



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

April 9, 2008

VIA U.S. MAIL AND FAX (732) 542-4010

John D. Giolli
Chief Financial Officer
Millennium Cell Inc.
1 Industrial Way West
Eatontown, New Jersey 07724

**Re: Millennium Cell Inc.
Form 10-K for the fiscal year ended December 31, 2007
Filed March 19, 2008
File No. 000-31083**

Dear Mr. Giolli:

We have reviewed your filing and have the following comments. 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 these comments. 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. 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 year ended December 31, 2007

Controls and Procedures, page 26

1. We note your statement that your chief executive officer and chief financial officer “have concluded that, as of the evaluation date, [y]our disclosure controls and procedures are effective in alerting them on a timely basis to material information relating to [you] required to be included in [y]our reports filed or submitted under the Exchange Act.” The language that is currently included after the word "effective" in your disclosure appears to be superfluous, since the meaning of "disclosure controls and procedures" is established by Rule 13a-15(e) of the Exchange Act. Please remove the language in your future filings or revise the disclosure so that the language that appears after the word "effective" is substantially similar in all material respects to the language that appears in the entire two-sentence definition of "disclosure controls and procedures" set forth in Rule 13a-15(e).

Financial Statements, page F-1

Consolidated Statements of Operations, page F-4

2. We note that you present non-cash charges as a separate line on your statements of operations here and on page F-27. In future filings, please revise to present non-cash charges within the same line as cash charges on your statements of operations, consistent with SAB Topic 14.F. Please provide us with your proposed revisions.
3. Further, please revise your item description of these charges in the statement of cash flows in future filings so that it is descriptive of the nature of underlying charges.
4. In future filings please similarly revise your discussion in MD&A to be consistent with your U.S. GAAP based financial statements. To the extent that you present non-GAAP measures in MD&A, please ensure that your presentation complies with and includes all of the disclosures required by Item 10(e) of Regulation S-K.

Consolidated Statements of Stockholders' Equity, page F-5

5. As previously requested in comment 5 from our June 28, 2005 letter, please revise future filings to show all equity issuances since inception consistent with paragraph 11(d) of SFAS 7.

Note 1 – Basis of Presentation, page F-19

6. Your independent accountant's report indicated that your recurring losses from operations and lack of sufficient liquidity to fund ongoing operations for next year raise substantial doubt about your ability to continue as a going concern. We note that there is no discussion of these factors in this note. In addition, we note elsewhere in this filing that your current working capital will support your operation only until April, 2008. Because your filing contains an accountant's report that is qualified as a result of questions about your continued existence, you should disclose your financial difficulties as well as your viable plans to overcome these difficulties, consistent with FRC 607.02. Please respond to the following:

- Please tell us and disclose in future filings the principal conditions that raise questions about your ability to continue in existence, the possible effects of such conditions, and management's evaluation of the significance of those conditions and any mitigating factors. See FRC 607.02.
- Please tell us and disclose in future filings your viable plan that has the capability of removing the threat to the continuation of the business. Please note that the plan should enable you to remain viable for at least the 12 months following the date of the financial statements being reported on. See FRC 607.02.

Note 2 – Significant Accounting Policies, page F-9

Equity Method Investments, page F-9

7. With respect to your cost-method investment in Horizon, please tell us and in future filings disclose in more detail your accounting policy with respect to reviewing the investment for impairment. Please tell us how you considered FSP FAS 115-1 and FAS 124-1, and the applicable disclosure requirements under paragraph 18 thereof.

Revenue Recognition, page F-10

8. We note that you primarily generated revenues from engineering and design services. You disclose that you recognize revenues "in the period in which services are performed, technology and/or prototype is delivered or licensed revenue is earned." However, on page 16 you disclose that you recognized certain revenues from the US Army upon completion of milestones. Please tell us in more detail when you recognize and how you measure revenue from these services. Tell us and disclose in future filings the types of contract payment milestones, and explain how they relate to substantive performance and revenue recognition events. It should be clear from your revenue recognition policy disclosure how you measure progress on your contracts.

Cost-Sharing Programs, page F-11

9. Please tell us about your consideration of each of the criteria in paragraph 3.53 of Chapter 3 of the AICPA's Audit and Accounting Guides - Federal Government Contractors, in determining that the amounts funded by the government should be recognized as an offset to the your expenses rather than as contract revenues.
10. Please tell us and disclose in future filings the significant terms and conditions of your government research and development arrangements (including estimated total contract expenditures and customer funding), a general description of the activities to be performed under the arrangement, and any unusual contractual commitments or funding contingencies, consistent with paragraph 3.57 of Chapter 3 of the AICPA's Audit and Accounting Guides - Federal Government Contractors, or tell us why these disclosures are not required. Also include the net amount of research and development costs incurred for such arrangements that were offset by customer funding for each period an income statement is presented.

Note 6 – Acquisition of Gecko, page F-15

11. We note you allocated \$2,627,770 to intangible assets/intellectual property as a result of the acquisition of Gecko. Please respond to the following:
 - Please tell us and disclose in future filings the nature (intangible asset class) of the acquired intangible asset, consistent with paragraph 44(a) of SFAS 142.
 - Please tell us the method and significant assumptions used to value the intangible asset.
 - Please tell us how you determined the amortization period for the acquired intangible asset.

Note 10 – Convertible Debentures, page F-18

2007 Debentures, page F-19

12. Please tell us and disclose in future filings why you have classified the conversion feature (and any other bifurcated embedded feature of the debt) and the warrants as liabilities. Please also tell us how you are accounting for the ability of the holders to call the debt at a 20% premium and why.
13. We note that you modified the terms of the 2007 debentures in July 2007. Please tell us how you accounted for the modification and why. Discuss your consideration of EITF 96-19 and EITF 06-6.

14. Please tell us and disclose in future filings the valuation of the embedded feature(s) of the debt and the valuation of the detachable warrants as of the issuance date and December 31, 2007. Please also tell us and disclose in future filings the method and significant assumptions used to value the bifurcated embedded derivatives of the 2007 debentures and the warrants as of the date of issuance and December 31, 2007.
15. Please tell us and disclose in future filings all of the significant terms of the 2007 debentures. Include a discussion of how you determine the number of shares of common stock to issue as payment for interest expense.
16. Please tell us and disclose in future filings the nature of the “certain other contingent liabilities” associated with the 2007 debentures that you recorded as a debt discount.

Note 18. Quarterly Information, page F-27

17. We note that on page F-28 you refer to using a valuation specialist when determining the purchase price allocation for Gecko. While management may elect to take full responsibility for the valuation, if you choose to continue to refer to the expert in any capacity, please revise future filings, beginning with your next 10-Q, to name the independent valuation firm. In addition, please note that if you intend to incorporate your Form 10-K by reference into any registration statement, you will be required to include the consent of the independent valuation firm as an exhibit to the registration statement.

Exhibit 31

18. We note that the identification of the certifying individual at the beginning of the certification required by Exchange Act Rule 13a-14(a) also includes the title of the certifying individual. In future filings, the identification of the certifying individual at the beginning of the certification should be revised so as not to include the individual’s title.
19. We note that your annual report contains management’s internal control report as required by Item 308T of Regulation S-K. As such, your certifications should include the introductory language in paragraph 4 of the certification that refers to the certifying officers' responsibility for establishing and maintaining internal control over financial reporting for the company and paragraph 4(b), which states that the certifying officer has designed internal control over financial reporting (or caused it to be designed under their supervision). Please file an amendment to the Form 10-K that includes new, corrected certifications. You may provide an abbreviated amendment that consists of a cover page, explanatory note, signature page and paragraphs 1, 2, 4 and 5 of the certification.

As appropriate, please amend your filing 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 and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and 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.

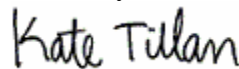
In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

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

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.

You may contact Andri Boerman, Staff Accountant, at (202) 551-3645 or me at (202) 551-3604 if you have any questions regarding these comments. In this regard, do not hesitate to contact Angela Crane, Branch Chief, at (202) 551-3554.

Sincerely,



Kate Tillan
Assistant Chief Accountant