

## Cara Therapeutics (CARA - \$17.49)

All Good Things Arrive Unto Them That Wait – and Don't Die in the Meantime; Raising PT to \$20 from \$17

CARA reported 4Q16 last night after the close and the old bard Mark Twain's words were never truer than with CARA and the anticipation for data in March (IV for pruritus data) and 2Q17 (IV post-op pain, oral OA pain, oral pruritus). CARA has one of the most interesting 1H17s coming up of any name in our coverage space, with multiple data read outs that target huge markets (pain) and huge & currently unserved by approved drugs (pruritus). Outside of R&D coming in significantly higher than our expectations no real news on the quarter; the story remains the upcoming data read outs and the subsequent FDA meetings to determine the appropriate path forward. Given the early data in pain & pruritus CARA has already demonstrated over the past, we continue to believe the ongoing trials have a high probability of also posting positive data positioning CARA for significant advancement through 2017. We are reiterating our Buy rating, and raising our PT from \$17 to \$20.

- **IV pruritus up first in March.** With positive Phase 2 data on 65 patients in hand, and with statistical significance reductions in worst itch & Skindex-10 measurements; we are increasingly confident that the larger (N=160) Part A of the current trial should also look good. Following an FDA meeting in mid-2017 CARA anticipates starting Part B (N=~240) which should wrap up by mid/3Q18, suggesting a 1H19 NDA filing is possible.
- **Phase 3 IV for pain & Phase 2 oral for OA pain next.** CARA remains on-track for 2Q17 data on their lead kappa opioid agonist. With the potential to be as effective as Oxycontin in a Schedule 5 drug (or even unscheduled given the lack of addiction/abuse) with much lower side effects, CR845 could be a real game changer in pain therapy.
- **Cash through 1Q18.** With \$58M in cash on the books, CARA anticipates having sufficient cash to 1Q18, well past the key data points in 1H17.
- **Reiterate Buy rating, raising price target to \$20.** We value CARA on a sum-of-the-parts: IV CR845 for post-op pain: \$9/share, pruritus: \$6/share, oral OA pain: \$3/share, and cash (end '17) and tech: \$2/share.

### Earnings Estimates: (per share)

(Dec)	1Q	2Q	3Q	4Q	FY	P/E
<b>FY-18E</b>	NA	NA	NA	NA	(2.05)	NA
<b>FY-17E</b>	(0.76)	(0.68)	(0.44)	(0.37)	(2.20)	NA
<b>FY-16A</b>	(0.39)	(0.48)	(0.42)	(0.81)	(2.10)	NA
<b>FY-15A</b>	(0.21)	(0.25)	(0.23)	(0.35)	(1.05)	NA

Source: Company data and Laidlaw & Company estimates

Healthcare/Biotechnology

Ticker:	<b>CARA</b>
Rating:	<b>Buy</b>
Price Target:	↑ <b>\$20</b>

### Trading Data:

Last Price (03/09/2017)	\$17.49
52-Week High (06/27/2016)	\$19.44
52-Week Low (03/03/2017)	\$4.35
Market Cap. (MM)	\$477.2
Shares Out. (MM)	xx.xx

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Figure 1: Variance analysis

CARA Therapeutics Quarterly variance analysis										
(000's except per share)	4Q15A	4Q16A	4Q16E	Variance	% Y/Y	FY15A	FY16A	FY16E	Variance	% Y/Y
License & milestones	\$0	\$0	\$0	\$0	NA	\$1,710	\$0	\$0	\$0	NA
Collaborative revenues	750	0	750	(750)	-100%	2,843	86	836	(750)	-97%
<b>Total Revenue</b>	<b>\$0</b>	<b>\$0</b>	<b>\$750</b>	<b>(\$750)</b>	<b>NA</b>	<b>\$3,803</b>	<b>\$86</b>	<b>\$836</b>	<b>(\$750)</b>	<b>-98%</b>
SG&A Expense	2,161	2,038	2,500	(462)	-6%	7,770	9,232	9,694	(462)	19%
R&D Expense	7,568	20,277	9,500	10,777	168%	21,221	49,254	38,477	10,777	132%
<b>Operating Income</b>	<b>(9,729)</b>	<b>(22,315)</b>	<b>(11,250)</b>	<b>(11,065)</b>	<b>129%</b>	<b>(25,188)</b>	<b>(58,400)</b>	<b>(47,335)</b>	<b>(11,065)</b>	<b>132%</b>
Int inc (exp), net	52	155	25	130	198%	101	652	522	130	546%
Other (exp) gain, net	0	0	0	0	NA	0	0	0	0	NA
<b>Pretax Income</b>	<b>(9,677)</b>	<b>(22,160)</b>	<b>(11,225)</b>	<b>(10,935)</b>	<b>129%</b>	<b>(25,087)</b>	<b>(57,748)</b>	<b>(46,813)</b>	<b>(10,935)</b>	<b>130%</b>
Income Tax exp (benefit)	(147)	(189)	0	(189)	29%	(397)	(468)	0	(468)	18%
<b>Net income (loss)</b>	<b>(9,530)</b>	<b>(21,971)</b>	<b>(11,225)</b>	<b>(10,746)</b>	<b>131%</b>	<b>(24,690)</b>	<b>(57,280)</b>	<b>(46,534)</b>	<b>(10,746)</b>	<b>132%</b>
Weighted avg. shares (000)	27,240	27,291	27,383	(92)	0%	24,620	27,279	27,302	(23)	11%
Fully diluted shares (000)	29,515	29,541	29,633	(92)	0%	26,279	29,534	29,557	(23)	12%
<b>Adj EPS ex-1x</b>	<b>(\$0.35)</b>	<b>(\$0.81)</b>	<b>(\$0.41)</b>	<b>(\$0.40)</b>	<b>130%</b>	<b>(\$1.00)</b>	<b>(\$2.10)</b>	<b>(\$1.70)</b>	<b>(\$0.40)</b>	<b>109%</b>

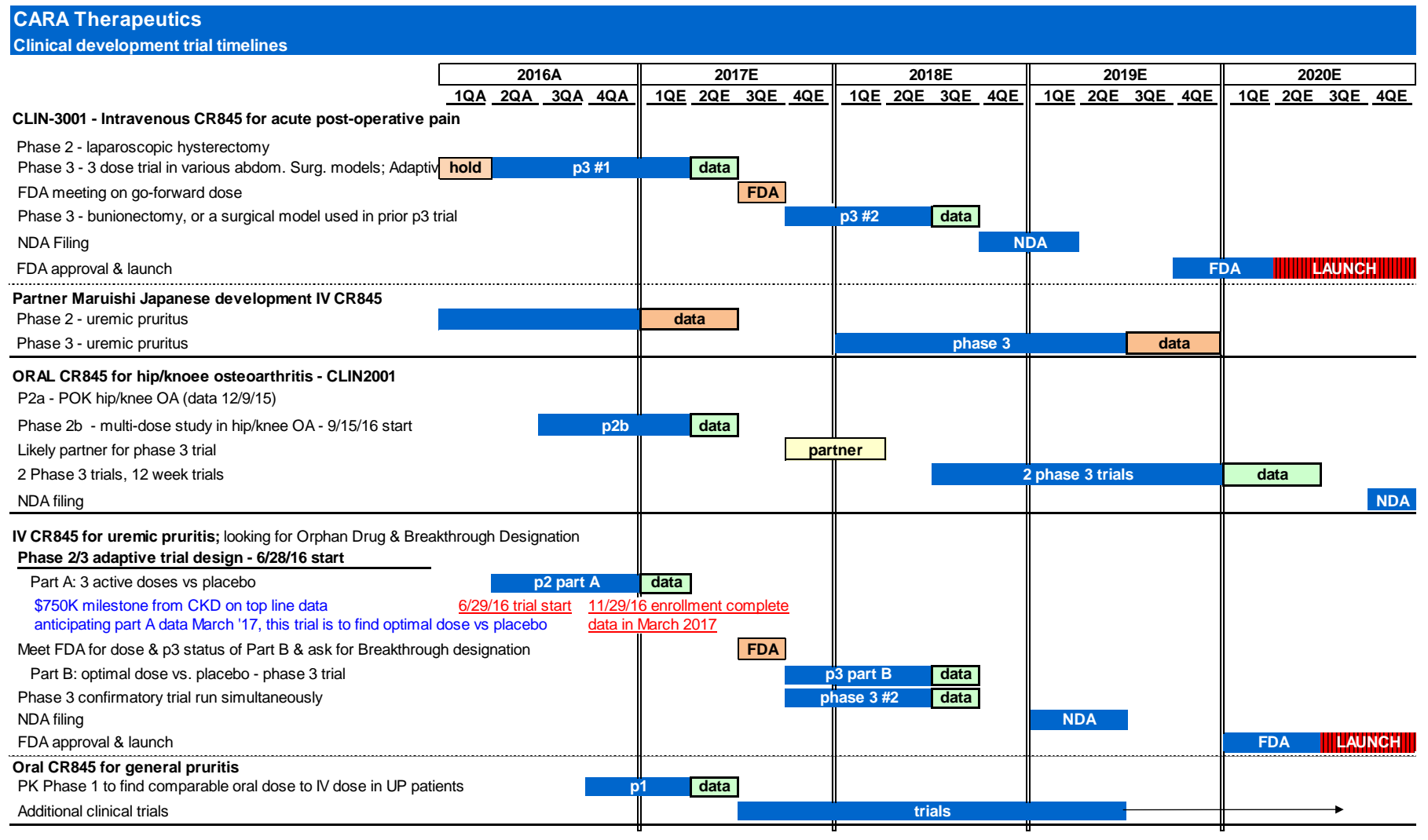
Source: Company reports; Laidlaw &amp; Company estimates

Figure 2: Valuation

Sum-of-the-parts value: CARA		
Segment	Valuation (000's)	Per share value
CR845 - IV post-op pain	\$215,189	\$7.0
CR845 - oral OA pain	\$86,644	\$2.5
CR845 - IV uremic pruritus	\$108,048	\$3.5
CR845 - oral general pruritus	\$48,676	\$1.5
Cash (end '17) & tech value	\$87,388	\$2.5
<b>SUM</b>	<b>\$545,945</b>	<b>\$17</b>
Shares out '17E (000)		32,233

Source: Laidlaw Estimates

Figure 3: Clinical trials timeline



Source: Company reports; Laidlaw & Company estimates.

Figure 4: Quarterly Income Statement

CARA Therapeutics										
Quarterly income statement										
(\$000 except per share)	2016A				2016A Year	2017E				2017E Year
	1QA	2QA	3QA	4QA		1QE	2QE	3QE	4QE	
<b>Revenues</b>										
License & milestones					\$0					
Collaborative revenues	\$7	\$79			86	\$750	\$750	\$750	\$750	3,000
<b>Total Revenue</b>	<b>\$7</b>	<b>\$79</b>	<b>\$0</b>	<b>\$0</b>	<b>\$86</b>	<b>\$750</b>	<b>\$750</b>	<b>\$750</b>	<b>\$750</b>	<b>\$3,000</b>
<b>Expenses:</b>										
Cost of Revenue (COGS)	-	-	-	-	-	-	-	-	-	-
<b>Gross Margin</b>	<b>7</b>	<b>79</b>	<b>-</b>	<b>-</b>	<b>86</b>	<b>750</b>	<b>750</b>	<b>750</b>	<b>750</b>	<b>3,000</b>
Research and development	8,546	10,760	9,671	20,277	49,254	20,000	18,000	12,000	9,750	59,750
General and administrative	2,447	2,645	2,102	2,038	9,232	2,000	2,250	2,750	3,000	10,000
Total operating expenses	10,993	13,405	11,773	22,315	58,486	22,000	20,250	14,750	12,750	69,750
<b>Income (loss) from Operations</b>	<b>(10,986)</b>	<b>(13,326)</b>	<b>(11,773)</b>	<b>(22,315)</b>	<b>(58,400)</b>	<b>(21,250)</b>	<b>(19,500)</b>	<b>(14,000)</b>	<b>(12,000)</b>	<b>(66,750)</b>
Interest income (expense), net	149	172	176	155	652	25	25	25	25	100
Other (exp) gain, net										
<b>Income (loss) before taxes</b>	<b>(10,837)</b>	<b>(13,154)</b>	<b>(11,597)</b>	<b>(22,160)</b>	<b>(57,748)</b>	<b>(21,225)</b>	<b>(19,475)</b>	<b>(13,975)</b>	<b>(11,975)</b>	<b>(66,650)</b>
Income tax exp (benefit)	(145)	(79)	(55)	(189)	(468)					
<b>Net income (Loss)</b>	<b>(10,692)</b>	<b>(13,075)</b>	<b>(11,542)</b>	<b>(21,971)</b>	<b>(57,280)</b>	<b>(21,225)</b>	<b>(19,475)</b>	<b>(13,975)</b>	<b>(11,975)</b>	<b>(66,650)</b>
<b>Net income to common</b>										
<b>Earning per Share (EPS)</b>	<b>(\$0.39)</b>	<b>(\$0.48)</b>	<b>(\$0.42)</b>	<b>(\$0.81)</b>	<b>(\$2.10)</b>	<b>(\$0.76)</b>	<b>(\$0.68)</b>	<b>(\$0.44)</b>	<b>(\$0.37)</b>	<b>(\$2.20)</b>
<b>Adj EPS ex-1x &amp; non-cash</b>			<b>(\$0.42)</b>		<b>(\$2.10)</b>					
Weighted avg. shares (000)	27,260	27,283	27,283	27,291	27,279	27,833	28,433	32,033	32,633	30,233
Fully diluted shares (000)	29,474	29,540	29,582	29,541	29,534	29,833	30,433	34,033	34,633	32,233

Source: Bloomberg LP; Company reports; Laidlaw &amp; Company estimates.

Figure 5: Annual Income Statement

<b>CARA Therapeutics</b>						
<b>Annual income statement</b>						
(\$'000 except per share)	2016A	2017E	2018E	2019E	2020E	Comments
<b>Revenues</b>						
CR845 - IV post-op pain					\$56,760	Interim data 2Q17
CR845 - IV Uremic pruritus			-	-	17,938	p2 data 1Q17
CR845 - oral hip/knee OA pain			-	-	-	p2b data 2Q17
License & milestones	\$0		-	-	-	Maruishi milestones here
Collaborative revenues	86	\$3,000	\$3,000	\$3,000	3,000	
<b>Total Revenue</b>	<b>\$86</b>	<b>\$3,000</b>	<b>\$3,000</b>	<b>\$3,000</b>	<b>\$77,698</b>	
<b>Expenses:</b>						
Cost of Revenue (COGS)	-	-	-	-	8,514	
<b>Gross Margin</b>	<b>86</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>69,184</b>	
R&D	49,254	59,750	60,500	58,250	50,500	
SG&A	9,232	10,000	10,750	11,000	30,000	50 reps in 2020
Total op exp	58,486	69,750	71,250	69,250	80,500	
<b>Inc/(loss) from Ops</b>	<b>(58,400)</b>	<b>(66,750)</b>	<b>(68,250)</b>	<b>(66,250)</b>	<b>(11,316)</b>	
Int income (exp), net	652	100	100	100	100	
Other expenses, net	-	-	-	-	-	
<b>Inc/(loss) before taxes</b>	<b>(57,748)</b>	<b>(66,650)</b>	<b>(68,150)</b>	<b>(66,150)</b>	<b>(11,216)</b>	
Income tax exp (benefit)	(468)	-	-	-	-	sig. tax loss carryforwards
<b>Net income (Loss)</b>	<b>(\$57,280)</b>	<b>(\$66,650)</b>	<b>(\$68,150)</b>	<b>(\$66,150)</b>	<b>(\$11,216)</b>	
<b>Net income to common</b>						
<b>Earning per Share</b>	<b>(\$2.10)</b>	<b>(\$2.20)</b>	<b>(\$2.05)</b>	<b>(\$1.85)</b>	<b>(\$0.30)</b>	
<b>Adj EPS ex-1x &amp; non-cash</b>	<b>(\$2.10)</b>					
Weighted avg. shares (000)	27,279	30,233	33,233	35,733	37,233	
Fully diluted shares (000)	29,534	32,233	35,733	38,483	39,983	
Cash position	\$58,276	\$37,388	\$29,570	\$26,103	\$17,996	Additional raises 2017-2019

Source: Bloomberg LP; Company reports; Laidlaw &amp; Company estimates.

## Major Risks

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Exogenous events could impact our outlook. We believe pharmaceutical companies have the least control over competitive, political, and regulatory risks. Although we have incorporated competitive assumptions into our forecasts, there may be other risks beyond the scope of our analysis. Changes in the drug reimbursement system, as well as any political or regulatory amendments, may significantly influence the earnings power of these companies.

Actual clinical results and the FDA's conclusions may deviate from expectations. Many of our assumptions are based on a review of incomplete clinical trial data available in the public domain. Often our conclusions are drawn from early stage data, which may not be reflected by pivotal studies. Furthermore, the FDA's conclusions may not coincide with our own, materially changing our revenue and earnings assumptions.

Compliance issues, product recalls, and other mandates by regulatory authorities could materially change our expectations. Regulatory compliance issues, ranging from accounting irregularities to defective manufacturing practices, could materially change our assumptions and earnings outlook. Unanticipated product recalls and labeling changes could also have adverse consequences on our earnings assumptions.

Legal risks could lead to additional liabilities and revenue loss. In addition to the expenses incurred by patent challenges, product liability and other legal suits could occur and lead to additional liabilities and revenue loss, which could substantially change our financial assumptions.

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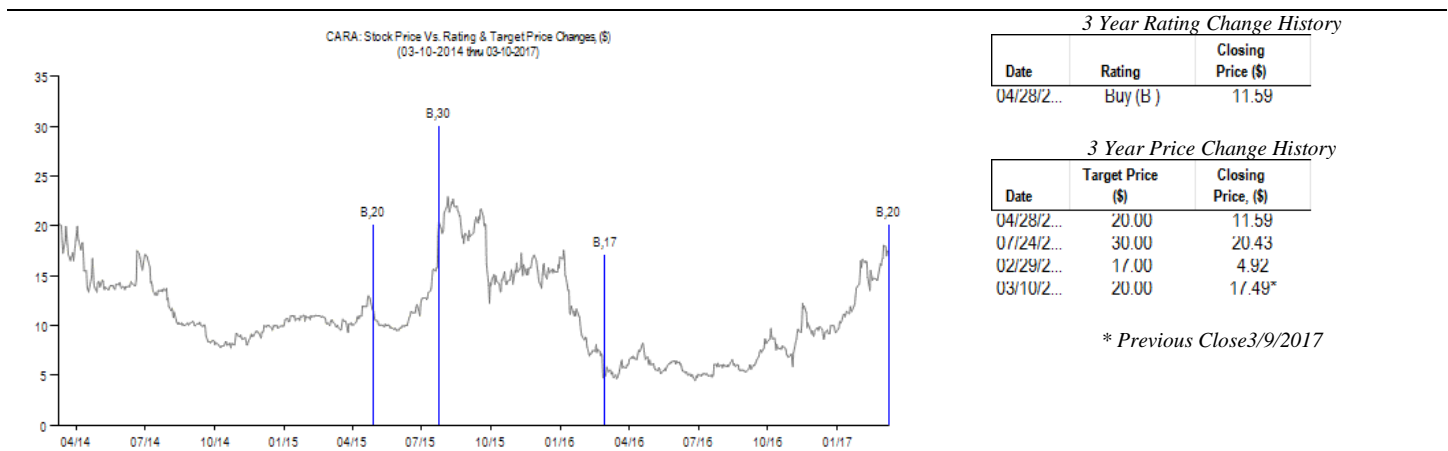
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*Additional information available upon request.*

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Laidlaw & Company Rating System*		% of Companies Under Coverage With This Rating	% of Companies for which Laidlaw & Company has performed services for in the last 12 months	
			Investment Banking	Brokerage
<b>Strong Buy (SB)</b>	Expected to significantly outperform the sector over 12 months.	2.44%	2.44%	0.00%
<b>Buy (B)</b>	Expected to outperform the sector average over 12 months.	60.98%	26.83%	2.44%
<b>Hold (H)</b>	Expected returns to be in line with the sector average over 12 months.	2.44%	0.00%	0.00%
<b>Sell (S)</b>	Returns expected to significantly underperform the sector average over 12 months.	4.88%	0.00%	0.00%

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