

**Tetralogic Pharmaceuticals**

TLOG - BUY - Birinapant Drives HBV Seroconversion in Pre-Clinical Results; Ph.Ib/Ila Clinical Trial Initiated

**BRET HOLLEY, PH.D., ANALYST**  
 bret.holley@guggenheimpartners.com  
 212 293 2820

**FLASH NOTE**

SECTOR: Biotechnology

November 10, 2014

*Reminder: Be sure to register for the 2014 Guggenheim Securities **Life Sciences Day on Tuesday, December 16 in Boston**, by contacting your Guggenheim institutional sales representative. This event will consist of a full day of one-on-one meetings with senior management from more than 35 large-, mid-, and small-cap life sciences companies.*

On 11/10, Dr. Marc Pellegrini presented updated preclinical results for TLOG's (BUY, \$3.95) birinapant in hepatitis B (HBV) at AASLD. Dr. Pellegrini reviewed already reported data regarding birinapant's strong efficacy in eliminating HBV-DNA and HBV-surface Ag (HBsAg). Dr. Pellegrini also reported new results showing birinapant generated HBV seroconversion in all animals tested, which we believe is clearly positive, given the association of seroconversion with an effective HBV cure. In the preclinical models, birinapant was associated with transient AST/ALT elevations, and we believe this result is consistent with the drug causing death of HBV-infected cells. Importantly, we do not believe transient AST/ALT elevations would be a major impediment to birinapant's progress in the clinic. Overall, we believe the preclinical results provide early proof of concept for birinapant in HBV. Dr. Pellegrini, in association with TLOG, has initiated a Ph.Ib/Ila dose-escalation trial of birinapant in combination with either entecavir or tenofovir for chronic HBV, with safety and preliminary efficacy (HBsAg reduction and seroconversion) endpoints. Planned enrollment is 48 patients with measurable HBsAg in 6 cohorts (8 patients/cohort: 6-treated and 2-placebo), with 1X/wk for 4 wks birinapant dosing.

We see a reasonable probability these strong preclinical results for birinapant in HBV will translate into clinical success, and we look forward to the first Ph.I/II results in 2H15. Although we note that antivirals already have broad acceptance in HBV, we believe birinapant, through clearance of HBV-infected cells, has the potential for complementary or possibly superior efficacy vs. these treatments. We believe TLOG remains attractive ahead of Ph.I/II results for birinapant in ovarian cancer/MDS in 4Q14/mid-'15, and we believe birinapant's LT potential in HBV is not currently reflected in the stock's value.

## ANALYST CERTIFICATION

By issuing this research report, each Guggenheim Securities, LLC ("Guggenheim Securities") research analyst whose name appears in this report hereby certifies that (i) all of the views expressed in this report accurately reflect the research analyst's personal views about any and all of the subject securities or issuers discussed herein and (ii) no part of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst.

## IMPORTANT DISCLOSURES

The research analyst(s) and research associate(s) have received compensation based upon various factors, including quality of research, investor client feedback, and Guggenheim Securities, LLC's overall revenues, which includes investment banking revenues.

Guggenheim Securities, LLC managed or co-managed a public offering of securities for Tetralogic Pharmaceuticals during the past 12 months.

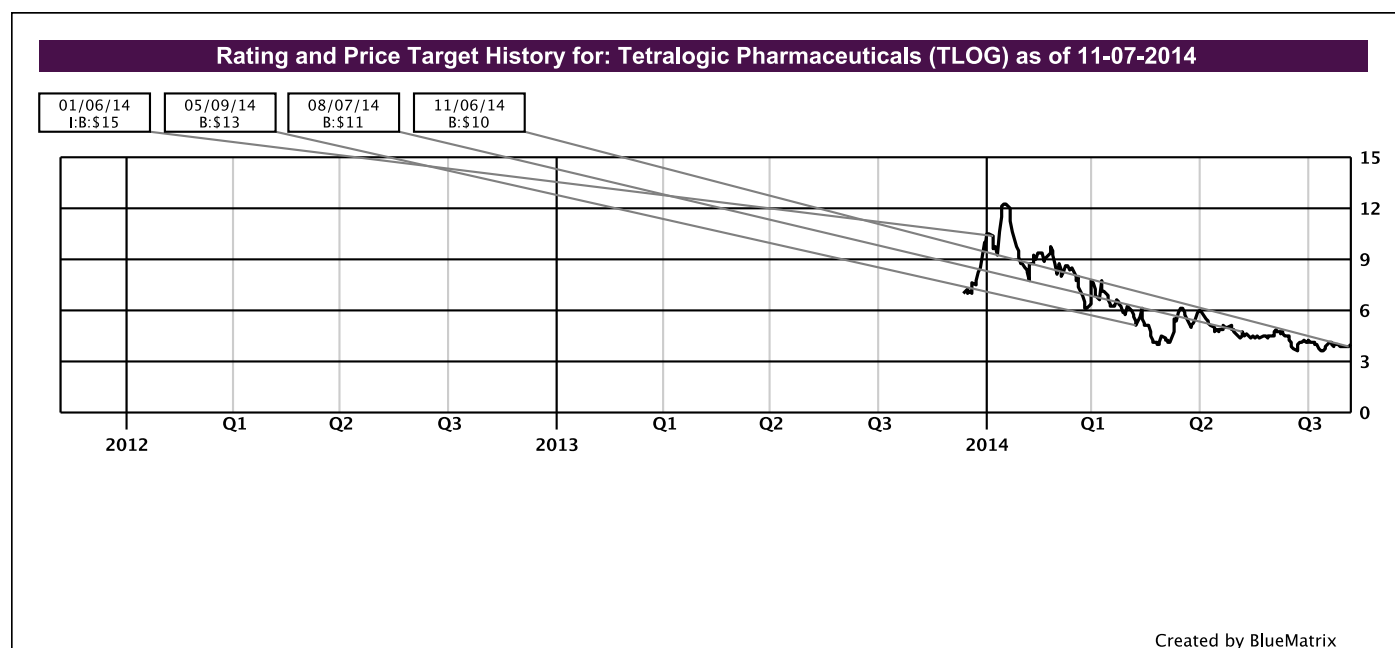
Guggenheim Securities, LLC makes a market in the securities or derivatives Tetralogic Pharmaceuticals.

Tetralogic Pharmaceuticals is or was during the 12-month period preceding the date of the distribution of this report a client of Guggenheim Securities, LLC. Guggenheim Securities, LLC provided Tetralogic Pharmaceuticals investment banking services.

Guggenheim Securities, LLC or its affiliates received compensation for investment banking services from Tetralogic Pharmaceuticals during the past 12 months.

Guggenheim Securities, LLC or its affiliates expect(s) to receive or intend(s) to seek compensation for investment banking services from Tetralogic Pharmaceuticals in the next 3 months.

Please refer to this website for company-specific disclosures referenced in this report: [https://guggenheimsecurities.bluematrix.com/sellside/ Disclosures.action](https://guggenheimsecurities.bluematrix.com/sellside/Disclosures.action). Disclosure information is also available from Compliance, 330 Madison Avenue, New York, NY 10017.



## RATING DEFINITIONS

**BUY (B)** - Describes stocks that we expect to provide a total return (price appreciation plus yield) of 15% or more within a 12-month period.

**NEUTRAL (N)** - Describes stocks that we expect to provide a total return (price appreciation plus yield) of plus 15% or minus 15% within a 12-month period.

**SELL (S)** - Describes stocks that we expect to provide a total negative return (price appreciation plus yield) of 15% or more within a 12-month period.

**NR** - The investment rating and price target have been temporarily suspended. Such suspensions are in compliance with applicable regulations and/or Guggenheim Securities, LLC policies.

**CS** - Coverage Suspended. Guggenheim Securities, LLC has suspended coverage of this company.

**NC** - Not covered. Guggenheim Securities, LLC does not cover this company.

**Restricted** - Describes issuers where, in conjunction with Guggenheim Securities, LLC engagement in certain transactions, company policy or applicable securities regulations prohibit certain types of communications, including investment recommendations.

**Monitor** - Describes stocks whose company fundamentals and financials are being monitored, and for which no financial projections or opinions on the investment merits of the company are provided.

Guggenheim Securities, LLC methodology for assigning ratings may include the following: market capitalization, maturity, growth/value, volatility and expected total return over the next 12 months. The price targets are based on several methodologies, which may include, but are not restricted to, analyses of market risk, growth rate, revenue stream, discounted cash flow (DCF), EBITDA, EPS, cash flow (CF), free cash flow (FCF), EV/EBITDA, P/E, PE/growth, P/CF, P/FCF, premium (discount)/average group EV/EBITDA, premium (discount)/average group P/E, sum of the parts, net asset value, dividend returns, and return on equity (ROE) over the next 12 months.

## RATINGS DISTRIBUTIONS FOR GUGGENHEIM SECURITIES:

Rating Category	Count	Percent	IB Serv./ Past 12Mos.	
			Count	Percent
Buy	108	59.67%	20	18.52%
Neutral	73	40.33%	5	6.85%
Sell	0	0.00%	0	0.00%

## OTHER DISCLOSURES

This research is for our clients and prospective clients only. Other than disclosures relating to Guggenheim Securities and its affiliates, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the research analyst's judgment. Guggenheim Securities conducts a full-service, integrated investment banking and brokerage business, and one or more of its affiliates conduct an investment management business. Guggenheim Securities is a member of SIPC (<http://www.sipc.org>). Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and our employees trading for our own account that reflect opinions that are contrary to the opinions expressed in this research. Guggenheim Securities or certain of its affiliates conducts an investment management business, trades for its own account, and conducts an investment business, and may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

We and our affiliates, officers, directors, and employees, excluding equity and credit analysts, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research. We and our affiliates also may sell to or buy from customers on a principal basis the securities described herein. We and our affiliates also do business with, or that relates to, companies covered in Guggenheim Securities' research, and may have a position in the debt of the company or companies discussed herein.

This research is not an offer to sell or the solicitation of an offer to buy any security. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

### TACTICAL TRADING IDEA DISCLAIMER

Guggenheim Securities, LLC produces "Tactical Trade Ideas" that identify short-term, catalyst-driven trading opportunities impacting companies within the Firm's coverage universe. Tactical Trade Ideas may exist on companies in this report and may be contrary to the analyst's published rating.

Copyright © 2014 by Guggenheim Securities, LLC, ("Guggenheim") a FINRA registered broker-dealer. All rights reserved. The contents of this report are based upon information or are obtained from sources that Guggenheim generally considers reliable, but Guggenheim makes no representations or warranties with respect to their accuracy, completeness, timeliness, suitability or otherwise, and assumes no responsibility to update them for subsequent events or knowledge. Guggenheim is not responsible for your use of this information.

## Contact Information

## NEW YORK SALES &amp; TRADING DESK

212 292 4700

## EQUITY TRADING DESK

212 292 4701

## MEDIA INQUIRIES

310 367 6567

## EMAIL

general@guggenheimcm.com

## Locations

## NEW YORK

330 Madison Avenue  
New York, NY 10017

## WASHINGTON, DC

1055 Thomas Jefferson Street, NW  
Suite 450  
Washington, DC 20007

## BOSTON

500 Boylston Street, 13<sup>th</sup> Floor  
Boston, MA 02116

## LOS ANGELES

601 South Figueroa Street  
Suite 4005  
Los Angeles, CA 90017

## DALLAS

1717 McKinney Avenue  
Suite 870  
Dallas, TX 75202

## SAN FRANCISCO

50 California Street  
Suite 1515  
San Francisco, CA 94111

## NASHVILLE

104 Woodmont Blvd  
Suite 203  
Nashville, TN 37205

## RICHMOND

919 East Main Street  
Suite 1605  
Richmond, VA 23219

## Guggenheim Equity Research

## ENERGY: EXPLORATION &amp; PRODUCTION

## Rob Cordray, Analyst

robert.cordray@guggenheimpartners.com  
972 638 5509

## ENERGY: OIL SERVICES &amp; EQUIPMENT

## Darren Gacicia, Analyst

darren.gacicia@guggenheimpartners.com  
212 293 3054

## Michael LaMotte, Analyst

michael.lamotte@guggenheimpartners.com  
972 638 5502FINANCIAL SERVICES: BUSINESS  
DEVELOPMENT COMPANIES,  
COMMUNITY AND REGIONAL BANKS

## Taylor Brodarick, Analyst

taylor.brodarick@guggenheimpartners.com  
615 208 1222FINANCIAL SERVICES: CARD NETWORKS,  
COMMUNITY AND REGIONAL BANKS

## David Darst, Analyst

david.darst@guggenheimpartners.com  
615 208 1224

## Ryan Strain, Associate

ryan.strain@guggenheimpartners.com  
615 208 1226

## HEALTHCARE: BIOPHARMA

## Tony Butler, Analyst

tony.butler@guggenheimpartners.com  
212 823 6540

## HEALTHCARE: BIOTECH

## Bret Holley, Analyst

bret.holley@guggenheimpartners.com  
212 293 2820

## HEALTHCARE: PHARMACEUTICALS

## Louise Chen, Analyst

louise.chen@guggenheimpartners.com  
212 381 4195

## Swati Kumar, Analyst

swati.kumar@guggenheimpartners.com  
212 918 8754

## Brandon Folkes, Associate

brandon.folkes@guggenheimpartners.com  
212 518 9976

## RETAIL &amp; CONSUMER

## John Heinbockel, Analyst

john.heinbockel@guggenheimpartners.com  
212 381 4135

## Steven Forbes, Associate

steven.forbes@guggenheimpartners.com  
212 381 4188TMT: MEDIA & ENTERTAINMENT,  
CABLE & SATELLITE TV

## Michael Morris, Analyst

michael.morris@guggenheimpartners.com  
804 253 8025

## Curry Baker, Associate

curry.baker@guggenheimpartners.com  
804 253 8029