.00

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**Buy:** A rating, which at the time it is instituted and or reiterated, that indicates an expectation of a total return of at least 10% over the next 12 months.

**Neutral:** A rating, which at the time it is instituted and or reiterated, that indicates an expectation of a total return between negative 10% and 10% over the next 12 months.

**Sell:** A rating, which at the time it is instituted and or reiterated, that indicates an expectation that the price will depreciate by more than 10% over the next 12 months.

**Under Review [UR]:** A rating, which at the time it is instituted and or reiterated, indicates the temporary removal of the prior rating, price target and estimates for the security. Prior rating, price target and estimates should no longer be relied upon for UR-rated securities.

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