



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

January 27, 2009

By U.S. Mail and Facsimile

Mr. John A. Luce
Chief Financial Officer
Polydex Pharmaceuticals Limited
421 Comstock Road
Toronto, Ontario
CANADA M1L 2H5

Re: Polydex Pharmaceuticals Limited
Form 10-K for the Fiscal Year Ended January 31, 2008
Form 10-Q for the Fiscal Quarter Ended October 31, 2008
File No. 001-08366

Dear Mr. Luce:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents in response to these comments. If you disagree, we will consider your explanation as to why our comments are inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended January 31, 2008

Item 7. Management's Discussion and Analysis..., page 14
Liquidity and Capital Resources, page 19

1. Given the importance of available funding to your business, please revise future filings to include a more specific and comprehensive discussion of the terms of the significant covenants within your debt agreements. Please revise future filings to also present, for your most restrictive financial covenants, your actual ratios/amounts versus the minimum/maximum ratios/amounts permitted as of

each reporting date. Such a presentation will allow investors to more easily understand your current ability to meet and to continue to meet your financial covenants. In addition, please revise future filings to provide a specific and comprehensive discussion of any covenant violations, to address how such violations were remedied, and to discuss the potential consequences of future violations.

Item 8. Financial Statements and Supplementary Data, page 27

Note 8 – Related Party Transactions, page F-11

2. In future filings, please disclose the repayment terms of the amount due to shareholder.

Item 9A. Controls and Procedures, page 28

3. We note your disclosure that your certifying officers “concluded that the Company’s disclosure controls and procedures cannot be relied upon”. In future filings, please revise your disclosure to explicitly state management’s conclusion that disclosure controls and procedures were either “effective” or “not effective”.
4. We note that your disclosure does not provide the correct and full definition of “disclosure controls and procedures” as defined in Rule 13a-15(e) of the Exchange Act. Please confirm to us that your disclosure controls and procedures are effective or not effective, as defined, for the fiscal year ended January 31, 2008, and for each of the fiscal quarters ended April 30, 2008, July 31, 2008 and October 31, 2008. Additionally, please revise future annual and quarterly filings to include the correct and full definition of disclosure controls and procedures or state that your disclosure controls and procedures are effective or not effective, without defining them.
5. We note your disclosure that “management could not conclude that its internal control over financial reporting was effective”. In future filings, please revise your disclosure to explicitly state management’s conclusion that internal control over financial reporting was either “effective” or “not effective”.
6. Please revise future filings to disclose how you are remediating the material weakness you identified in your internal controls over financial reporting.

Exhibit 31 – Certifications

7. In your future annual and quarterly filings, please omit, from the introduction sentence, the certifying individual’s title since the officer should sign the certificate in a personal capacity. See Item 601(b)(31)(i) of Regulation S-K for guidance.

Form 10-Q for the Fiscal Quarter Ended October 31, 2008

General

8. We note the continuing negative trends in your liquidity. Please revise future filings to address the negative trends, to discuss management's plans to reverse such trends, to discuss the risks and uncertainties related to those plans, and to discuss the potential consequences if those plans are not successful. In addition, please address the recent global economic downturn and its current and expected future impact on your operations, financial position and liquidity. This disclosure should provide detailed information on your customers, recent order activity, expected trends, management's response for managing the events, potential future actions by management and other detailed information. Also, expand your liquidity discussion to address the expected impact to current and future cash flows and how you expect recent economic events may impact your sources of liquidity, if any.

* * *

Please respond to these comments within 10 business days, or tell us when you will provide us with a response. Please provide us with a response letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please furnish your response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in their filings;
- 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.

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In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

If you have any questions regarding these comments, you may contact Dale Welcome, Staff Accountant, at (202) 551-3865, Anne McConnell, Senior Staff Accountant, at (202) 551-3709 or, in their absence, to the undersigned at (202) 551-3768.

Sincerely,

John Cash
Accounting Branch Chief