

Mail Stop 4561

December 23, 2009

Walter S. Woltosz
Chairman of the Board and Chief Executive Officer
Simulations Plus, Inc.
42505 Tenth Street West
Lancaster, CA 93534-7059

**Re: Simulations Plus, Inc.
Form 10-K for Fiscal Year Ended August 31, 2009
Filed November 30, 2009
File No. 000-32046**

Dear Mr. Woltosz:

We have reviewed the above-referenced filing and have the following comments. If 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 supplemental 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.

Item 7 – Management’s Discussion and Analysis or Plan of Operation

Results of Operations, page 14

1. In your future filings, consider including an overview of management’s discussion and analysis of financial condition and results of operations to provide a balanced, executive-level discussion that identifies the most important themes or other significant matters that may impact your financial condition and operating results. As examples of such themes and matters, we note in Exhibit 99.1 to your Form 8-K filed December 3, 2009, your PowerPoint presentation includes a high level summary overview of the fiscal year 2009 and your business strategy going

forward. For guidance see Section III.A of SEC Release No. 33-8350, available on our website at <http://www.sec.gov/rules/interp/33-8350.htm>.

2. Your discussion of the results of operations frequently does not quantify sources of material changes. For example, refer to disclosure on page 14 addressing the increase in pharmaceutical software sales and services. Please note that prefacing a reference to the source or sources of changes with the word “primarily” obscures the ability of the reader to identify the material sources of the change. In addition, where a material change is attributed to two or more factors, including any offsetting factors, the contribution of each identified factor should be described in quantified terms. See Section III.D of SEC Release No. 34-26831. To the extent possible, please quantify the sources of material changes and offsetting factors.

Item 9A(T) – Controls and Procedures, page 21

3. You state that you maintain disclosure controls and procedures designed to ensure that “material information” related to your company is recorded, processed, summarized, and reported within the time periods specified in the SEC rules and forms. However, your definition does not entirely conform to the full definition of disclosure controls and procedures, as defined in Exchange Act Rule 13a-15(e). In your future filings, to the extent that you set forth the definition of disclosure controls and procedures, please ensure that you include the full definition set forth in Rule 13a-15(e), and that you do not qualify the definition as to materiality. In your response letter, tell us whether the conclusions reached at the end of 2009 concerned disclosure controls and procedures as defined by Rule 13a-15(e). Further, you state that your CEO and CFO based their evaluations “as of the end of the period,” without providing a specific date. In future filings please clarify your disclosure by providing a specific date.
4. We note the statement that a “control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met.” In your response letter, please confirm, if true, that your CEO and CFO concluded that your disclosure controls and procedures were effective at that reasonable assurance level as of August 31, 2009. In addition, ensure that future quarterly and annual reports set forth whether your CEO and CFO have concluded that your disclosure controls and procedures are effective at that reasonable assurance level. In the alternative, omit from future filings the reference to the level of assurance of your disclosure controls and procedures. Please refer to Section II.F.4 of SEC Release No. 33-8238.

Signatures, page 26

5. Your Form 10-K must be signed by your controller or principal accounting officer, in addition to your principal executive officer and principal financial officer. See General Instruction D(2)(a) to Form 10-K. Please confirm that one of the officers who signed the Form 10-K on your behalf was your controller or principal accounting officer. In future filings on Form 10-K, please identify in your signature blocks the person signing in each of the foregoing capacities.

Item 15 – Exhibits and Financial Statement Schedules

6. We note that you have redacted and marked as confidential, certain portions of Exhibits 10.34 and 10.41; however, it appears that you have not submitted corresponding requests for confidential treatment that conform to the requirements of Rule 24b-2 of the Securities Exchange Act. Without an application for and a grant of confidential treatment, exhibits that are required pursuant to Item 601 of Regulation S-K must be filed in their entirety. As a consequence of your failure to provide agreements in full and in the absence of a confidential treatment order, your Form 10-K is deficient and you should consider this as it pertains to pending registration statements.
7. While you have incorporated by reference certain exhibits required by Item 601 of Regulation S-K, we were unable to locate the exhibits referenced in footnotes 1 and 8 on page 25 of your filing. To the extent that the exhibits are applicable to your Form 10-K for the fiscal year ended 2009 and are required by Item 601 of Regulation S-K, please revise your disclosure to clearly indicate where the exhibits can be located; or re-file the exhibits so that the information required by Item 601 is made publicly and electronically available to investors.
8. On page F-18, you refer to your 2007 Stock Option Plan, but you do not appear to have filed this plan as an exhibit to your Form 10-K. Please advise. Refer to Item 601(b)(10)(iii) of Regulation S-K.
9. We note your disclosure on page F-12 that, for the 2009 fiscal year: two customers accounted for 13% each of net sales for Simulations Plus; a third customer accounted for 12% of net sales for Simulations Plus; and one government agency accounted for 21% of net sales for Words+. However, you do not appear to have filed as exhibits to your Form 10-K any contracts with these customers. Please tell us whether you have contracts with any of these entities, and, if so, provide us with your analysis as to whether you are required to file these contracts as exhibits to your Form 10-K. Refer to Item 601(b)(10)(i) and (ii) of Regulation S-K.

Notes to Consolidated Financial Statements

License Agreement, page F-16

10. We note that according to your agreement with Enslein Research, Inc., you are required to pay 50% of gross sales revenues of the ADMET Metabolism Module to Enslein in the form of a royalty payment. Tell us what consideration you have given to including disclosure of the material terms of this agreement in your business description section and whether this agreement should be filed as an exhibit to your Form 10-K. See Item 601(b)(10) of Regulation S-K.

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Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit all correspondence and supplemental materials on EDGAR as required by Rule 101 of Regulation S-T. If you amend your filing(s), you may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter that keys your response 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 any amendment and your response to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings 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.

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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.

You may contact Stephani Bouvet at (202) 551-3545 if you have any questions regarding the above comments. If you need further assistance, you may contact me at (202) 551-3735.

Sincerely,

David Orlic
Attorney Adviser