



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

September 21, 2011

Via e-mail

Dr. Shalom Hirschman
Principal Executive, Financial and Accounting Officer
Quantrx Biomedical Corporation
P.O. Box 4960
Portland, Oregon 97062

Re: Quantrx Biomedical Corporation
Form 10-K for the fiscal year ended December 31, 2010
Filed April 14, 2011
Form 10-Q for the quarterly period ended June 30, 2011
Filed August 16, 2011
File No. 000-17119

Dear Dr. Hirschman:

We have reviewed your filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2010

Item 8. Financial Statements and Supplementary Data, page 26

Statements of Operations, page F-4 and Statements of Cash Flows, page F-5

1. We note that the statements of operations and statements of cash flows are marked as 'unaudited'. Please amend the Form 10-K to provide audited financial statements consistent with Rule 8-02 of Regulation S-X.

2. We note that the columns in 2010 and 2009 for cash flows used by operating activities does not sum to the totals presented of \$(1,833,722) and \$(1,116,119). Please revise so that the columns properly sum to the totals presented.

Statements of Stockholders' Equity, page F-6

3. Please revise to correct the following inconsistencies noted in your financial statements:
 - Net loss for the year ended December 31, 2009 is shown as \$(3,153,496) which does not agree to the statements of operations on page F-4 of \$(3,133,496). We note a similar inconsistency in your 2009 statements of cash flows on page F-5.
 - Additional paid-in capital as of December 31, 2010 of \$47,652,761 does not agree to the balance sheet on page F-3 of \$47,524,761.
 - Accumulated deficit as of December 31, 2010 of \$47,652,761 does not agree to the balance sheet on page F-3 of \$(47,819,948). In addition, we note the missing brackets.

Note 2. Management Statement Regarding Going Concern, page F-8

4. Please revise future filings, including any amendments, to disclose that there is *substantial doubt* about your ability to continue as a going concern consistent with the report of your independent registered public accounting firm on page F-2. In addition, you should disclose the principal conditions that raise questions about your ability to continue in existence. We note that the audit report refers to your accumulated deficit and lack of revenues. Refer to FRC 607.02.

Note 3. Summary of Significant Accounting Policies, page F-9

Accounting for Share-Based Payments, page F-9

5. We note your disclosure that you base the fair value of your stock compensation on assumptions you determine as of the beginning of each year. Please discuss how your accounting considered ASC 710-10-30-3 which requires you to value the stock compensation based on the grant-date fair value.
6. Further, please explain why all of your stock compensation is based on historical volatility over a 3 year period. Tell us how you considered ASC 718-10-55-37 which refers to the expected term of the option.

Note 14. Capital Stock, page F-26

7. Please tell us how you accounted for and valued the exchange in October 2010 of your equity interest in FluoraPharma.

Item 9A. Controls and Procedures, page 27

8. Please amend your Form 10-K to disclose the conclusions of your principal executive and principal financial officer regarding the effectiveness of your disclosure controls and procedures as of December 31, 2010 as required by Item 307 of Regulation S-K.
9. Further, we note that you included your discussion of the evaluation of internal control over financial reporting under a header for your evaluation of disclosure controls and procedures. In your amendment, please revise so that the headers appropriately correspond to the content of the section.

Form 10-Q for the Quarterly Period Ended June 30, 2011

Item 1. Financial Statements, page 2

Statements of Operations, page 3

10. Please describe to us in detail the circumstances that resulted in your recording a loss from joint venture of \$210,646 for the six months ended June 30, 2011.

Note 7. Note Payable, page 8

11. Please tell us how you accounted for and valued the common shares issued to the lender in connection with the note payable.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 11

12. Please tell us why your consolidated results of operations discussion excludes an analysis of the changes in research and development, gain on settlement of accounts payable and loss from joint venture.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company 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.

You may contact Kate Tillan, Assistant Chief Accountant, at (202) 511-3604 or me at (202) 551-3671 with any questions.

Sincerely,

/s/ Martin James

Martin James
Senior Assistant Chief Accountant