

March 1, 2006

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, D.C. 20549
Attention: John Reynolds, Esq.

Re: Xenomics, Inc.
Form SB-2 filed August 1, 2005
Amendment No. 3 to Form SB-2 filed February 14, 2006
File No. 333-127071

Dear Mr. Reynolds:

This letter sets forth the responses of Xenomics, Inc., a Florida corporation (the "Company" or "we"), to the comments received from the Staff (the "Staff") of the Securities and Exchange Commission (the "Commission") by letter dated February 22, 2006 concerning Amendment No. 3 to the Company's Registration Statement on Form SB-2 (File No. 333-127071) filed with the Commission on February 14, 2006 (the "Registration Statement"). We are authorized by the Company to provide the responses contained in this letter on behalf of the Company.

The numbers of the responses in this letter correspond to the numbers of the Staff's comments as set forth in its letter to the Company dated February 22, 2006. References in the text of the responses herein to captions and page numbers are to Amendment No. 4 to Form SB-2 which is being filed herewith. For your convenience, we set forth each comment from your comment letter in bold typeface and include the Company's response below it.

Executive Compensation

- 1. The table should include compensation amounts for the past three years. See Instruction to Item 402(b) of Regulation S-B.**

On page 27 of Amendment No. 4 to Form SB-2, we have modified the Summary Compensation Table to include compensation amounts for the past three years.

Financial Statements

Note 4-Stockholders' Equity, page F-25

- 2. We note your response to prior comment nine. Please tell us why you believe it was appropriate to record an expense for the fair value of the warrants at the date of issuance. To the extent that liability classification is required under EITF 00-19, the instrument should be recorded at fair value on the date of issuance. For a private placement, this typically occurs through the allocation of a portion of the proceeds. Generally, it would not be appropriate to record an expense at the date of issuance unless the fair value of the instruments that were required to be classified as derivative liabilities exceeded the net proceeds received. Please revise the financial statements accordingly, or tell us why you believe that no revisions are required.**

The original accounting for the fair value for the warrants as an immediate charge to expense was overly conservative and not an appropriate interpretation of applicable guidance in accounting literature. On pages F-16, F-20, F-21, and F-26 of Amendment No. 4 to Form SB-2, we have modified the financial statements and related disclosures to reflect the establishment of a liability for the fair value of the warrants at the date of issuance with a corresponding reduction to proceeds allocated to preferred stock. Further, we have marked that liability to market at subsequent balance sheet dates and recorded a corresponding charge or benefit in the statement of operations.

- 3. Please revise the description of the warrant liability on the balance sheet to clearly indicate that the amount is a liability. Also, please revise your disclosure in Note 4 to state why the amount is recorded as a non-current liability.**

On page F-16 of Amendment No. 4 to Form SB-2, we have modified the financial statements as requested. Additionally, on page F-26 we have disclosed why the warrant liability has been classified as a non-current liability as requested.

- 4. Please tell us why you believe that the income or expense relating to the valuation of the warrants is appropriately classified in the cash flow statement as a financing activity, or revise your disclosures accordingly.**

On page F-21 of Amendment No. 4 to Form SB-2, we have modified the financial statements as described in the response to comment #2 above. Consequently, the charge to expense representing the total value of the warrants, which was classified as a financing activity in the cash flow statement, has been removed. Additionally, the charge or benefit in the statement of operations relating to the change in the warrant liability (to mark this liability to market) has been classified in the cash flow statement as an operating activity.

1934 Act Periodic Reports

- 5. Your response to prior comment 14 did not address the majority of the adjustments relating to stock-based compensation expense, which were unrelated to the use of quoted market prices as discussed in your supplemental response. Please tell us the specific factors that you considered in determining your disclosure controls and procedures were effective despite the restatements related to the Trilogy warrants and the application of EITF 96-18.**

Introduction:

The paragraphs below describe the specific factors considered by our Chief Executive Officer and Principal Financial Officer in determining our disclosure controls and procedures were effective despite the restatements related to the Trilogy warrants and the application of EITF 96-18.

Further, the changes described therein such as appointment to the Board of Directors and the Audit Committee of an "audit committee financial expert" (as defined in Item 401(e) of Regulation S-B), appointment of a new Chief Financial Officer and his inclusion in all meetings of the Board of Directors, establishment of a Disclosure Committee, etc., have had an immediate benefit to the Company and its financial and control environment. Such changes demonstrate the Company's commitment to quality financial reporting and effective controls and procedures both now and for the future.

Specific Factors Considered:

The following specific factors were considered by our Chief Executive Officer and Principal Financial Officer in evaluating the effectiveness of the Company's disclosure controls and procedures.

1) The Control Environment

This factor overarches and sets the tone for all other disclosure controls and procedures. This factor includes the professionalism and qualifications of those officers and directors involved in the financial reporting process.

2) Corporate Governance

This factor relates to the structure of corporate management and board of directors responsibilities regarding the oversight of financial reporting.

3) Accounting Policies, Audit and Reporting Procedures

This factor relates to the integrity of the financial reporting process and management's application of Generally Accepted Accounting Principles.

4) Internal Controls

This factor relates to accounting systems, proper segregation of duties, account reconciliations and approvals at the transaction level.

The Control Environment

This disclosure control factor involves the number, position, duties and professional qualifications of the individuals involved in the Company's financial reporting process. On July 2, 2004, Xenomics, Inc., formerly Used Kar Parts, Inc. acquired all of the outstanding common stock of Xenomics and concurrently completed a private placement for aggregate proceeds of approximately \$2.5 million. Prior to this acquisition both Used Kar Parts and Xenomics had limited operations.

From July 2004 through the present, the Company has diligently recruited and hired a strong and highly experienced team of officers, directors, employees and advisors capable of addressing the issues related to being a newly public company. The following is a chronology of those actions which have contributed to management's conclusion that disclosure controls and procedure were effective:

- a) On September 3, 2004, the Company appointed V. Randy White, Ph.D. as Chief Executive Officer. Dr. White has over thirty years of executive management experience with both public and private companies. (Effective February 23, 2006, Mr. White has left the Company to pursue other interests and Dr. L. David Tomei, co-founder of Xenomics and Co-Chairman of the Xenomics Board of Directors as been appointed Chief Executive Officer.)
 - b) On January 28, 2005, the Company's audit committee engaged Lazar Levine & Felix LLP as its principal Independent Registered Public Accounting Firm and Baum & Company, PA resigned as the principal Independent Registered Public Accounting Firm. Lazar Levine & Felix, LLP is a firm with a broad public company practice and SEC reporting experience. This change was reported in Form 8-K filed on February 3, 2005, Item 4.01, Changes in Registrant's Certifying Accountant.
 - c) On February 14, 2005, the Company appointed Bernard Denoyer as Vice President-Controller for a period of one year. Mr. Denoyer is a Certified Public Accountant and has over thirty years of financial management experience which includes serving as principal financial officer for several public companies.
 - d) On December 1, 2005, the Board of Directors appointed John Brancaccio as director and Chairman of the Audit Committee. Mr. Brancaccio is a retired CPA and has over 30 years of financial management experience. He currently serves as the Chief Financial Officer of Accelerated Technologies, Inc., a medical device company, and on the boards of the following publicly-held companies: Callisto Pharmaceuticals, Inc., Alfacell Corporation, and FermaVir
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Pharmaceuticals, Inc. Mr. Brancaccio was formerly the acting Chief Financial Officer and Treasurer of Memory Pharmaceuticals Corporation. This appointment was reported in Form 8-K filed on December 7, 2005, Item 5.02: Departure of Directors or Principal Officers; Election of Directors; Appointment of Principal Officers.

- e) On January 16, 2006 the Company appointed Frederick Larcombe as Chief Financial Officer. Mr. Larcombe is a Certified Public Accountant and has over twenty-five years of financial management experience which includes serving as Chief Financial Officer and Vice President of Finance with MicroDose Technologies, Inc., a privately held drug delivery company, and ProTeam.com, Inc., a publicly held Internet-oriented retailer. Prior to that, he held financial positions with Cambrex Corporation, a publicly-held life sciences company, and PriceWaterhouseCoopers. This appointment was reported in Form 8-K filed on January 20, 2006, Item 5.02: Departure of Directors or Principal Officers; Election of Directors; Appointment of Principal Officers.

Corporate Governance

One of the most important aspects of corporate governance, as it relates to disclosure controls and procedures, is the Audit Committee of the Board of Directors. As you are aware, the Audit Committee is responsible for: (i) reviewing the independence, qualifications, services, fees, and performance of the independent auditors, (ii) appointing, replacing and discharging the independent auditors, (iii) pre-approving the professional services provided by the independent auditors, (iv) reviewing the scope of the annual audit and reports and recommendations submitted by the independent auditors, and (v) reviewing our financial reporting and accounting policies, including any significant changes, with management and the independent auditors. Members of the Company's Audit Committee have been consistently active in these capacities and fulfilling the related responsibilities.

During the period from October 25, 2004 through December 1, 2005 the Audit Committee consisted of Thomas Adams and Donald Picker. They are "independent" as that term is defined under applicable SEC rules. With the appointment of John Brancaccio to the Audit Committee on December 1, 2005, the Company now has an "audit committee financial expert" as defined in Item 401(e) of Regulation S-B.

Accounting Policies, Audit and Reporting Procedures

The restatements related to the Trilogy warrants and the application of EITF 98-16 thereto were the result of professional differences of opinion in the interpretation and application of Generally Accepted Accounting Principles. Trilogy's consulting agreement was for a period of one year. We initially amortized the stock based compensation associated with the Trilogy warrants over the one year service period in an effort to reflect the cost of the warrants over the service period. Upon review of EITF 96-18, we recognized that immediate expensing of the value of the warrant is

required when, as in the case with the Trilogy agreement, the warrants are exercisable upon issuance and no further service is required of the recipient.

Please note that on January 13, 2005, we properly and timely filed a Form 8-K which disclosed all of the material terms of the Trilogy agreement, including the warrants, as follows:

a) Item 1.01 - Entry into a Material Definitive Agreement

On January 10, 2005, Xenomics, Inc., a Florida corporation (the "Company") entered into a letter of engagement (the "Agreement") with Trilogy Capital Partners, Inc. ("Trilogy"). The term of the Agreement is for twelve months beginning on January 10, 2005 and terminable thereafter by either party upon 30 days' prior written notice. Pursuant to the Agreement, Trilogy will provide marketing and financial public relations services to the Company and will assume the responsibilities of an investor relations officer for the Company. The Company will pay Trilogy \$10,000 per month under the Agreement.

b) Item 3.02 Unregistered Sales of Equity Securities

Reference is made to "Item 1.01 Entry into a Material Definitive Agreement" of this report, which is incorporated by reference into this item. Pursuant to the Agreement, the Company issued warrants to purchase 1,000,000 shares of Common Stock of the Company at an exercise price of \$2.95 per share (the "Warrants"). The Warrants issued to Trilogy are exercisable upon issuance and expire on January 10, 2008.

Further, the Company's principal independent registered public accounting firm has audited our financial statements as of and for the year ended January 31, 2005 and reviewed our subsequent periodic financial reports filed with the SEC. They have performed procedures in the following areas and reported to management and/or the Audit Committee the following results and conclusions:

a) Critical and Significant Accounting Policies

The Company's principal independent registered public accounting firm has reviewed the accounting policies that management has identified to be the most critical, and concurred with management's assessments.

b) Management's Judgments and Accounting Estimates

Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ markedly from management's current judgments. Our principal accountants have reviewed management's judgments

and estimates with respect to stock-based compensation and deemed them to be reasonable.

c) Significant Review Adjustments and Financial Statement Disclosures

Professional standards define an adjustment as a proposed correction of the financial statements that may not have been detected except through our independent accountant's review procedures. The definition includes adjustments that were not recorded by the Company because they are not material to the current financial statements but might be potentially material to future financial statements. While audit and review procedures do not provide assurance that they will become aware of all matters that might require adjustment to the Company's financial statements, no material adjustments were required. Additionally, no significant modifications to management's financial statement disclosures were proposed.

d) Disagreements with Management

Professional standards define a disagreement with management as a matter, whether or not resolved to principal accountant's satisfaction, concerning a financial accounting or reporting matter that could be significant to the Company's financial statements. No such disagreements arose during the course of the annual audit and quarterly reviews.

e) Alternative Accounting Treatments Discussed with Management

During the past eighteen months, there were no significant transactions that required a discussion with management as to alternative accounting treatments.

Internal Controls

From July 2004 through the present, the Company implemented and enhanced internal accounting controls designed to assure timely and accurate financial reporting. They fundamentally included, but were not limited to:

- a) Discussion of all contracts, commitments, and general business activities with members of the financial management team and inclusion of the Chief Financial Officer in all meetings of the Board of Directors,
 - b) Resources supporting the accounting and reporting function have been strengthened with more experienced individuals,
 - c) The establishment of a Disclosure Committee consisting of the Chief Executive Officer, Chief Financial Officer, and the Chairman of the Audit Committee which meets periodically to ensure the identification of key business matters and related disclosures, and
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d) All financial reports filed with the SEC are circulated to the Company's senior management prior to filing for review and comment to ensure completeness and accuracy.

6. You state the restatements and related accounting were thoroughly discussed with the accounting firm and “reliance upon the Independent Registered Public Accounting Firm” was one of the primary factors that enabled you to determine that your disclosure controls and procedures were effective. Please explain the specific nature of this reliance. Please explain how the discussion of the restatement and the related accounting with the accounting firm provided any basis for originally concluding disclosure controls and procedures were effective, since the accounting for these transactions resulted in material errors to the financial statements.

The nature of the reliance upon the Independent Registered Public Accounting Firm referred to in response to Comment #14 on our letter to you of February 14, 2006 was a reference to the independent attestation role of the Independent Registered Public Accounting Firm. We recognize and acknowledge that that statement had unintended inferences. To be clear, we recognize and acknowledge that the attestation role of the Independent Registered Public Accounting Firm is not part of the Company's disclosure controls and procedures.

In response to the second question in Comment #6, we direct your attention to the response to Comment #5 which addresses the environment in which the Chief Executive Officer and the Principal Accounting Officer originally concluded that disclosure controls and procedures were effective.

Prospectively, we believe the disclosure controls and procedures currently in place as previously described in this document (the appointment of a "financial expert" as Chairman of the Audit Committee, the appointment of a new Chief Financial Officer, the inclusion of the Chief Financial Officer in all meetings of the Board of Directors, the establishment of a Disclosure Committee, strengthening of the accounting staff, etc.) provide the necessary environment to ensure the effectiveness of these controls in the future and demonstrate the Company's commitment to quality financial reporting.

Very truly yours,

/s/ Jeffrey J. Fessler