Via Facsimile and U.S. Mail Mail Stop 6010

August 26, 2008

Steve H. Kanzer Chairman and Chief Executive Officer Pipex Pharmaceuticals, Inc. 3930 Varsity Drive Ann Arbor, MI 48108

Re: Pipex Pharmaceuticals, Inc.

Form 10-KSB for the Year Ended December 31, 2007

File No. 001-12584

Dear Mr. Kanzer:

We have reviewed your filing and have the following comment. 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 document. Where indicated, we think you should revise your document in response to this comment. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation.

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 filings. We look forward to working with you in these respects. We welcome any questions you may have about our comment or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Exhibit 31.1 – Certification Pursuant To Rule 13a-14(a) or Rule 15d-14(a)

1. We note that you filed your Principal Executive Officer and Principal Financial Officer certification under Item 601(b)(31) of Regulation SB. Please revise this certification to include the introductory language of paragraph 4 and the language of paragraph 4(b) of Item 601(b)(31) of Regulation SB.

* * * *

As appropriate, please amend your Form 10-KSB for the year ended December 31, 2007 and respond to the comment within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your response to our comment and provides any requested information. Detailed cover letters greatly facilitate

Steve H. Kanzer Pipex Pharmaceuticals, Inc. August 26, 2008 Page 2

our review. Please furnish your letter on EDGAR under the form type label CORRESP. Please understand that we may have additional comments after reviewing your amendment and response to our comment.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include 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 comment, please provide, in your letter, a statement from the company acknowledging that:

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

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 filings or in response to our comments on your filings.

Please contact James Peklenk, Staff Accountant, at (202) 551-3661, or Mary Mast, Senior Accountant, at (202) 551-3613 if you have any questions regarding the comment. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg Senior Assistant Chief Accountant