Zacks Small-Cap Research

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Pressure Biosciences (PBIO-OTCQB)

PBIO: two new products will be launched soon, expecting continued revenue growth in 4Q13 and fiscal 2014; valuation very attractive---Outperform.

Current Recommendation	**Outperform**
Prior Recommendation	Neutral
Date of Last Change	11/15/2012
Current Price (01/24/14)	$0.30
Twelve- Month Target Price	**$1.25**

OUTLOOK

PBIO is a research products and services provider for the life science industry. We are impressed with and optimistic about the Company's novel, enabling platform technology PCT which has competitive advantages over existing technologies in the sample preparation market. PCT is increasingly gaining recognition by research labs.

PBIO just reported record revenue for 3Q13 and we expect sales to grow further in 4Q13 and 2014.

Valuation is very attractive at this time. Therefore, we maintain our Outperform rating.

SUMMARY DATA

52-Week High	**$0.48**
52-Week Low	**$0.17**
One-Year Return (%)	**-12.15**
Beta	**1.87**
Average Daily Volume (sh)	**21,438**
Shares Outstanding (mil)	**12**
Market Capitalization ($mil)	**$3**
Short Interest Ratio (days)	**3.01**
Institutional Ownership (%)	**2**
Insider Ownership (%)	**41**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**37.0**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2011 Estimate	**N/A**
P/E using 2012 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**High,**
Type of Stock	**Small-Value**
Industry	**Med Instruments**
Zacks Rank in Industry	**N/A**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2012	0.31 A	0.32 A	0.39 A	0.22 A	1.24 A
2013	0.37 A	0.36 A	0.42 A	0.30 E	1.45 E
2014					1.65 E
2015					5.70 E

Earnings per Share
(EPS is operating earnings before non-recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2012	-$0.14 A	-$0.12 A	-$0.09 A	-$0.11 A	-$0.45 A
2013	-$0.11 A	-$0.10 A	-$0.06 A	-$0.06 E	-$0.34 E
2014					-$0.22 E
2015					-$0.12 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

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WHAT'S NEW

- **Two new products expected to be launched soon;**
- **Record quarterly revenue reported in 3Q13;**
- **Continued revenue growth expected in 4Q13 and fiscal 2014;**
- **New application of PCT in protein structure and function;**
- **Valuation is very attractive;**

Two New Products Will Be Launched Soon and Will Accelerate Revenue Growth

We recently talked to management of PBIO about the company's development plan of new products. Management indicated that two new instruments will be launched in 2014.

The **HUB880** will be launched during 1Q14 and the **High Throughput Barocycler** will be launched in June 2014.

The **HUB880** is a first-in-kind instrument. It will generate pressures up to 100,000 psi. This is the type of pressure that will be very helpful to scientists making **vaccines,** to researchers in the **food industry** (pathogen inactivation studies), **material science** applications (quality control of petroleum, hydraulic fluid, plastics, valves, etc.). And it will play an important role in life sciences research, as these pressures will unravel the secrets of many biological substances that are not extracted/inactivated/recovered/etc. at "lower" pressures. This instrument is expected to be released **in 1Q14**.

PBIO's HUB880 targets the large market of vaccines, food industry and material science.

The **High Throughput (HT) Barocycler** uses the disposable microwell strips that are universally used by labs worldwide. PBIO's ability to perform PCT with these strips will allow the Company to directly integrate its PCT instruments with the current automated robotically-driven microwell templates used by thousands of labs worldwide. This instrument is expected to be launched **in June 2014**.

The high throughput system is a **breakthrough technology** for PBIO. PBIO announced in June 2013 that they have achieved and passed proof-of-principle objectives in their multi-year investment into the development of a **high throughput (HT) system** for their patented pressure cycling technology (PCT) platform. The new HT design will allow their PCT platform to integrate with the automated, universally accepted HT sample preparation and analytical system formats installed in tens of thousands of biological research laboratories worldwide.

This breakthrough also has the potential to significantly accelerate its growth in existing and new PCT-based applications and products, and its ability to attract and form new strategic partnerships.

There are more than 80,000 research laboratories working with biological samples worldwide and that many of these laboratories use automated, HT sample preparation and analytical systems in their studies. HT systems generally use sample handling robotics and "multiwell" test plates in standardized formats (e.g., 24, 96, or 384 wells per plate) for processing and testing large numbers of samples simultaneously. The multiwell plate is often processed in an automated fashion, allowing scientists to perform other important tasks while samples are being processed unattended.

Although a number of studies have shown significant advantages of the PCT platform in preparing biomolecules (e.g., DNA, proteins, and lipids) for analysis, the PCT platform continues to be used primarily in small but important research studies. Unlike today's popular HT multiwell plates that use an automated, unattended approach, the PCT Platform uses individual test tubes that require a lot of manual sample handling. These manual sample handling requirements have prevented the PCT platform from

being better accepted by the research community. To that end, PBIO's new HT multiwell format will substantially enhance and accelerate the acceptance of the PCT platform in the life sciences R&D marketplace. This technology breakthrough is a game-changer for PBIO in our view.

While the new HT multiwell PCT platform has the potential to significantly accelerate growth in existing and new PCT applications and products, installed base and strategic partnerships, both HUB880 and the new HT will accelerate sales reach and overall revenue growth in fiscal 2014 and beyond.

Record Revenue Reported for 3Q13, Continued Revenue Growth Expected for 4Q13 and Year 2014

On November 7, Pressure BioSciences, Inc. (PBIO) reported financial results for the three months ended September 30, 2013 and provided a business update.

Total revenue for the third quarter of 2013 was $420,762 compared to $391,616 for the same period in 2012, an increase of 7.4%.

Revenue from the sale of products and services was $327,958 for the third quarter of 2013 compared to $297,867 for the same period in 2012, an increase of 10%.

Grant revenue for the third quarter of 2013 was $92,804 compared to $93,749 for the comparable period in 2012.

Sales of consumables were $51,450 for the three months ended September 30, 2013 compared to $27,993 for the same period in 2012, an increase of 84%.

Operating loss for the third quarter of 2013 increased to $844,033, from $686,520 for the same period in 2012. This increase was mainly due to increased costs associated with the expansion of the company's strategic marketing and sales alliance with Constant Systems and with its marketing and sales plan in general, with the development of the company's new High Throughput and HUB880 Barocycler instruments, and quarter over quarter cost increases in patent, investor relations, and outside services.

Loss per common share – basic and diluted – was $0.06 for the third quarter of 2013 compared to $0.09 for the same period in 2012.

As of September 30, 2013, PBIO had cash and cash equivalents of $66,680. Management has been committed to strength its balance sheet by raising new funds to grow its business.

We are very pleased with the third quarter financials. The company has made the following notable achievements:

- recorded record quarterly total revenue of $420,762;
- recorded record quarterly products and services revenue of $327,958;
- recorded record quarterly consumable products sales of $51,450;
- recorded record quarterly Shredder System sales of $50,480;

We are especially impressed with the increased revenue from **consumables** in the third quarter. Sales of PCT-based consumables generated revenue of $51,450 in 3Q13, a record revenue from consumables. This compares to $26,034 for the three months ended June 30, 2013, an increase of 98%. This is important to PBIO as we previously said. As more and more PCT instruments are installed, more consumables will be used on these instruments. Revenue from consumables is **recurring**, which will increase with the number of installed PCT instruments.

The financial success in 3Q13 was achieved from the company's continued progress in implementing its aggressive sales and marketing plan. PBIO expanded its strategic marketing and sales program with

Constant Systems, increased its social media presence, revamped its corporate website, and increased its support of and training programs with its distributors. PBIO increased its marketing presence in the life sciences area, and increased its sales out-reach to potential users of the PCT system. These efforts resulted in record instrument and consumable sales for the quarter.

PBIO has reported three consecutive quarters with total revenue exceeding the prior year period. Management disclosed that the company had a very strong start in the first five weeks of Q4. We believe sales will continue to grow in 4Q2013 and in fiscal 2014.

For 4Q13, we estimate product sales will be $0.25 million, an increase of 104% over $0.12 million for 4Q12. Total product sales will reach $1 million and total revenue for the year of 2013 will reach the $1.5 million mark for the first time in the company's history according to our estimate.

Based on the two new products launch and continued marketing efforts by management, we estimate product sales will reach $1.5 million in fiscal 2014, an increase of 45.6% over $1 million product sales for fiscal 2013.

Novel Use of PCT Platform Offers New Insights into Protein Structure and Function

On Aug. 1, 2013, PBIO announced that data supporting important advantages of PBIO's powerful and enabling Pressure Cycling Technology (PCT) platform were presented at the 27th Annual Symposium of the Protein Society held July 20-23, 2013 in Boston, Massachusetts.

The use of highly sophisticated analytical instrument systems by research scientists worldwide has resulted in a greater understanding of complex biological molecules, including proteins. One such instrument system, Electron Paramagnetic Resonance (**EPR**) spectroscopy, has been shown to provide key information on the structure, flexibility, and function of proteins. This information is crucial to the development of new and better diagnostics, therapeutics, and vaccines.

At this year's annual Protein Society symposium, researchers from UCLA reported on the development of an improved EPR system based on the use of high pressure. This novel system combined (for the first time ever) two cutting-edge EPR methods: site directed spin labeling (SDSL) and double electron-electron resonance (DEER). This strategy allowed the investigation of dynamic events in proteins that would be difficult or even impossible to study by conventional EPR technology.

These and other data reported by researchers using pressure-based EPR and NMR systems strongly indicate that PCT can enhance the recovery, detection, and measurement of proteins from a wide variety of samples. In turn, this information has the potential to help accelerate the design and manufacture of new and better diagnostics, therapeutics, and vaccines. We believe that the advantages of pressure-based spectroscopic methods are just now beginning to be realized by scientists, and that as the body of data continues to grow from high pressure-based spectroscopic studies, that PBIO has the potential to become a major provider of high pressure equipment into the exciting and growing spectroscopy area.

Valuation Is Very Attractive

We maintain our Outperform rating on PBIO shares and reiterate our twelve-month price target of $1.25.

Our call is based on two factors: financial results and business development are improving and valuation is very attractive.

PBIO reported record product sales and total revenue for 3Q13, and we expect continued revenue growth in 4Q13 and fiscal 2014 due to two new products launch and continued marketing efforts from management.

In terms of valuation, we think PBIO shares are undervalued based on the Company's fundaments. Currently, the Company trades around $0.30 per share with a market cap of $3.6 million. We believe this deeply undervalues the Company based on the current fundamentals mentioned above. We understand that market discounts the value of the Company because the Company has only limited revenue base and has been losing money since its inception. We also understand that the Company has a relatively weak balance sheet, and further financing will be needed. However, when we look at the Company and the industry in which it operates in more detail, we realize that this is a company with huge opportunity and one that can grow its revenue and earnings at a tremendous rate in the next few years.

PBIO operates in the rather large, but underserved research services market. The Company has developed a unique and superior pressure cycling technology (PCT) for the preparation of biological laboratory samples. The Company's PCT platform holds competitive advantages over incumbent technologies in many important aspects related to sample preparation.

Currently, the Company is in the early stage of commercialization of its platform technology. We have realized that sales have not been stellar so far, but this is understandable. Pressure cycling technology is quite new to most customers in the sample preparation market, and the costs for PCT are also higher than those for most existing technologies. Therefore, rollout of the PCT platform will take time. However, once customers become familiar with the new PCT platform, and realize its advantages over existing technologies, uptake of PCT and its consumable products by the industry will increase dramatically in our view.

We are especially optimistic about the Company's collaboration programs which will generate great awareness of the PCT platform among researchers in the sample preparation market. We are also impressed with the potential of the PCT technology in new application areas such as in the forensic, oil spill clean-up, agricultural applications and lipids extraction.

PBIO has established extensive distribution partnerships with leading companies in the life science industry. With continued marketing efforts and a clear growth strategy in place, sales should pick up steam in the coming quarters.

We are now optimistic about the Company's prospect. With a rapidly growing market worldwide, combined with its unique technology and broad range of product offering, the Company is well positioned to boost its top line and bottom line in the coming years. According to our long term financial model, the Company's revenue will grow at a compound annual growth rate (CAGR) of 89% in the next three fiscal years from 2013 to 2015.

We think PBIO is more like a development stage biotech company. Our price target of $1.25 per share values the company at 15 million in market cap based on 12 million outstanding shares. This valuation is still very conservative in our view. As long as the Company can execute its growth strategy correctly, we believe this goal is achievable. Patient investors will get rewarded.

PROJECTED INCOME STATEMENT

$ in million except per share data	12/11A	Q1	Q2	Q3	Q4	12/12A	Q1	Q2	Q3	Q4	12/13E	12/14E	12/15E
Product/Service Revenue	$0.77	$0.16	$0.22	$0.30	$0.12	$0.81	$0.22	$0.20	$0.33	$0.25	$1.00	$1.45	$5.50
YOY Growth	-12.51%	-8.8%	17.7%	36.8%	-31.6%	5.4%	34.5%	-12.4%	10.1%	104.4%	23.1%	45.6%	279.3%
Grant Revenue	$0.22	$0.14	$0.10	$0.09	$0.09	$0.43	$0.15	$0.16	$0.09	$0.05	$0.45	$0.20	$0.20
Total Revenues	**$0.99**	**$0.31**	**$0.32**	**$0.39**	**$0.22**	**$1.24**	**$0.37**	**$0.36**	**$0.42**	**$0.30**	**$1.45**	**$1.65**	**$5.70**
YOY Growth	-26.3%	69.2%	70.4%	39.7%	-35.7%	25.4%	21.3%	10.1%	7.4%	38.9%	17.0%	13.9%	245.5%
CoGS	$0.3	$0.1	$0.1	$0.1	$0.1	$0.4	$0.1	$0.1	$0.2	$0.1	$0.5	$0.7	$2.8
Gross Income	**$0.64**	**$0.23**	**$0.22**	**$0.28**	**$0.10**	**$0.82**	**$0.27**	**$0.27**	**$0.24**	**$0.17**	**$0.95**	**$0.92**	**$2.95**
Gross Margin	65.3%	74.4%	66.4%	72.2%	44.3%	66.4%	71.8%	76.6%	58.2%	55.3%	65.6%	56.0%	51.7%
Gross Margin for PCT revenue	55.3%	52.5%	51.3%	63.5%	1.6%	48.5%	52.8%	57.3%	46.3%	46.3%	49.9%	49.9%	49.9%
R&D	$1.0	$0.3	$0.3	$0.2	$0.2	$1.0	$0.2	$0.3	$0.3	$0.3	$1.1	$1.4	$1.6
% R&D	98.2%	88.9%	78.9%	63.3%	87.9%	78.0%	66.5%	72.8%	66.6%	93.3%	73.6%	84.8%	28.1%
SG&A	$3.0	$0.9	$0.6	$0.7	$1.0	$3.3	$0.7	$0.9	$0.8	$0.9	$3.3	$4.0	$5.0
% SG&A	300.2%	301.1%	197.7%	184.3%	479.3%	268.1%	200.9%	243.6%	192.2%	283.3%	226.0%	242.4%	87.7%
Other	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
% Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating Income	**($3.3)**	**($1.0)**	**($0.7)**	**($0.7)**	**($1.1)**	**($3.5)**	**($0.7)**	**($0.9)**	**($0.8)**	**($1.0)**	**($3.4)**	**($4.5)**	**($3.7)**
Operating Margin	-333.1%	-315.6%	-210.1%	-175.3%	-523.0%	-279.7%	-195.6%	-239.8%	-200.6%	-321.4%	-234.0%	-271.3%	-64.1%
Other Net	$0.31	($0.10)	$0.17	($0.11)	$0.05	$0.01	($0.05)	($0.21)	$0.17	$0.05	($0.04)	$0.00	$0.00
Pre-Tax Income	**($3.0)**	**($1.1)**	**($0.5)**	**($0.8)**	**($1.1)**	**($3.5)**	**($0.8)**	**($1.1)**	**($0.7)**	**($0.9)**	**($3.4)**	**($4.5)**	**($3.7)**
Pref. stk Div	$2.14	$0.02	$0.58	$0.13	$0.22	$0.95	$0.61	$0.11	$0.04	$0.05	$0.82	$0.00	$0.00
Taxes (Benefit)	$0.0	$0.0	$0.0	$0.0	($0.0)	($0.0)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reported Net Income	**($5.1)**	**($1.1)**	**($1.1)**	**($0.9)**	**($1.3)**	**($4.4)**	**($1.4)**	**($1.2)**	**($0.7)**	**($1.0)**	**($4.2)**	**($4.5)**	**($3.7)**
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Margin	-518.2%	-355.7%	-335.4%	-236.4%	-600.6%	-355.4%	-376.0%	-328.2%	-170.2%	-321.4%	-293.1%	-271.3%	-64.1%
Shares Out	4.7	7.7	10.2	10.9	11.8	10.2	12.1	11.5	11.7	15.0	12.6	20.0	30.0
Reported EPS	**($1.10)**	**($0.14)**	**($0.11)**	**($0.09)**	**($0.11)**	**($0.43)**	**($0.11)**	**($0.10)**	**($0.06)**	**($0.06)**	**($0.34)**	**($0.22)**	**($0.12)**
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	-	-
One time charge	*($0.22)*	*$0.00*	*($0.18)*	*$0.00*	*$0.00*	*($0.18)*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Non GAAP Net Income	**($5.3)**	**($1.1)**	**($1.3)**	**($0.9)**	**($1.3)**	**($4.6)**	**($1.4)**	**($1.2)**	**($0.7)**	**($1.0)**	**($4.2)**	**($4.5)**	**($3.7)**
Non GAAP EPS	**($1.14)**	**($0.14)**	**($0.12)**	**($0.09)**	**($0.11)**	**($0.45)**	**($0.11)**	**($0.10)**	**($0.06)**	**($0.06)**	**($0.34)**	**($0.22)**	**($0.12)**

Source: Company filings and Zacks Investment Research Inc. estimates

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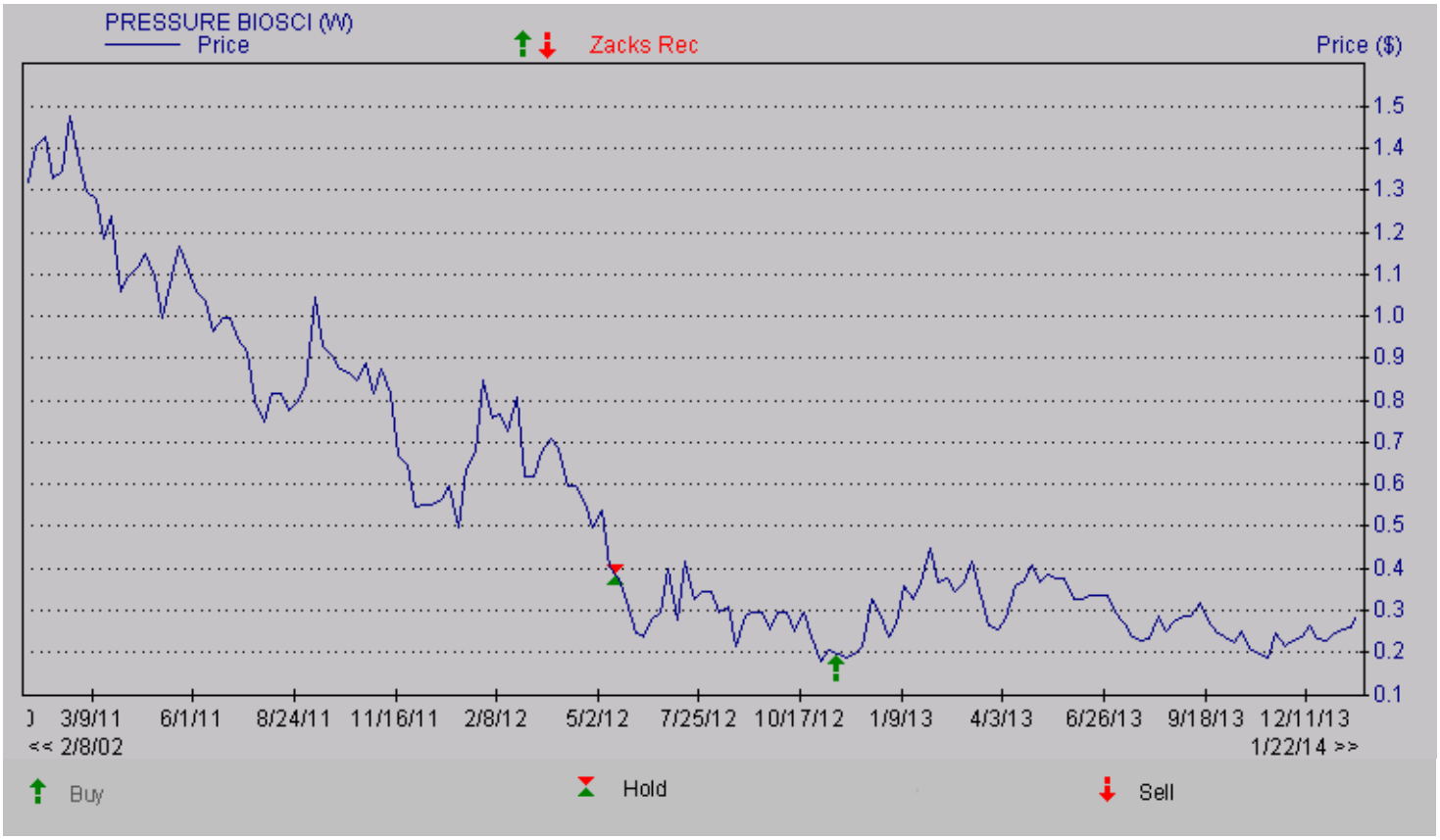
HISTORICAL ZACKS RECOMMENDATIONS



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Sell/Underperform: The analyst expects the company will underperform the broader U.S. Equity market over the next one to two quarters.

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