



## Pressure BioSciences Inc. (NASDAQ:PBIO)

Investor Presentation – March 15<sup>th</sup>, 2012

### Safe Harbor Statement / Forward Looking Statements



Statements contained in this presentation regarding the Company's intentions, hopes, beliefs, expectations, or predictions of the future are "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, without limitation, statements regarding: the Company's business strategy, growth and market opportunities, commercialization, marketing and expansion plans and efforts, benefits and advantages of the Company's products, anticipated product introductions and timing thereof, potential strategic partners, financing plans and efforts, and outlook and expectations relating to financial results and shareholder value.

These statements are based upon the Company's current expectations, forecasts, and assumptions that are subject to risks, uncertainties, and other factors that could cause actual outcomes and results to differ materially from those indicated by these forward-looking statements. These risks, uncertainties, and other factors include, but are not limited to: the Company's historical and projected financial results may not necessarily be indicative of future results as future revenues may not meet expectations due to the possible failure of the Company's products to achieve commercial acceptance, changes in customer's needs and technological innovations, and expenses that may be higher than anticipated due to unforeseen costs or cost increases; risks associated with new product development; problems, delays, expenses, and complications that often affect companies with products that have not achieved market acceptance; the risk that the Company may be unable to improve total revenue and PCT products and services revenue, the number of PCT Systems installations, and its operating loss due to unexpected costs or increases in costs; possible difficulties or delays in the implementation of the Company's strategies that may adversely affect the Company's aggressive commercialization of PCT; changes in customer's needs and technological innovations; the Company's sales force may not be successful in selling the Company's PCT product line because, among other things, scientists may not perceive the advantages of PCT over other sample preparation methods and the lengthy sales cycle of the Company's products; risks associated with strategic relationships, including the ability to identify appropriate strategic partners and ability to successfully manage such relationships; the Company's ability to attract and retain qualified personnel; the Company may not be successful in raising additional capital necessary to fund its operations or its aggressive commercialization and expansion plans; and, if the Company fails to achieve its plan to regain compliance with the NASDAQ Listing Rules for minimum stockholders' equity and the minimum bid price of \$1.00 per share, the Company's common stock will be delisted from The NASDAQ Capital Market which could further impact its ability to raise additional capital.

Further, the Company will require additional working capital to fund its operations beyond April 2012, and there can be no assurance that the Company will be successful in obtaining such financing on acceptable terms, if at all. Additional risks and uncertainties that could cause actual results to differ materially from those indicated by these forward-looking statements are discussed under the heading "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2011, and other reports filed by the Company from time to time with the SEC. The Company undertakes no obligation to update any of the information included in this release, except as otherwise required by law.

PBI filed a registration statement (including a prospectus) with the SEC for an offering to which this communication may relate. Before you invest, you should read the prospectus in that registration statement for the offering and other documents PBI has filed with the SEC for more complete information about PBI and the offering. You may get these documents for free by visiting EDGAR on the SEC Web site at [www.sec.gov](http://www.sec.gov). Alternatively, PBI can arrange to send you the prospectus, when available, upon request.

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- Company Overview
  - Investment Highlights
  - Management Team

- **Pressure BioSciences, Inc. (NASDAQ:P BIO), (“P BIO”) develops and markets laboratory devices that address the challenges of biological sample preparation. The Company’s proprietary technology platform utilizes a process called pressure cycling technology (“PCT”) in order to more efficiently control the actions of molecules in biological samples.**
  - Company is focused on three dynamic biological sample preparation markets that include:
    - Biomarker Discovery
    - Forensics
    - Pathology
  - Company has a number of blue-chip government, academic, and corporate clients
- **P BIO has several novel and patented products that enhance the safety, speed, and quality of sample preparation:**

| Product Name                      | Description   |
|-----------------------------------|---|
| <b>Barocycler Instrumentation</b> | ▪ Uses cycles of hydrostatic pressure to break up the cellular structures of a specimen and accelerate many enzymatic reactions.  |
| <b>P BI Shredder Systems</b>      | ▪ Homogenizes tough samples such as ticks, seeds, or muscle prior to PCT.   |
| <b>Consumable Products</b>        | ▪ Specially designed PULSE processing tubes and microtubes as well as various kits for the extraction and isolation of nucleic acids, proteins, and lipids from biological samples. |



# Investment Highlights

- **PCT is a Powerful, Enabling, and Patented platform that offers significant advantages over competitive methods**
- **Focused on three large and dynamic Sample Preparation markets: Biomarker Discovery / Forensics / Pathology**
- **Proven Technology: ~200 Installations in ~140 Marquee Laboratories; Blue-Chip Customers**
- **Existing and new products offer significant growth opportunity**
- **Attractive “Razor / Razorblade” business model**
- **Commercialization Plan in place for 2012**

➤ **Richard T. Schumacher – President & Chief Executive Officer**

- Co-founder of Trinity Biotech plc, (NASDAQ:TRIB), a Company specializing in the development, manufacture and marketing of clinical diagnostic products.
- Founder of Panacos Pharmaceuticals, Inc. (formerly NASDAQ:PANC), a Company focused on antiviral drugs for the treatment of Human Immunodeficiency Virus (HIV) infection.
- Former CEO of Boston Biomedica (formerly NASDAQ:BBII), a company focused on infectious disease quality control products.
- Received a B.S. in Zoology from the University of New Hampshire.

➤ **Edmund Y. Ting, Ph.D. – Senior Vice President of Engineering**

- Former Chief Research Officer of Avure Technologies, Inc., a leading worldwide manufacturer of high pressure hydrostatic processing equipment for the food and materials processing industry; Former VP of Engineering Research and Development for Flow International Corporation (NASDAQ:FLOW), a world leader in the ultra-high pressure water jet cutting technology market.
- Research scientist and group leader at Northrop Grumman Corporation (NYSE:NOC).
- Received B.S. in Mechanical Engineering from Northeastern University and a Science Doctorate in Materials Science and Engineering from the Massachusetts Institute of Technology.

➤ **Nathan P. Lawrence, Ph.D. – Vice President of Marketing & Sales**

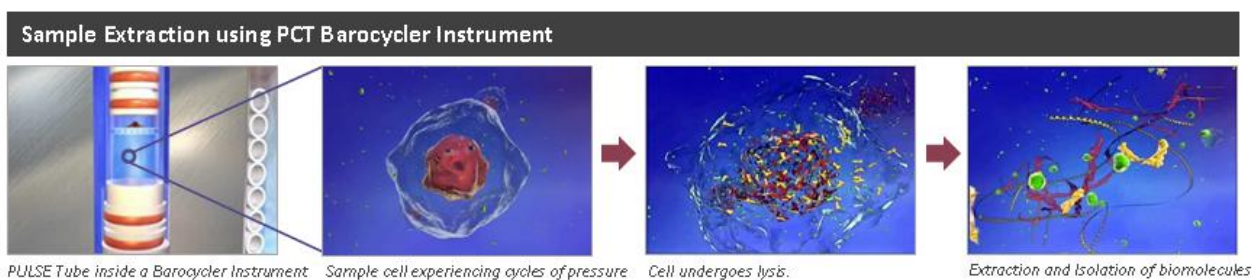
- Product developer for 454 Life Sciences Corporation, a developer of instruments for DNA sequencing.
- Former Director of Research and Development for Boston Biomedica, Inc., (formerly NASDAQ:BBII).
- Held several positions in R&D and manufacturing at Becton, Dickinson and Company (NYSE:BDX), a medical technology company, and Gen-Trak Systems, which supplies food borne pathogen detection products and was recently acquired by Neogen Corp. (NASDAQ:NEOG).
- Received a B.A. from University of Miami, an M.S. from Southern Connecticut State University, and a Ph.D. from Yale University.

➤ **Alexander Lazarev, Ph.D. – Vice President of Research & Development**

- Served as Director of New Technology Development at Proteome Systems, Inc., a developer of medical instruments.
- Former Senior Scientist at the Proteomics Division of Genomic Solutions, Inc., a developer of medical instruments.
- Held various positions at the Ohio State University School of Medicine and the Uniformed Services University of Health Sciences.
- Earned his undergraduate and graduate degrees from the University of Kazan, Russian Federation.

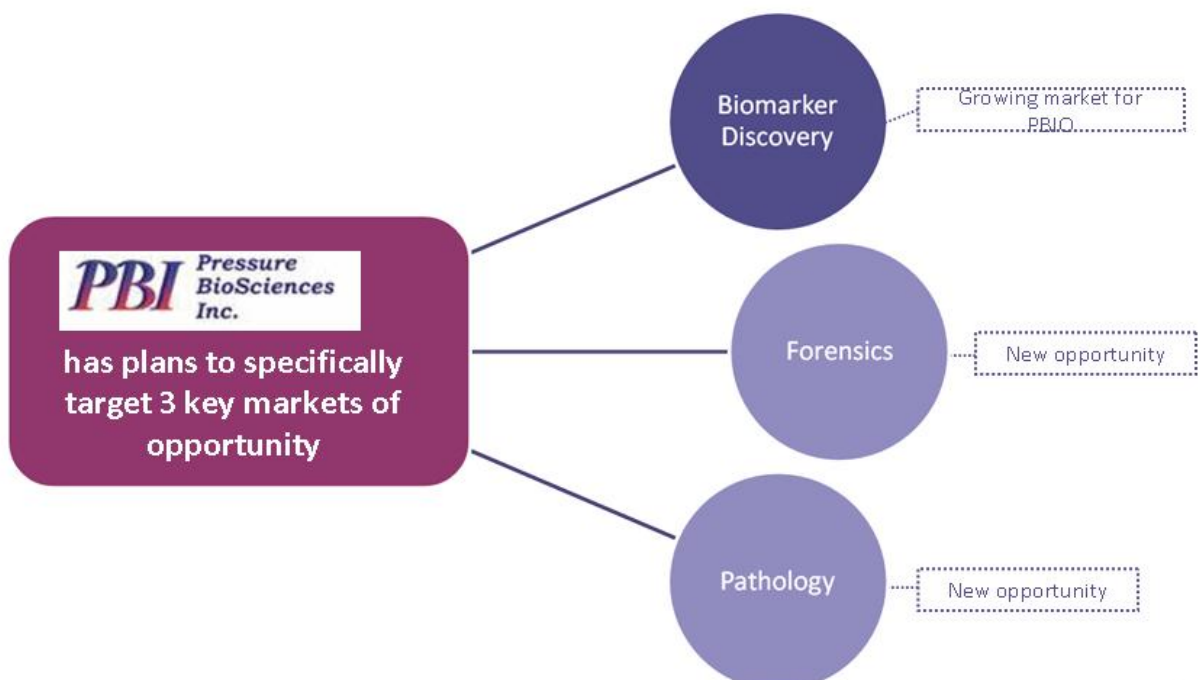
- PCT Sample Preparation Overview
- PBIO Blue-Chip Clients
- Market Opportunities

- **Sample preparation is required prior to virtually all analyses.**
  - Most difficult aspect of sample preparation is extracting / isolating the material of interest without damaging it.
  - Often complex, time-consuming, and one of the most error-prone steps in scientific research.
  - Approximately 15% of a researcher’s time is spent on sample preparation.
  
- **The Company’s PCT Sample Preparation System (“PCT SPS”) utilizes rapid and repeating alternating cycles of hydrostatic pressure at controlled temperatures in order to control the interactions of biomolecules and induce cell lysis for the extraction of cell components.**
  - This novel technology has the potential for broad use in a number of applications, including:
    - Sample preparation for genomic, proteomic, and small molecule studies.
    - Pathogen inactivation / Protein purification.
    - Control of chemical reactions / Immunodiagnostics.



## Market Opportunities

- **PBIO’s superior solution to sample preparation enables the Company to take advantage of the large and rapidly growing market.**
  - There are an estimated 80,000 laboratories and 500,000 biological researchers worldwide (The Emmes Group).
  - According to Strategic Directions International, the worldwide sample preparation market is approx. \$6 billion (2009).



### Biomarker Discovery

- Biomarker discovery has become increasingly important in providing preventative and proactive medical treatment.
- A Biomarker is a traceable substance whose detection in the body indicates the presence or progression of a certain disease, infection, or cancer.
- The Drug Discovery Biotechnology Industry spent an estimated **\$8.6 billion USD on the purchase of research products in 2005**, approx. 50% of their operating costs<sup>(1)</sup>.

### Forensics

- There are 180,000 new cases of sexual assault per year.
- The PCT platform can effectively separate male DNA from female DNA in evidence.
- The speed and efficiency of PBI's technology can help process a backlog of 500,000 unanalyzed rape kits.
- In addition to applications in the investigation of rape, the PCT platform is especially effective in the testing of Touch DNA Samples.
- Total Sales of forensic products and services were nearly **\$10.1 billion in 2010** and that sales will grow at a 9.4% CAGR through 2016 to more than \$17 billion.

### Pathology

- Pathology is the study of the causes, developments, and consequences of diseases.
- PBI's PCT platform increases the quality, speed, and efficiency of preparing tissues and isolating materials of interest for samples in pathology labs.

(1) Source: "World Drug Discovery Technologies Outlook", Frost & Sullivan, November 2006.  
(2) Source: BCC Research. <http://www.bccresearch.com/report/SAS003D.html>

- Existing Product Portfolio
- PCT vs. Existing Methods
- Sales, Distribution & Manufacturing
- Key Developments (2011) & Anticipated Milestones (2012)
- Product Pipeline

➤ **PBIO's products consist of pressure-generating instruments, auxiliary shredding systems, and consumables that are used with the instruments.**

▪ **Barocycler Instruments**

- *Barocycler NEP3229*: A hydraulic barocycler unit capable of processing up to 3 large or 48 samples simultaneously.
- *Barocycler NEP2320*: A compact unit that processes 1 large or 12 small samples at a time and works on compressed air.
- *Barocycler HUB440*: A modular universal computer-controlled benchtop pressure generator.



▪ **Shredder Systems**

- *PCT Shredder*: Designed to disrupt very tough samples such as ticks, muscle, and seeds prior to PCT. (\$770/Unit)
- *Shredder SG3*: Features a three-position force setting lever in order to apply reproducible force to sample. (\$3,950/Unit)



▪ **Consumables**

- *PULSE Tubes*: A specially designed, plastic, single-use, processing container that is required for use with the barocycler and shredder instruments.
- *PCT Microtube Adapter Kit*: Includes PCT MicroTubes and MicroCaps enabling the user to process up to 48 samples simultaneously using the PCT SPS.
- *ProteoSolve Kits*: A line of kits for the extraction of proteins and lipids from a variety of animal and plant samples.



NASDAQ: PBO

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## PCT vs. Existing Methods

➤ **The PCT SPS outperforms other methods such as sonication, bead beating, tissue homogenizer, mortar pestle, and French press. PCT has the following features & benefits:**

- *Safer for Scientists* - Offers a closed system to reduce sample handling and minimize exposure to pathogens / toxins.
- *Fast & Efficient* - Up to three samples of nucleic acids, small molecules, and proteins can be released from a wide variety of cells and tissues in minutes.
- *Powerful* - Up to 35,000 psi can be used to lyse samples and release excellent quality and quantity of bio-molecules.
- *Versatile* - Animal, plant, and microbial cells and tissues, particularly those considered hard-to extract, can be processed; either standard or user defined protocols can be used.
- *Reproducible* - Computer controlled protocols mean consistent sample extraction each and every time.

- **PBIO markets its products to researchers at academic and government research institutions, biotechnology, pharmaceutical, and other life science companies, as well as other public and private laboratories in the United States and Internationally.**
  - The Company has installed 209 barocycler instruments since 2007.
    - Over 80,000 laboratories & 500,000 biological researchers exist worldwide.
  
- **PBIO recently signed a collaborative agreement with Digilab, Inc. to co-develop, market, and sell their respective products worldwide.**
  - Digilab, Inc. provides tools and technologies for sample preparation, handling, and identification of scientific discovery in life sciences, analytical chemistry, and diagnostics markets. Company is based in Holliston, MA.
  
- **Source Scientific, LLC currently provides all of the major manufacturing and assembly services for PBIO's instrumentation products.**
  - Developer and manufacturer, of medical devices, clinical laboratory instruments, and optical detection and sample processing systems. Company is based in Irvine, CA.

## Sales, Distribution & Manufacturing (continued..)

- **The Company's current sales force is small and has significant room to grow.**
  - Small internal sales force of 3 professionals
  
  - Non-exclusive world-wide e-commerce distribution rights with KeraFAST LLC
  

- 4 international distribution agreements, including:
      - Veritas Corporation (Japan)
      - L.A. Biosystems BV (Benelux Region)
      - IUL Instruments GmbH (Germany & Switzerland)
      - Oroboros Instruments Corp. (Worldwide)
        - Specific to PBI Shredder SG3 System and related products

  
  - Significant Use of Proceeds to be allocated towards building out a larger sales team in order to target more new accounts
    - Goal to hire new sales people, secure additional international distribution agreements over next few years.



➤ The Company has recently undergone several key developments including:

▪ **2011 Key Developments:**

- *Product Pipeline:* Recently unveiled four key instruments in the 2011-2013 product pipeline.
- *Studies Promote PCT Technology:* Significant benefits of PCT cited in recent Cancer and Heart Disease Studies.
- *National Institutes of Health Grant:* Awarded \$160,978 grant from the National Institute of General Medical Sciences.
- *Department of Defense Grant:* Recently awarded a \$649,498 grant for the development of a safe and accurate method of processing pathogenic organisms such as viruses and bacteria.

➤ PBIO has achieved and expects to achieve several important milestones in the coming year:





▪ **2012 Key Developments:**

- *Collaboration with the Henry C. Lee Institute of Forensic Sciences:* Collaboration to evaluate the use of the PCT platform for the extraction of DNA from difficult-to-analyze samples.
- *Success at 56<sup>th</sup> Biophysical Society Annual Meeting:* Dr. W. Hubbell of UCLA presents supporting evidence that PCT platform will advance biomarker discovery and drug development.
- *New Distribution Agreement:* Entered exclusive distribution agreement with L.A. Biosystems BV for Benelux countries.

▪ **2012 Anticipated Milestones:**

- *Release of New Research Papers:* Data will be released by new and high profile labs supporting the PCT platform.
- *Industry Conferences:* Will present at several industry conferences about the many applications of PBIO's products.
- *Distribution Agreements:* Will sign several new domestic and international distribution agreements.
- *Strategic Partnerships:* New partnerships to market PBIO's products will be pursued and executed.
- *Release of New Products:* Expects to release new products in 2012 including the Barocycler FFPE.

## Product Pipeline

| PBIO 2011-2013 Product Pipeline                   |   |  |                           |
|---|---|--|---------------------------|
|   |   | Description  | Availability              |
| <b>Barocycler HUB 440</b>                         |  | <ul style="list-style-type: none"> <li>▪ Ready to use, flexible compact high pressure generator for biological research</li> <li>▪ Compatible with a line of enabling attachments</li> </ul>                           | <b>Released July 2011</b> |
| <b>Barocycler FFPE Protein Extraction Service</b> |  | <ul style="list-style-type: none"> <li>▪ Service offering enhanced extraction of proteins from FFPE</li> <li>▪ Executed under high pressure and temperature utilizing custom internally developed equipment</li> </ul> | <b>Q4-2012</b>            |
| <b>XstreamPCT™ Digestion Module</b>               |  | <ul style="list-style-type: none"> <li>▪ For PCT-enhanced sample prep including protein digestion in an inline, semi-continuous flow integration environment</li> </ul>  | <b>2013</b>               |
| <b>Barocycler HT Multiwell</b>                    |  | <ul style="list-style-type: none"> <li>▪ Able to process 48-384 samples at one time</li> <li>▪ Allows for easy integration of PCT into sample handling robots for batch system integration</li> </ul>                  | <b>2013</b>               |

- Financials – Balance Sheet & Income Statement
- Financials – Capitalization Table

## Financials – Balance Sheet & Income Statement

| <b>BALANCE SHEET<sup>(1)</sup></b> |                     |  |                     |
|------------------------------------|---------------------|--|---------------------|
| <b>Assets</b>                      |                     | <b>Liabilities</b>                           |                     |
| <b>Current</b>                     |                     | <b>Current</b>                               |                     |
| Cash & Cash Equivalents            | \$ 222,775          | Accounts Payable                             | \$ 890,676          |
| Accounts Receivables               | 269,237             | Warrant Derivative Liability                 | 436,553             |
| Prepaid Expenses                   | 143,591             | Short Term Debt                              | 544,912             |
| Other Assets                       | 1,303,157           | Other Liabilities <i>(No long term debt)</i> | 474,955             |
| <b>TOTAL ASSETS</b>                | <b>\$ 1,938,760</b> | <b>TOTAL LIABILITIES</b>                     | <b>\$ 2,347,096</b> |

| <b>INCOME STATEMENT</b>                 |                      |                        |                           |
|---|----------------------|------------------------|---------------------------|
|   | <b>2009</b>          | <b>2010</b>            | <b>2011<sup>(1)</sup></b> |
| <b>Revenue</b>                          | \$ 1,244,910         | \$ 1,340,032           | \$ 987,729                |
| Cost of Goods                           | (402,340)            | (376,514)              | (342,865)                 |
| <b>Gross Profit</b>                     | <b>842,570</b>       | <b>963,518</b>         | <b>644,864</b>            |
| Selling, General & Administrative       | (2,864,002)          | (3,129,706)            | (2,965,531)               |
| Research & Development                  | (1,175,136)          | (1,232,566)            | (969,473)                 |
| <b>Operating Income</b>                 | <b>(3,196,568)</b>   | <b>(3,398,754)</b>     | <b>(3,290,140)</b>        |
| Net Interest Income (Expense)           | 4,990                | 2,303                  | (136,595)                 |
| Income Tax Refund (Expense)             | 623,262              | 23,710                 | -                         |
| Other Non-Operating Income / (Expenses) | -                    | 244,479 <sup>(2)</sup> | 430,423 <sup>(3)</sup>    |
| <b>Net Profit / (Loss)</b>              | <b>(\$2,568,316)</b> | <b>(\$ 3,128,262)</b>  | <b>(\$2,996,312)</b>      |

(1) Source: Company's Form 10-K for FY 2011.

(2) Note: Refers to a Therapeutic discovery credit.

(3) Note: Refers to a change in fair value of warrant derivative liability.

| <b>OWNERSHIP TABLE<sup>(1)</sup></b>                     |  |  |
|--|--|--|
| <b>Holder Name</b>                                       | <b>Total Shares Beneficially Owned</b> | <b>% of Fully Diluted Shares Outstanding</b> |
| <b>Officers &amp; Directors</b>                          |  |  |
| Wayne Fritzsche (Chairman)                               | 710,795                                | 4.27%  |
| Richard T. Schumacher (CEO & President)                  | 938,456                                | 5.63%  |
| Alan Rosenson (Director)                                 | 289,274                                | 1.74%  |
| Alan I. Goldberg (Director)                              | 249,027                                | 1.49%  |
| Other Insiders   | 844,645                                | 5.07%  |
| <b>Total Executives, Directors, &amp; Other Insiders</b> | <b>3,032,197</b>                       | <b>18.20%</b>                                |
| <b>Public Float</b>                                      | <b>13,627,158</b>                      | <b>81.80%</b>                                |
| <b>TOTAL Fully Diluted Shares Outstanding</b>            | <b>16,659,355</b>                      | <b>100.00%</b>                               |

| <b>CAPITALIZATION TABLE</b>  |                   |
|--|-------------------|
| <b>Description</b>   | <b>Number</b>     |
| Common Shares Outstanding (as of March 13, 2012)                       | 8,499,898         |
| Convertible Preferred Stock C  | 880,980           |
| Convertible Preferred Stock D  | 461,539           |
| Warrants (Weighted Average Strike Price of \$1.29) <sup>(2)</sup>      | 5,261,438         |
| Stock Options (Weighted Average Strike Price of \$2.17) <sup>(2)</sup> | 1,555,500         |
| <b>Total Fully Diluted Common Shares Outstanding</b>                   | <b>16,659,355</b> |

(1)Source: Conversations with the Company's CEO, and SEC filings including Form 4s and 13Ps (as of March 13, 2012).

(2)Source: Company's internal data (as of March 13, 2012)



## Pressure BioSciences Inc. (NASDAQ:PBIO)

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