

April 27, 2007

United States Securities and Exchange Commission
Division of Corporation Finance
Washington, DC 20549
Mail Stop 6010

RE: Pressure BioSciences, Inc.
Form 10-KSB for the Year Ended December 31, 2006
File No. 000-21615

Ladies and Gentlemen:

Set forth below are the responses of Pressure BioSciences, Inc. ("PBI" or the "Company") to the comments of the staff of the Securities and Exchange Commission (the "SEC") contained in a letter (the "Comment Letter") from the SEC dated April 20, 2007 relating to the Company's Form 10-KSB for the year ended December 31, 2006 (the "Form 10-KSB"). The numbered paragraphs below refer to the numbered paragraphs in the Comment Letter. For convenience, each of the Company's responses is preceded by the text of the comment from the Comment Letter.

Form 10-KSB for the Year Ended December 31, 2006

Consolidated Financial Statements, page 28

Notes to Consolidated Financial Statements, page 33

Note 2. Summary of Significant Accounting Policies, page 33

(iii) Revenue Recognition, page 33

1. **SEC Comment.** *We note from your disclosure on page 5 that you lease your PCT Sample Preparation System, which includes your Barocycler instrument and your single-use PULSE Tubes. Please tell us and revise your future filings to explain the nature of these agreements and to disclose your revenue recognition policy associated with these lease agreements.*

Company Response.

During 2006 we recorded revenue under two lease agreements with our customers. One of these lease agreements has a term of twelve months and the other agreement has a term of thirty-six months. Both lease agreements require our customers to pay us approximately \$1,000 per month for the use of our Barocycler instrument.

In accordance with SFAS 13, "Accounting for Leases", we have accounted for our lease agreements under the operating method. We record revenue over the life of the lease term and we record depreciation expense on a straight-line basis over the thirty-six month estimated useful life of the Barocycler instrument. The depreciation expense associated with assets under lease agreement is included in the "Cost of PCT products and services" line item in our Consolidated Statements of Operations. We pay all maintenance costs associated with the instrument during the term of the leases.

In accordance with the staff's comments we will clarify the disclosures in future filings.

(vii) Property and Equipment, page 34

2. **SEC Comment.** *We note here and on page 40 that you have capitalized inventory that includes your PCT units that are used within your operations for training and demonstration purposes, your collaboration arrangements, and are also leased to customers. Please tell us and revise your future filings to address the following:*

- *Describe the nature of the arrangements that you enter into and your accounting policies related to this equipment under each type of arrangement;*
- *Discuss the basis at which transfer your equipment from inventory to plant, property, and equipment;*
- *Describe the contractual terms through which you loan the systems, including the typical term of the loan, any associated requirements that the borrower purchase any disposable products or services;*
- *Disclose how you record amortization expense, how it is reflected in the financial statements and why you believe the classification is appropriate.*

Company Response.

The instruments referred to on pages 34 and 40 of our Form 10-KSB were instruments purchased by us, capitalized as fixed assets, and depreciated over their estimated useful life of three years, on a straight-line basis. When we purchased these instruments, we assumed they would be used for internal research and development and collaborative research and development with third parties.

Throughout 2006, as our collaboration programs progressed, many of our collaborators decided that they wanted to purchase or lease our instrumentation. In 2006 we had the following types of arrangements with respect to our Barocycler instruments:

- Internal use - placed in our own laboratories for use by our researchers. These instruments are capitalized as fixed assets and depreciated over their three year estimated useful life on a straight-line basis. The depreciation expense is classified as "Research and development" in our Consolidated Statements of Operations.
 - Collaboration program - placed in the laboratory of a third party researcher who wishes to experiment by applying our technology to their area of research. These agreements typically have a term of between 30 and 180 days. We incur all of the cost to install and maintain the instrument throughout the term of the agreement. While the third party researcher is not required to pay for the use of the Barocycler instrument, we typically negotiate a minimum purchase of between \$300 and \$1,000 of our consumable PULSE Tubes during the term of these agreements. These Barocycler instruments are capitalized as fixed assets and depreciated over their three year estimated useful life on a straight-line basis. The depreciation expense is classified as "Research and development" in our Consolidated Statements of Operations.
 - Lease agreement - please refer to the Company response to SEC Comment 1.
 - Sale agreement - In a few cases, our collaborators purchased our instrumentation at the end of their collaboration agreement. In these cases, we transferred the assets sold from fixed assets to inventory and then expensed the inventory through "Cost of PCT products & services" in our Consolidated Statements of Operations. These transfers from fixed assets to inventory were recorded at net book value at the time of transfer.
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In accordance with the staff's comments we will clarify the disclosures in future filings.

(xiii) Accounting for Stock-Based Compensation, page 36

3. ***SEC Comment.*** *We note that you do not make an estimate of forfeitures in valuing your stock options granted since you are in the early stages of development as a new company and you have a limited workforce of fourteen employees. Please revise future filings to include an estimate of forfeitures as required by SFAS 123(R). Refer to the guidance in paragraphs 43 and B166 of SFAS 123(R).*

Company Response. Future filings will be revised to comply with the staff's comment.

Note 4. Assets and Liabilities Transferred Under Contractual Arrangements, page 39

4. ***SEC Comment.*** *Please tell us and revise future filings to disclose the amounts of related party transactions for each of the periods for which you present your consolidated statements of operations. Please also disclose the amounts due to or from the Source Scientific as of the balance sheet date and the terms and manner of settlement. Refer to paragraph 2(c) and 2(d) of SFAS 57.*

Company Response.

During 2005, total purchases from Source Scientific LLC amounted to \$74,569. During 2006, total purchases from Source Scientific LLC amounted to \$75,815. These purchases are for goods and services related to the design and assembly of our Barocyler instrumentation and are negotiated as arms-length transactions. During April 2006, we placed a deposit of \$200,000 with Source Scientific LLC in connection with a purchase order for the manufacture of future Barocyler instruments. As of December 31, 2006 we had accounts payable to Source Scientific LLC of \$38,604 and a remaining deposit of \$168,000. We settle our accounts payable balances with Source Scientific LLC with cash payments through our normal accounts payable process. The deposit placed with Source Scientific LLC for instrument production is offset ratably against billings for completed instruments.

Future filings will be revised to comply with the staff's comment.

Item 8A. Controls and Procedures, page 47

5. ***SEC Comment.*** *We note your disclosure that your management, including [your] principal executive officer and principal financial officer, "concluded [your] disclosure controls and procedures are effective in enabling [you] to record, process, summarize and report information required to be included in [your] periodic SEC filings within the required time periods." Revise future filings to clarify, if true, that your officers concluded that your disclosure controls and procedures are also effective to ensure that information required to be disclosed in the reports that you file or submit under the Exchange Act is accumulated and communicated to your management, including your chief financial officer, to allow timely decisions regarding required disclosure. See Exchange Act Rule 13a-15(e).*

Company Response. Future filings will be revised to comply with the staff's comment.

Exhibits 31.1 and 31.2

6. ***SEC Comment.*** *We note that the certifications filed pursuant to Exchange Act Rule 13a-14(a) are not in the exact form prescribed by Item 601(b)(31) of Regulation S-B. Specifically, we note that you improperly include the title of the certifying official in the introduction of your certification. Please revise your certifications in future filings to conform to the exact wording required by Item 601(b)(31) of Regulation S-B.*

Company Response. Future filings will be revised to comply with the staff's comment.

Acknowledgement by the Company:

The Company acknowledges it is responsible for the adequacy and accuracy of the disclosure in the Company's Form 10-KSB. The Company acknowledges that staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the Form 10-KSB. The Company also acknowledges that it may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you have any questions regarding the information in the Company's response, please do not hesitate to contact me at (508) 580-1818, ext. 132.

Very truly yours,

PRESSURE BIOSCIENCES, INC.

By: /s/ Edward H. Myles

Edward H. Myles, Chief Financial Officer

Encl.

cc: Mr. Kevin Vaughn, Branch Chief
Ms. Tara Harkins, Staff Accountant
Mr. Martin James, Senior Assistant Chief Accountant
Richard T. Schumacher, President and Chief Executive Officer
Matthew S. Gilman, Esq.