

Via Facsimile and U.S. Mail
Mail Stop 4720

July 8, 2009

Lawrence W. Briscoe
Chief Financial Officer
Maxygen, Inc.
515 Galveston Drive
Redwood City, CA 94063

Re: Maxygen, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2008
Form 10-K/A for the Fiscal Year Ended December 31, 2008
Form 10-Q for the Quarterly Period Ended March 31, 2009
File Number: 000-28401

Dear Mr. Briscoe:

We have reviewed your filings and have the following comments. In our comments, we ask you to provide us with information to better understand your disclosure. Where a comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe that revised disclosure is necessary, explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

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 on 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 Fiscal Year Ended December 31, 2008

Consolidated Financial Statements
Notes to Consolidated Financial Statements
Note 1. Summary of Significant Accounting Policies
Accounting for Clinical Trial Costs, page 59

1. You disclose that clinical trial costs for each distinctive stage are expensed ratably over their respective stage of the clinical trial. Please revise your disclosure to clarify how your method of recognizing expenses ratably over the respective stage

accomplishes the objective of your accounting policy of expensing the costs as incurred. Disclose the significant terms of these agreements, including performance by the CRO, when you incur a liability and the payment terms during each stage of the clinical trial. If you incur a liability at a different time than when you expense the costs, explain why that is and how your accounting complies with GAAP. Also, revise your disclosure to address similar issues regarding when you record the expense and what incurred means with respect to your policy of expensing pass through costs, including the cost of drugs, as incurred.

Net Income (Loss) Per Share, page 64

2. Please revise your disclosure to clarify why 10,265,000 options and 1,008,000 restricted stock units were excluded from the calculation of diluted net income per share for the year ended December 31, 2008.

Note 3. Sale of Hematology Assets and Grant of License to Bayer HealthCare LLC, page 67

3. Please tell us your basis for recognizing the \$90 million payment from Bayer for the sale of your hematology assets and grant of certain licenses to your Molecular Breeding as license revenue and not as a sale of assets. In addition, please tell us and disclose the carrying value of the assets sold and the gain or loss recognized on the sale.

Note 9. Income Taxes, page 73

4. Please disclose the amount of the unrecognized deferred tax liability for temporary differences related to investments in foreign subsidiaries that you believe are essentially permanent in duration because the earning will be indefinitely reinvested in accordance with FASB ASC 740-30-50-2-c or state that determination is not practicable. If the latter, please tell us why determination is not practicable.
5. Please revise your disclosure to clarify what the line items "unbenefited foreign losses" and "foreign deferred tax adjustments" represent and explain any major changes in these line items.
6. Please refer to your reconciliation of unrecognized tax benefits. Revise your disclosure to address why during 2008, your prior year tax estimate decreased by \$3.7 million

Form 10-K/A for the Fiscal Year Ended December 31, 2008

Item 11. Executive Compensation
Compensation Discussion and Analysis
Benchmarking, page 6

7. Please identify the compensation surveys that are used to determine compensation for named executive officers. In addition, please confirm that you will provide this information in your 2009 Form 10-K.

Compensation Decisions in 2008 & 2009, page 11

8. Please identify your compensation consultant and confirm that you will provide this information in your 2009 Form 10-K.
9. Please provide us with proposed disclosure for your 2009 Form 10-K which identifies the strategic objectives used to determine the bonus awards paid to your named executive officers. In addition, please identify any qualitative or quantitative targets used to assess achievement of the strategic objectives and include a discussion of how this level of achievement is evaluated to determine bonus payments.

Form 10-Q for the Quarterly Period Ended March 31, 2009

Notes to Condensed Consolidated Financial Statements
Note 10. Subsequent Event, page 15

10. We note you have entered into an option and license agreement with Cangene Corporation in relation to MAXY-G34. Please confirm that you will file this agreement as an exhibit to your next Form 10-Q. If you do not believe that this agreement is required to be filed as an exhibit, please provide us with a detailed analysis in support of your position.

* * * *

Please provide us the information requested within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your response to our comments. Detailed cover letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

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

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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 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 Dana Hartz, Staff Accountant, at (202) 551-3648 or Don Abbott, Review Accountant, at (202) 551-3608 if you have any questions regarding the processing of your response as well as any questions regarding comments on the financial statements and related matters. You may contact Brian Pitko, Staff Attorney, at (202) 551-3203 with questions on any of the other comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant