

Via Facsimile and U.S. Mail
Mail Stop 4720

August 6, 2009

Mr. Jeffery Edwards
Chief Financial Officer
Molecular Pharmacology (USA) Limited
Drug Discovery Centre
284 Oxford Street
Leederville 6007 Perth
Western Australia

Re: Molecular Pharmacology (USA) Limited
Form 10-KSB for the Fiscal Year Ended June 30, 2008
Filed October 2, 2008
Form 10-KSB/A for the Fiscal Year Ended June 30, 2008
Filed June 10, 2009
File Number: 000-50156

Dear Mr. Edwards:

We have reviewed your June 8, 2009 response to our March 24, 2009 comment letter and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. In some of our comments, we ask you to provide us with information to better understand your disclosure.

Form 10-KSB/A for the Fiscal Year Ended June 30, 2008 Filed June 10, 2009

Financial Statements

Item 8A. Controls and Procedures

Management's annual report on internal control over financial reporting

(a) Evaluation of Disclosure Controls and Procedures, page 34

1. We note that your amended 10-KSB filed June 10, 2009 management concluded that disclosure controls and procedures were effective as of the end of the fiscal year. Please consider whether management's failure to provide the conclusion on

the effectiveness of internal control over financial reporting as required by Item 308T(a)(3) impacts its conclusions regarding the effectiveness of your disclosure controls and procedures as of the end of the fiscal year and revise your disclosure as appropriate.

(b) Internal control over financial reporting, page 34

2. Please refer to your response to our prior comment number four. The disclosure provided in the amended 10-KSB filed on June 10, 2009 does not comply with Item 308T(a)(3) of Regulation S-B. Please note that you are required to separately conclude on the effectiveness of disclosure controls and procedures and internal controls over financial reporting. As such, we reissue our comment and ask that you amend your filing within 10 business days to provide management's conclusion as to the effectiveness of your internal control over financial reporting.

Exhibits 31.1 and 31.2

3. Your Principal Executive Officer and Principal Financial Officer certifications do not comply with Item 601(b)(31) of Regulation S-B, as they exclude paragraph 5(a) and (b). Further, we note that Exhibit 31.2 is dated as of a date subsequent to the date the amendment was filed. Please revise your certifications accordingly.

* * * *

As appropriate, please file an amendment to your Form 10-KSB for the year ended June 30, 2008 and respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your amendment that keys your responses to our comments. Detailed cover letters greatly facilitate our review. You should file the letter on EDGAR under the form type label CORRESP. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658, or Mary Mast, Senior Staff Accountant, at (202) 551-3613, if you have questions regarding the comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant