

# Conatus Pharmaceuticals Inc. (CNAT)

Conatus to Initiate Two New Studies in 1H14

## MARKET DATA

Price	\$7.25
52-Week Range:	\$5.83 - \$11.24
Shares Out. (M):	16.0
Market Cap (\$M):	\$116.0
Average Daily Vol. (000):	105.0
Cash (M):	\$60
LT Debt (M):	\$1

Source: Thomson Reuters and JMP Securities LLC

**MARKET OUTPERFORM** | Price: \$7.25 | Target Price: \$14.00

## INVESTMENT HIGHLIGHTS

**Conatus to initiate two new studies in 1H14; reiterate Market Outperform rating and \$14 price target** based on a risk-adjusted, discounted cash flow analysis. Today, Conatus announced plans to initiate two additional clinical trials for its pan-caspase inhibitor emricasan -- a Phase 2b trial in NASH and a Phase 1b trial in liver failure patients with severe renal impairment (Figure 1). The NASH study is designed to establish a dosing strategy for this population. The severe renal impairment study is designed to broaden the scope of the liver failure program to include patients with severe renal impairment. Together, we view these upcoming studies as positive signs that Conatus is aggressively moving forward with emricasan development, providing additional incremental catalysts for the stock next year.

**Phase 2b trial in NASH.** Conatus plans to enroll ~40 patients for 28 days of dosing and to use the study to characterize the effect of emricasan on key biomarkers (cCK18 and ALT). If the biomarkers perform as expected based on studies of emricasan in other settings, development in NASH could be more straightforward. Management commented that if the initial study is successful, the next step could be a trial with chronic dosing for a full year; however, Conatus would likely wait for data from the placebo arms of a competitive program from Gilead to gain information about the natural history of the disease before moving into a larger NASH trial itself. Although there are some mechanistic safety concerns related to long-term dosing, emricasan is currently cleared by the FDA for dosing for up to two years and recent cCK18 studies have shown that while emricasan reduces unnaturally high apoptosis rates it does not reduce rates below normal levels.

**Phase 1b trial in severe renal impairment.** The trial is designed as an open-label study in the U.S. with eight patients on a 50 mg dose and eight matching controls. Conatus plans to understand the pharmacokinetic and safety/tolerability profile with the goals of broadening eligibility requirements in future liver failure studies and identifying any dose adjustments that may be needed in this population. Results are expected in 2Q14 and, along with the acute on chronic liver failure (ACLF) study, will feed into the next chronic liver failure (CLF) study, slated to start in 2H14 (Figure 2).

FY DEC	2012A	2013E	2014E
Revenue (\$M) 1Q	--	\$0.0A	--
2Q	--	\$0.0A	--
3Q	--	\$0.0A	--
4Q	--	\$0.0	--
<b>FY</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
EPS 1Q	--	(\$0.03)A	--
2Q	--	\$0.16A	--
3Q	--	(\$0.28)A	--
4Q	--	(\$0.38)	--
<b>FY</b>	<b>(\$1.04)</b>	<b>(\$0.50)</b>	<b>(\$1.62)</b>

Source: Company reports and JMP Securities LLC

## STOCK PRICE PERFORMANCE

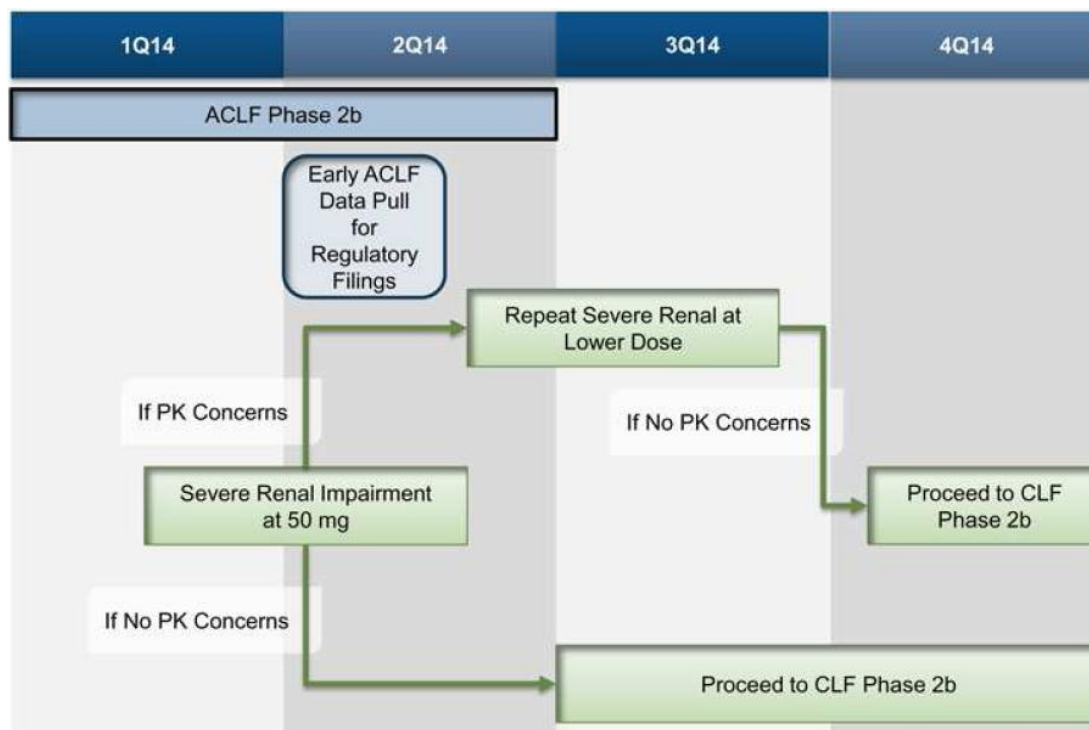


**Figure 1. CNAT Pipeline**

Indication	Preclinical	Phase 1	Phase 2	Phase 3	Next Milestone
Acute-on-Chronic Liver Failure (ACLF)					Phase 2b trial initiated Sept. 2013
Severe Renal Impairment					Phase 1b trial to initiate 1H14
Chronic Liver Failure (CLF)					Phase 2b trial to initiate 2H14
NASH/NAFLD					Phase 2b trial to initiate 1H14
HCV-POLT					Exploring clinical trial options

- Also supporting a pilot clinical study funded by National Institute on Alcohol Abuse and Alcoholism (NIAAA) in patients with alcoholic hepatitis

Source: Company reports

**Figure 2. Liver Failure Study Dependencies**


Source: Company reports

## Company Description

Conatus Pharmaceuticals is a San Diego-based biopharmaceutical company focused on the development of emricasan, a pan-caspase inhibitor with the potential to be used to treat liver fibrosis, particularly in areas of large unmet need, including cirrhosis-induced liver failure.

## Investment Risks

**Clinical Risk.** Emricasan has not yet been evaluated in clinical trials longer than 12 weeks. Longer trials may result in unanticipated safety concerns, which could cause emricasan to underperform in clinical trials. Although successful in the regulation of biomarkers, emricasan may not impact clinical outcomes.

**Regulatory Risk.** Conatus hopes to use emricasan in acute and chronic indications. However, due to potential on-target activities that may increase cancer risk, FDA maybe unwilling to approve the drug in a chronic setting.

**Intellectual Property Risk.** The composition of matter patent for emricasan expires in 2017 and has not yet received a Hatch Waxman extension. As such, Conatus may have to rely on a polymorph composition and method patent, which expires in 2027, for long-term market exclusivity. If Conatus does not receive orphan exclusivity for emricasan, protection may also be limited.

**Commercial Risk.** As a small company, Conatus may have difficulty educating healthcare payers and providers on the benefits of a novel drug. As such, emricasan adoption may be slowed.

**Sector Risk.** Valuation of biopharmaceutical stocks is subject to both investor assessments of the prospects of the underlying companies, as well as risk tolerance and the level of confidence in the prospects of pharmaceutical stocks as a group. Therefore, Conatus' stock price may fall even while the company meets or exceeds investor expectations.

## JMP FACTS AND DISCLOSURES

### Analyst Certification:

The research analyst(s) who prepared this report does/do hereby certify that the views presented in this report are in accordance with my/our personal views on the securities and issuers discussed in this report. As mandated by SEC Regulation AC no part of my/our compensation was, is or will be directly or indirectly related to the specific views or recommendations expressed herein. This certification is made under the obligations set forth in SEC Regulation AC. Any other person or entity may not use it for any other purpose. This certification is made based on my/our analysis on the date of this report's publication. I/We assume no obligation to update this certification to reflect any facts, circumstances or events that may subsequently come to my/our attention. Signed Liisa A. Bayko and Heather Behanna

### JMP Securities Disclosures:

JMP Securities currently makes a market in the security of Conatus Pharmaceuticals Inc.

JMP Securities was manager or co-manager of a public offering, and received compensation for doing so, for Conatus Pharmaceuticals Inc. in the past 12 months.

### JMP Securities Investment Opinion Definitions:

Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.

Market Perform (MP): JMP Securities expects the stock price to perform in line with relevant market indices over the next 12 months.

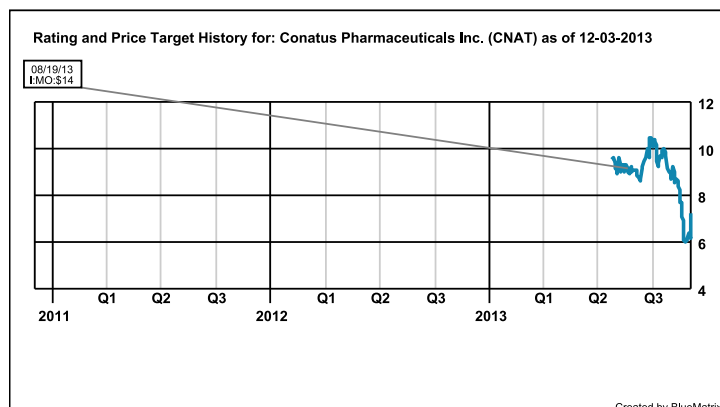
Market Underperform (MU): JMP Securities expects the stock price to underperform relevant market indices over the next 12 months.

### JMP Securities Research Ratings and Investment Banking Services: (as of December 3, 2013)

JMP Rating	Regulatory Equivalent	# Co's Under Coverage	% of Total	Regulatory Equivalent	# Co's Under Coverage	% of Total	# Co's Receiving IB Services in Past 12 Months	% of Co's With This Rating
MARKET OUTPERFORM	Buy	227	54.70%	Buy	227	54.70%	87	38.33%
MARKET PERFORM	Hold	138	33.25%	Hold	138	33.25%	25	18.12%
MARKET UNDERPERFORM	Sell	5	1.20%	Sell	5	1.20%	0	0%
COVERAGE IN TRANSITION		45	10.84%		45	10.84%	0	0%
TOTAL:		415	100%		415	100%	112	26.99%

### Stock Price Chart of Rating and Target Price Changes:

Note: First annotation denotes initiation of coverage or 3 years, whichever is shorter. If no target price is listed, then the target price is N/A. In accordance with NASD Rule 2711, the chart(s) below reflect(s) price range and any changes to the rating or price target as of the end of the most recent calendar quarter. The action reflected in this note is not annotated in the stock price chart. Source: JMP Securities.



**JMP Disclaimer:**

JMP Securities LLC (the "Firm") compensates research analysts, like other Firm employees, based on the Firm's profitability, which includes revenues from the Firm's institutional sales, trading, and investment banking departments as well as on the quality of the services and activities performed that are intended to benefit the Firm's institutional clients. These data have been prepared by JMP Securities LLC for informational purposes only and are based on information available to the public from sources that we believe to be reliable, but we do not guarantee their accuracy or completeness. Any opinions and projections expressed herein reflect our judgment at this date and are subject to change without notice. These data are neither intended nor should be considered as an offer to sell or a solicitation or a basis for any contract for the purchase of any security or other financial product. JMP Securities LLC, its affiliates, JMP Group LLC, Harvest Capital Strategies LLC, and their respective partners, directors, officers, and associates may have a long or short position in, may act as a market maker for, or may purchase or sell a position in the securities mentioned herein. JMP Securities LLC or its affiliates may be performing, have performed, or seek to perform investment banking, advisory, or other services and may have acted as manager or co-manager for a public offering of securities for any company mentioned herein. The reader should assume that JMP Securities LLC will solicit business from the company covered in this report. Members of our Sales and Trading Department provide oral and/or written market opinions and trading strategies to our clients that reflect their personal opinions about stocks that are the subject of the firm's research reports. Our research analysts discuss trading strategies with clients and complete surveys from clients that sometimes reflect short-term expectations for the price of the securities that are the subject of research reports. Those trading strategies and survey responses are distinct from the analysts' fundamental rating for the stock, which is based upon the analysts' view compared to other stocks under coverage for the relevant time period. © Copyright 2013. All rights reserved by JMP Securities LLC. JMP Securities LLC is a member of FINRA, NASDAQ, and SIPC.

**Jeffrey H. Spurr**  
**Director of Research**  
(415) 835-3903

## RESEARCH PROFESSIONALS

### FINANCIAL SERVICES

#### Alternative Asset Managers

Devin Ryan (212) 906-3578

#### Commercial & Specialty Finance

Christopher York (415) 835-8965  
Hannah Kim, CFA (415) 835-8962

#### Consumer Finance

David M. Scharf (415) 835-8942  
Jeremy Frazer (312) 768-1796

#### Financial Processing & Outsourcing

David M. Scharf (415) 835-8942  
Jeremy Frazer (312) 768-1796

#### Insurance

Matthew J. Carletti (312) 768-1784  
Christine Worley (312) 768-1786

#### Investment Banks & Brokers

Devin Ryan (212) 906-3578

#### Mortgage Finance

Steven C. DeLaney (404) 848-7773  
Trevor Cranston, CFA (415) 869-4431  
Charter Robinson (757) 613-8955  
Benjamin Zucker (212) 906-3529

### HEALTHCARE

#### Biotechnology

Liisa A. Bayko (312) 768-1785  
Heather Behanna, PhD (312) 768-1795  
Andrew Prigodich (312) 768-1788  
Jason N. Butler, PhD (212) 906-3505  
Christopher T. Radom, PhD (212) 906-3519  
Caroline Palomeque (212) 906-3509  
Michael G. King, Jr. (212) 906-3520  
Eric Joseph (212) 906-3514  
Joseph A. Knowles (212) 906-3525

#### Healthcare Services & Facilities

Peter L. Martin, CFA (415) 835-8904  
Aaron Hecht (415) 835-3963  
Arthur Kwok (415) 835-8908

#### Medical Devices & Supplies

David Turkaly (212) 906-3563  
John Gillings (212) 906-3564

#### Medical Devices & Molecular Diagnostics

J. T. Haresco, III, PhD (415) 869-4477  
Marie T. Casey, PhD (415) 835-3955

### REAL ESTATE

#### Housing & Land Development

Peter L. Martin, CFA (415) 835-8904  
Aaron Hecht (415) 835-3963  
Bharathwajan Iyengar (415) 835-3902

#### Lodging

Robert A. LaFleur (212) 906-3510  
Whitney Stevenson (212) 906-3538

#### Property Services

Mitch Germain (212) 906-3546  
Peter Lunenburg (212) 906-3537

#### REITs: Healthcare

Peter L. Martin, CFA (415) 835-8904  
Aaron Hecht (415) 835-3963  
Arthur Kwok (415) 835-8908

#### REITs: Office, Industrial, & Diversified

Mitch Germain (212) 906-3546  
Peter Lunenburg (212) 906-3537

### TECHNOLOGY

#### Communications Equipment & Internet Security

Erik Suppiger (415) 835-3918  
John Lucia (415) 835-3920

#### Internet & Digital Media

Ronald V. Josey III (212) 906-3528

#### Software

Patrick Walravens (415) 835-8943  
Peter Lowry (415) 869-4418  
Caitlin Schields (415) 835-8960  
Greg McDowell (415) 835-3934

#### Wireless & Cloud Computing Technologies

Alex Gauna (415) 835-8998  
Michael Wu (415) 835-8996

## ADDITIONAL CONTACTS

**Thomas R. Wright**  
**Director of Equities**  
(212) 906-3599

**Dan Wychulis**  
**Director of Institutional Sales**  
(617) 235-8530

**600 Montgomery Street, Suite 1100**  
San Francisco, CA 94111  
[www.jmpsecurities.com](http://www.jmpsecurities.com)