

Protea Biosciences Group (PRGB - \$ 0.76)

Healthcare / Medical Technology

Protea Enters Into Collaboration and Co-Marketing Agreement

Protea announced a collaboration and marketing agreement with InSphero AG to combine LAESI 3D imaging capabilities with InSphero's 3D microtissues.

Ticker: **PRGB**
Rating: **Buy**
Price Target: **\$ 4.50**

- Combining Innovative Technologies.** On July 9, 2014, Protea Biosciences and InSphero AG announced a collaborative agreement utilizing their unique 3D technologies to create new products and services for use in pharmaceutical and biotechnology research. Protea's proprietary technology, Laser Ablation Electrospray Ionization (LAESI) mass spectrometry with molecular visualization capabilities and bioinformatics, delivers molecular intelligence solutions that improve outcomes in the fields of preclinical drug discovery, biomarker discovery and ultimately clinical medicine. LAESI also provides 2D and 3D imaging data, showing the distribution of biomolecules across tissue sections and single cells. Three-dimensional imaging of molecular distributions offers insight into the correlation between biochemical processes and the spatial organization of a biological tissue. The collaboration will pair LAESI with InSphero's 3D InSight microtissues, which are designed to reflect the native cell composition of organs including the liver, pancreas, and brain, as well as tumor composition. Combining these two unique technologies introduces additional opportunity for Protea to offer first-in-class products and services and expand its position in mass spec imaging, in our opinion.
- New Potential Revenue Stream.** The potential revenue from the InSphero collaboration was not expected and could produce upside to our revenue estimates. We project the companies will publish data in 3Q14 to potentially support marketing efforts later in the year. We do not expect any revenue to be generated until at least 1Q15 from this effort. We believe the co-marketing effort of the two companies will improve the visibility of the LAESI and Protea's service capabilities. Additionally, as this is a non-exclusive agreement, we believe Protea could sign a similar collaboration deal at some point with Organovo, which could improve that company's 3D tissue bioprinting capabilities.
- Maintaining BUY Rating and Price Target.** We are maintaining our BUY rating and \$4.50 price target. We forecast sales will grow from \$1.2 million in 2013 to \$13.2 million in 2016 and over \$100 million by 2020, an impressive revenue CAGR of 88.2% out to 2020. Our price target of \$4.50 is based on 7.0x on the net present value of our revenue estimates.

Trading Data:

Last Price (07/10/2014)	\$ 0.76
52-Week High (4/29/2014)	\$ 5.00
52-Week Low (7/9/2014)	\$ 0.75
Market Cap. (MM)	\$ 50
Shares Out. (MM)	66

Earnings Estimates: (per share)

(Dec)	1Q	2Q	3Q	4Q	FY	P/E
FY_15E	-0.03	-0.03	-0.03	-0.02	-0.11	NM
FY_14E	-0.04A	-0.04	-0.04	-0.04	-0.16	NM
FY_13A	-0.08	-0.07	-0.06	-0.05	-0.25	NM
FY_12A	-0.11	-0.09	-0.08	-0.06	-0.33	NM

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Source: Laidlaw & Company estimates

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Risks to Owning the Stock

As with all medical technology companies, many factors can impact operating results including but not limited to changes in government regulations and oversight, product development failures and delays, litigation outcomes, competitive launches, and product recalls. The mass spectrometry molecular imaging market is highly concentrated and competitive. Current and potential competitors have significant resources to aggressively promote their products. Most of these companies have more resources than Protea. Competitors could develop technologies and products that are more effective, easier to use, or less expensive than LAESI as well as utilize existing sales channels to market their products to a wider base of customers. Large competitors in the mass spectrometry market include Agilent Technologies, AB SIEX (Danaher Corp. subsidiary), Bruker, Thermo Scientific, and Waters Corporation. A large majority of the revenue generated in the global mass spectrometry market is concentrated among five key competitors. The company's services unit may require significant future capital expenditures for equipment necessary to remain competitive. In addition, the company's services has competition from multiple sources including DNA sequencing solutions providers, traditional mass spectrometry imaging, and molecular imaging services providers.

Figure 1: Income Statement

PROTEA BIOSCIENCES GROUP, INC. <i>Income Statement (000s, except per share data)</i>	FY 2013				FY 2014E				FY 2015E				FY_11 Dec	FY_12 Dec	FY_13 Dec	FY_14E Dec	FY_15E Dec	FY_16E Dec	
	Q1_13 Mar	Q2_13 Jun	Q3_13 Sept	Q4_13 Dec	Q1_14 Mar	Q2_14E Jun	Q3_14E Sept	Q4_14E Dec	Q1_15E Mar	Q2_15E Jun	Q3_15E Sept	Q4_15E Dec							
Revenue	481.6	278.0	178.5	285.4	468.1	625.0	785.0	1,160.3	1,315.8	1,571.6	1,602.6	2,234.0	713.0	834.3	1,223.5	3,038.4	6,724.0	13,161.3	
<i>Operating expenses:</i>																			
Cost of good sold	-	-	-	-	-	167.3	238.9	324.0	336.0	386.5	381.0	561.0	-	-	-	730.2	1,664.5	2,655.0	
Gross Profit	481.6	278.0	178.5	285.4	468.1	457.8	546.1	836.3	979.8	1,185.1	1,221.6	1,673.0	713.0	834.3	1,223.5	2,308.2	5,059.5	10,506.3	
Selling, general and administrative (includes COGS in actuals)	2,047.6	2,023.6	1,943.8	2,760.4	2,353.4	2,486.1	2,521.3	2,952.9	2,615.9	2,748.6	2,783.8	3,190.4	5,246.0	5,218.8	8,775.5	10,313.8	11,338.8	12,147.2	
Research and development	863.6	844.5	658.9	405.9	722.0	745.0	750.0	750.0	750.0	750.0	750.0	750.0	6,242.9	4,595.8	2,772.9	2,967.0	3,000.0	3,150.0	
Depreciation and amortization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Operating Expenses	2,911.2	2,868.2	2,602.7	3,166.3	3,075.4	3,231.1	3,271.3	3,702.9	3,365.9	3,498.6	3,533.8	3,940.4	11,488.8	9,814.6	11,548.4	13,280.7	14,338.8	15,297.2	
Operating Income/(loss)	(2,429.6)	(2,590.2)	(2,424.2)	(2,880.9)	(2,607.3)	(2,606.1)	(2,486.3)	(2,542.6)	(2,050.2)	(1,927.1)	(1,931.2)	(1,706.4)	(10,775.8)	(8,980.3)	(10,324.9)	(10,242.4)	(7,614.8)	(2,135.9)	
<i>Other Income:</i>																			
Interest and exchange income (expense)	(2.2)	8.6	0.6	6.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	8.1	(8.7)	13.1	0.6	0.6	0.9	
Interest expense	(158.3)	(174.6)	(131.3)	(282.1)	(166.2)	(166.2)	(166.2)	(166.2)	(166.2)	(166.2)	(166.2)	(166.2)	(729.6)	(541.8)	(746.2)	(664.7)	(664.7)	(664.7)	
Debt Conversion cost	-	-	-	(724.6)	-	-	-	-	-	-	-	-	-	-	(724.6)	-	-	-	
Gain on debt settlement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	
Loss on asset disposal	(15.8)	-	-	0.7	(24.8)	-	-	-	-	-	-	-	-	(0.4)	(15.1)	(24.8)	-	-	
Derivative income	-	-	-	380.0	65.9	-	-	-	-	-	-	-	-	-	380.0	65.9	-	-	
Other	-	-	-	-	(124.8)	-	-	-	-	-	-	-	-	-	-	(124.8)	-	-	
Income (loss) before provision for income taxes	(2,605.8)	(2,756.1)	(2,554.9)	(2,776.2)	(2,857.0)	(2,772.1)	(2,652.3)	(2,708.7)	(2,216.2)	(2,093.2)	(2,097.1)	(1,872.3)	(11,497.3)	(9,531.3)	(11,417.7)	(10,990.1)	(8,278.9)	(2,799.7)	
<i>Tax: (%) non-GAAP</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	
Income tax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Net income (loss)	(2,605.8)	(2,756.1)	(2,554.9)	(2,776.2)	(2,857.0)	(2,772.1)	(2,652.3)	(2,708.7)	(2,216.2)	(2,093.2)	(2,097.1)	(1,872.3)	(11,497.3)	(9,531.3)	(11,417.7)	(10,990.1)	(8,278.9)	(2,799.7)	
Foreign currency translation adjustment	(11.5)	12.2	5.8	23.1	0.8	-	-	-	0.8	-	-	-	18.6	(21.2)	29.6	0.8	-	-	
Total Comprehensive Loss	(2,617.3)	(2,743.9)	(2,549.1)	(2,753.1)	(2,856.2)	(2,772.1)	(2,652.3)	(2,708.7)	(2,215.5)	(2,093.2)	(2,097.1)	(1,872.3)	(11,478.7)	(9,552.5)	(11,388.1)	(10,989.4)	(8,278.9)	(2,799.7)	
Diluted EPS (GAAP)	(0.08)	(0.07)	(0.06)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.02)	(0.55)	(0.33)	(0.25)	(0.16)	(0.11)	(0.04)	
Weighted Diluted Shares outstanding	34,517.6	40,866.2	43,952.0	54,152.8	65,455.8	65,455.8	65,455.8	75,455.8	75,455.8	75,455.8	75,455.8	78,789.1	20,925.5	28,953.1	45,044.6	67,955.8	76,289.1	77,539.1	
Weighted Diluted Shares YOY change (%)	26.2%	45.5%	50.3%	74.0%	89.6%	60.2%	48.9%	39.3%	15.3%	15.3%	15.3%	4.4%	-	38.4%	55.6%	50.9%	12.3%	1.6%	

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

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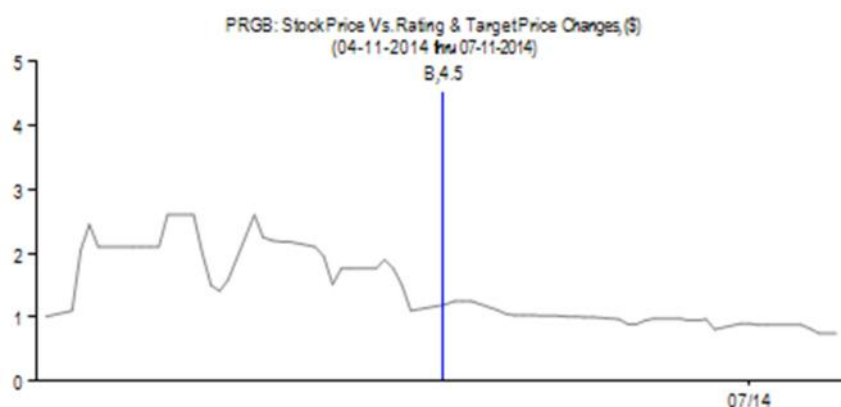
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Date	Rating	Closing Price (\$)
05/27/2014	Buy (B)	1.20

Date	Target Price (\$)	Closing Price, (\$)
05/27/2014	4.50	1.20

Source: Laidlaw & Company

Created by: Blue-Compass.net

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
Strong Buy (SB)	Expected to significantly outperform the sector over 12 months.	0.00%	0.00%	0.00%
Buy (B)	Expected to outperform the sector average over 12 months.	94.12%	35.29%	11.76%
Hold (H)	Expected returns to be in line with the sector average over 12 months.	5.88%	0.00%	0.00%
Sell (S)	Returns expected to significantly underperform the sector average over 12 months.	0.00%	0.00%	0.00%

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Agilent Technologies (A, Not Rated)
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