

## Cara Therapeutics Inc. (CARA)

Overweight

### Newsflow Could Open the Door for Paradigm Shifting Peripheral Pain Platform

#### CONCLUSION

Cara reported 2Q results yesterday and the company's development updates indicate on-track progress to expected milestones this year and next. As we recently highlighted, a likely meaningful milestone for the company was the design (low bar comparator) and start of its human abuse liability (HAL) study for I.V. CR845. Data from this HAL study is expected yet in 4Q14. The choice of a Schedule IV drug (pentazocine) greatly increases the likelihood of the '845 being unscheduled when approved, the more likely outcome in our view. We move our discount target date to YE15, resulting in a new \$30 price target vs. a prior \$23 (see exhibits 1 & 2).

- **Catalyst rich 2H14.** Both HAL data and that from the single-ascending-dose and multiple-ascending-dose Phase I studies are expected in 4Q. Data from the uremic pruritus, now being a more visible upside potential with the start of Phase II proof of concept study which just this week dosed its first patient, is anticipated in 1H15. This is a 2-part study in patients with chronic kidney disease. Part 1 will look at PK and peak dosing, part 2 is a 2-week treatment phase in about 60 patients. Note that pruritus is not currently included in our valuation.
- **For I.V. 845, Cara is completing chemistry and manufacturing work** to enable production of the Phase III lots of drug prior to requesting the end of Phase II meeting with the FDA. Cara expects to have the CMC work and transfer of manufacturing from the U.K. to central Europe completed in 4Q14.
- **Management indicated that R&D expenditures** are likely to increase slightly for 2H14 over 1H, while G&A should remain about constant. The company also guided to at least 18 months of cash runway, not accounting for possible milestones. Cara ended 2Q with \$63M in cash, consistent with our expectations.

#### RISKS TO ACHIEVEMENT OF PRICE TARGET

Failure of lead candidate I.V. '845 in pivotal studies, DEA scheduling, or safety signals.

#### COMPANY DESCRIPTION

Cara develops novel peripherally-restricted candidates for pain indications.

PRICE: US\$10.80

TARGET: US\$30.00

DCF of I.V. CR845 revenues for post-op pain in the U.S.

**Charles C. Duncan, PhD**

Sr. Research Analyst, Piper Jaffray & Co.  
212 284-5025, charles.c.duncan@pjc.com

**Roy Buchanan, Ph.D.**

Research Analyst, Piper Jaffray & Co.  
212 284-9458, roy.d.buchanan@pjc.com

Changes	Previous	Current
Rating	—	Overweight
Price Tgt	US\$23.00	US\$30.00
FY14E Rev (mil)	—	US\$0.2
FY15E Rev (mil)	—	US\$0.0
FY14E EPS	US\$(1.19)	US\$(0.93)
FY15E EPS	US\$(1.40)	US\$(1.64)

52-Week High / Low	US\$23.25 / US\$10.40
Shares Out (mil)	21.8
Market Cap. (mil)	US\$235.4
Avg Daily Vol (ooo)	81
Book Value/Share	US\$2.70
Net Cash Per Share	US\$2.80
Debt to Total Capital	0%
Div (ann)	NA
Fiscal Year End	Dec

#### Price Performance - 1 Year



Source: Bloomberg

YEAR	REVENUE (US\$ m)						EARNINGS PER SHARE (US\$)					
	Mar	Jun	Sep	Dec	FY	FY RM	Mar	Jun	Sep	Dec	FY	FY P/E
2013A	—	—	—	0.0	12.0	19.6x	—	—	—	(0.49)	(0.74)	NM
2014E	0.2A	0.0A	0.0	0.0	0.2	1,177.2x	(0.22)A	(0.16)A	(0.24)	(0.31)	(0.93)	NM
2015E	0.0	0.0	0.0	0.0	0.0	NA	(0.38)	(0.41)	(0.42)	(0.43)	(1.64)	NM

Piper Jaffray does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decisions. This report should be read in conjunction with important disclosure information, including an attestation under Regulation Analyst certification, found on pages 4 - 5 of this report or at the following site: <http://www.piperjaffray.com/researchdisclosures>.

Exhibit 1

**CURRENT VALUATION**

	<b>NPV (000s \$)</b>	<b>NPV Per Share (\$)</b>
<b>I.V. CR845 (U.S. only)</b>	1,367,530	\$ 60.49
<b>Oral CR845 (U.S. only)</b>	0	\$ -
<b>Operating costs</b>	(733,569)	\$ (32.45)
<b>Terminal value</b>	0	\$ -
<b>Pipeline value</b>	0	\$ -
Cash (YE15 est)	44,302	\$ 1.96
Long-term debt (YE14 est)	0	\$ -
<b>Total NPV</b>	<b>678,263</b>	<b>\$ 30.00</b>

Source: Piper Jaffray

Exhibit 2

**PRIOR VALUATION**

	<b>NPV (000s \$)</b>	<b>NPV Per Share (\$)</b>
<b>I.V. CR845 (U.S. only)</b>	1,094,024	\$ 45.67
<b>Oral CR845 (U.S. only)</b>	0	\$ -
<b>Operating costs</b>	(614,857)	\$ (25.67)
<b>Terminal value</b>	0	\$ -
<b>Pipeline value</b>	0	\$ -
Cash (YE14 est)	61,560	\$ 2.57
Long-term debt (YE14 est)	0	\$ -
<b>Total NPV</b>	<b>540,726</b>	<b>\$ 22.58</b>

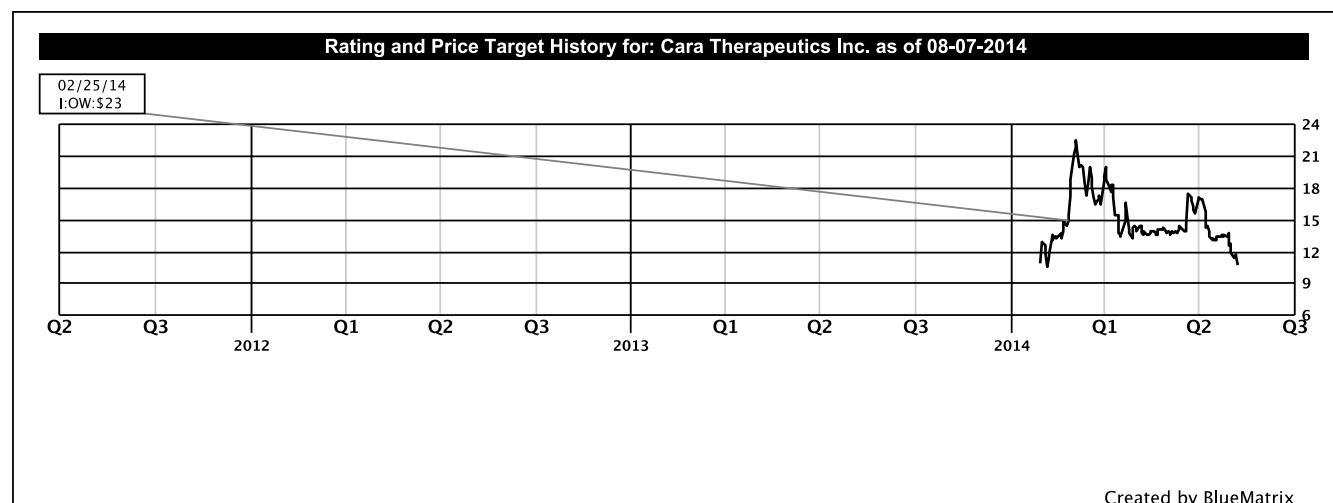
Source: Piper Jaffray

Cara (\$ in thousands, except per share amounts)	2011	2012	2013	1Q14	2Q14	3Q14E	4Q14E	2014E	1Q15E	2Q15E	3Q15E	4Q15E	2015E	2016E	2017E	2018E
<b>Income Statement</b>																
<b>Revenue</b>																
License and milestone fees	-	1,190	9,637	-	302	-	-	302	-	-	-	-	-	7,400	6,900	-
% total revenue	-	100%	81%	0%	31%	na	na	27%	na	na	na	na	na	100%	34%	0%
Revenues under collaborative agreements	-	-	2,327	178	658	-	-	836	-	-	-	-	-	-	-	-
% total revenue	-	0%	19%	100%	69%	na	na	73%	na	na	na	na	na	0%	0%	0%
Product sales and royalties	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,324	102,320
% total revenue	-	0%	0%	0%	0%	na	na	0%	na	na	na	na	na	0%	66%	100%
<b>Total Revenues</b>	-	1,190	11,964	178	960	-	-	1,138	-	-	-	-	-	7,400	20,224	102,320
<b>Costs &amp; Expenses:</b>																
Cost of product revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,250	26,311
R&D	7,159	4,597	8,685	2,201	3,200	4,500	6,000	15,901	8,000	9,000	9,450	9,923	36,373	40,059	30,939	30,103
SG&A	2,407	2,829	3,557	1,398	1,472	1,200	1,500	5,570	1,650	1,815	1,997	2,196	7,658	11,504	20,650	24,162
<b>Total Operating Expenses</b>	9,566	7,426	12,242	3,599	4,672	5,700	7,500	21,471	9,650	10,815	11,447	12,119	44,030	51,563	55,839	80,576
<b>Operating Income (loss)</b>	(9,566)	(6,236)	(278)	(3,421)	(3,712)	(5,700)	(7,500)	(20,333)	(9,650)	(10,815)	(11,447)	(12,119)	(44,030)	(44,163)	(35,616)	21,744
Investment income	-	-	-	22	56	-	-	-	-	-	-	-	-	-	-	-
<b>Income (loss) before income taxes</b>	(9,841)	(6,302)	(3,993)	(3,399)	(3,656)	(5,700)	(7,500)	(20,333)	(9,650)	(10,815)	(11,447)	(12,119)	(44,030)	(44,163)	(35,616)	21,744
Income tax (benefit) provision	(35)	(31)	(30)	(16)	(11)	(57)	(75)	(159)	(97)	(108)	(114)	(121)	(440)	(442)	(8,191)	7,610
Tax rate	0	0		0.5%	1.0%	1.0%	1.0%	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	26.5%	35.0%
Net operating loss offset			3	-	11	57	75	143	97	108	114	121	440	442	8,191	(7,610)
<b>Net income (loss) available to common stockholders</b>	(9,806)	(6,271)	(3,963)	(3,383)	(3,645)	(5,643)	(7,425)	(20,174)	(9,554)	(10,707)	(11,332)	(11,997)	(43,590)	(43,721)	(27,424)	14,134
<b>Net income (loss) to common shareholders - basic</b>	(9,806)	(6,271)	(3,072)	(3,383)	(3,645)	(5,643)	(7,425)	(20,174)	(9,554)	(10,707)	(11,332)	(11,997)	(43,590)	(43,721)	(27,424)	14,134
<b>Net income (loss) to common shareholders - diluted</b>	(9,806)	(6,271)	(3,072)	(3,383)	(3,645)	(5,643)	(7,425)	(20,174)	(9,554)	(10,707)	(11,332)	(11,997)	(43,590)	(43,721)	(27,424)	14,134
Basic Earnings Per Share	(1.21)	(0.75)	(\$0.74)	(\$0.22)	(\$0.16)	(\$0.24)	(\$0.31)	(\$0.93)	(\$0.38)	(\$0.41)	(\$0.42)	(\$0.43)	(\$1.64)	(\$1.32)	(\$0.71)	\$0.33
<b>Diluted Earnings Per Share</b>	(1.21)	(0.75)	(\$0.74)	(\$0.22)	(\$0.16)	(\$0.24)	(\$0.31)	(\$0.93)	(\$0.38)	(\$0.41)	(\$0.42)	(\$0.43)	(\$1.64)	(\$1.32)	(\$0.71)	\$0.28
Basic Shares Outstanding	8,089	8,322	4,133	15,654	22,608	23,287	23,985	24,705	25,446	26,209	26,996	27,805	28,640	33,201	38,489	42,495
<b>Diluted Shares Outstanding</b>	8,089	8,322	4,133	15,654	22,608	23,287	23,985	24,705	25,446	26,209	26,996	27,805	28,640	33,201	38,489	50,994

Proprietary to Piper Jaffray & Co. August 9, 2014  
 CARA: Charles Duncan; 212.284.2505  
 Current disclosure information for this company can be found at:  
<http://www.piperjaffray.com/researchdisclosures>

4.3  
 \$4.1

## IMPORTANT RESEARCH DISCLOSURES



Notes: The boxes on the Rating and Price Target History chart above indicate the date of the Research Note, the rating, and the price target. Each box 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.

### Legend:

I: Initiating Coverage  
R: Resuming Coverage  
T: Transferring Coverage  
D: Discontinuing Coverage  
S: Suspending Coverage  
OW: Overweight  
N: Neutral  
UW: Underweight  
NA: Not Available  
UR: Under Review

Distribution of Ratings/IB Services Piper Jaffray				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
<b>BUY [OW]</b>	361	62.03	95	26.32
<b>HOLD [N]</b>	210	36.08	22	10.48
<b>SELL [UW]</b>	11	1.89	0	0.00

Note: Distribution of Ratings/IB Services shows the number of companies currently in each rating category from which Piper Jaffray and its affiliates received compensation for investment banking services within the past 12 months. FINRA rules require disclosure of which ratings most closely correspond with "buy," "hold," and "sell" recommendations. Piper Jaffray ratings are not the equivalent of buy, hold or sell, but instead represent recommended relative weightings. Nevertheless, Overweight corresponds most closely with buy, Neutral with hold and Underweight with sell. See Stock Rating definitions below.

### Analyst Certification — Charles C. Duncan, PhD, Sr. Research Analyst — Roy Buchanan, Ph.D., Research Analyst

The views expressed in this report accurately reflect my personal views about the subject company and the subject security. In addition, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report.

## Research Disclosures

Piper Jaffray was making a market in the securities of Cara Therapeutics Inc. at the time this research report was published. Piper Jaffray will buy and sell Cara Therapeutics Inc. securities on a principal basis.

Piper Jaffray has received compensation for investment banking services from or has had a client relationship with Cara Therapeutics Inc. within the past 12 months.

Within the past 12 months Piper Jaffray was a managing underwriter of a public offering of, or dealer manager of a tender offer for, the securities of Cara Therapeutics Inc. or the securities of an affiliate.

Within the past 3 years Piper Jaffray participated in a public offering of, or acted as a dealer manager for, Cara Therapeutics Inc. securities.

Piper Jaffray research analysts receive compensation that is based, in part, on overall firm revenues, which include investment banking revenues.

## Rating Definitions

**Stock Ratings:** Piper Jaffray ratings are indicators of expected total return (price appreciation plus dividend) within the next 12 months. At times analysts may specify a different investment horizon or may include additional investment time horizons for specific stocks. Stock performance is measured relative to the group of stocks covered by each analyst. Lists of the stocks covered by each are available at [www.piperjaffray.com/researchdisclosures](http://www.piperjaffray.com/researchdisclosures). Stock ratings and/or stock coverage may be suspended from time to time in the event that there is no active analyst opinion or analyst coverage, but the opinion or coverage is expected to resume. Research reports and ratings should not be relied upon as individual investment advice. As always, an investor's decision to buy or sell a security must depend on individual circumstances, including existing holdings, time horizons and risk tolerance. Piper Jaffray sales and trading personnel may provide written or oral commentary, trade ideas, or other information about a particular stock to clients or internal trading desks reflecting different opinions than those expressed by the research analyst. In addition, Piper Jaffray technical research products are based on different methodologies and may contradict the opinions contained in fundamental research reports.

- **Overweight (OW):** Anticipated to outperform relative to the median of the group of stocks covered by the analyst.
- **Neutral (N):** Anticipated to perform in line relative to the median of the group of stocks covered by the analyst.
- **Underweight (UW):** Anticipated to underperform relative to the median of the group of stocks covered by the analyst.

## Other Important Information

The material regarding the subject company is based on data obtained from sources we deem to be reliable; it is not guaranteed as to accuracy and does not purport to be complete. This report is solely for informational purposes and is not intended to be used as the primary basis of investment decisions. Piper Jaffray has not assessed the suitability of the subject company for any person. Because of individual client requirements, it is not, and it should not be construed as, advice designed to meet the particular investment needs of any investor. This report is not an offer or the solicitation of an offer to sell or buy any security. Unless otherwise noted, the price of a security mentioned in this report is the market closing price as of the end of the prior business day. Piper Jaffray does not maintain a predetermined schedule for publication of research and will not necessarily update this report. Piper Jaffray policy generally prohibits research analysts from sending draft research reports to subject companies; however, it should be presumed that the analyst(s) who authored this report has had discussions with the subject company to ensure factual accuracy prior to publication, and has had assistance from the company in conducting diligence, including visits to company sites and meetings with company management and other representatives.

**Notice to customers:** This material is not directed to, or intended for distribution to or use by, any person or entity if Piper Jaffray is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to such person or entity. Customers in any of the jurisdictions where Piper Jaffray and its affiliates do business who wish to effect a transaction in the securities discussed in this report should contact their local Piper Jaffray representative. **Europe:** This material is for the use of intended recipients only and only for distribution to professional and institutional investors, i.e. persons who are authorised persons or exempted persons within the meaning of the Financial Services and Markets Act 2000 of the United Kingdom, or persons who have been categorised by Piper Jaffray Ltd. as professional clients under the rules of the Financial Conduct Authority. **United States:** This report is distributed in the United States by Piper Jaffray & Co., member SIPC, FINRA and NYSE, Inc., which accepts responsibility for its contents. The securities described in this report may not have been registered under the U.S. Securities Act of 1933 and, in such case, may not be offered or sold in the United States or to U.S. persons unless they have been so registered, or an exemption from the registration requirements is available.

This report is produced for the use of Piper Jaffray customers and may not be reproduced, re-distributed or passed to any other person or published in whole or in part for any purpose without the prior consent of Piper Jaffray & Co. Additional information is available upon request.

Copyright 2014 Piper Jaffray. All rights reserved.