

Mail Stop 6010

November 21, 2008

Harry Masuda  
Chief Executive Officer  
Human BioSystems  
1127 Harker Avenue  
Palo Alto, California 94301

**Re: Human BioSystems  
Registration Statement on Form S-1  
Filed November 7, 2008  
File No. 333-155216**

Dear Mr. Masuda:

We have limited our review of your filing to those issues we have addressed in our 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. Please be as detailed as necessary in your explanation.

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.

General

1. We note that on February 13, 2008, another registration statement became effective registering the sale of an additional 16,917,464 shares of common stock by the same selling shareholder, Dutchess Private Equities Fund, Ltd. Those 16,917,464 shares also related to an equity line of credit agreement. Given the aggregate size of the two offerings relative to the number of shares outstanding held by non-affiliates, the fact that the prior offering became effective within the past twelve months, the nature of the offering and the selling shareholder, this transaction appears to be a primary offering. Because you are not eligible to conduct a primary offering on Form S-3 you are not eligible to conduct a primary at-the-market offering under Rule 415(a)(4). Please reduce the size of the offering or withdraw the registration statement.

2. We note that you are registering the resale of up to 57,109,940 shares of common stock by Dutchess Private Equities Fund Ltd. that will be issued pursuant to an equity line of credit agreement. However, we note that the equity line of credit agreement which you have described in your filing and included as Exhibit 10.13 is dated as of June 20, 2004 by and between Human BioSystems and Dutchess Private Equities Fund, II, L.P., not Dutchess Private Equities Fund Ltd. We note that, pursuant to Section 12(h) of this agreement, it may not be assigned. Please explain how Dutchess Private Equities Fund Ltd. became a party to the equity line agreement. If there is another equity line agreement with Dutchess Private Equities Fund Ltd. which should have been referenced in your filing and included as an exhibit, please revise your disclosure accordingly.
3. We understand that the terms of the Second Note referenced on page 41 provide that you may be obligated to repay the Second Note with proceeds you receive from puts made pursuant to the equity line agreement. Please tell us whether you have the ability to repay the Second Note to the selling shareholder without recourse to the monies received or to be received under the equity line agreement.

Please also confirm to us that the amount of indebtedness under the Second Note may not be reduced or relieved by the issuance of shares under the equity line agreement.

4. We refer to your statement that, "Upon each and every event of default (as defined in the Second Note), the selling shareholder may elect to execute the puts in an amount that will repay it and fully enforce its rights under the Investment Agreement." Please tell us how the selling shareholder "may elect to execute the puts" and what type of discretion this provision gives the selling shareholder as to purchases shares of common stock under the equity line agreement.
5. Please expand your disclosure in the prospectus to discuss the likelihood that you will receive, or will ever need, based on your disclosed business plans, the full amount of proceeds available under the agreement. If you are not likely to receive the full amount, please explain why you and the selling shareholder chose the \$5,000,000 amount of the equity line.
6. Please revise your registration statement to disclose that the selling shareholder's obligations under the equity line agreement are not transferable and that the registration statement does not cover sales by transferees of the selling shareholder.

Risk Factors, page 5

7. Please expand your risk factors to discuss the likelihood that you will have access to the full amount under the equity line.
8. We note your statement on page 43 that the selling shareholder may engage in short sales. Please add a risk factor to discuss the effects of short selling on the company's market price.

Selling Shareholder, page 40

9. Please name the affiliate of the selling shareholder you reference in this section on page 40. Please describe the nature of the affiliation and tell us why the shares of common stock beneficially owned by the affiliate are not also beneficially owned by the selling shareholder. To the extent the shares of common stock beneficially owned by the affiliate are also beneficially owned by the selling shareholder, please update the selling shareholder table accordingly.
10. On pages 40 and 41 you reference prior transactions with the selling shareholder and an affiliate. Please include further disclosure regarding the impact of past transactions with the selling shareholder and its affiliates on the market price of the company's stock.
11. We note your statement that you issued 250,000 shares to the selling shareholder. Please explain why this amount is not reflected in the selling shareholder table, or alternatively, revise the table to disclose the number of shares beneficially owned by the selling shareholder prior to the offering.

Plan of Distribution, page 43

12. We note that you state that Dutchess "may be deemed" an underwriter. This disclosure is not sufficient. Please revise your disclosure in the plan of distribution to affirmatively identify Dutchess as an underwriter as you have on the cover page of the prospectus.

Financial Statements and Related Financial Information

13. Please update your financial statements and related financial information to reflect the updated financial data presented in your latest Form 10-Q filed on November 14, 2008.

Signatures

14. We note the filing does not include the signature of your controller or principal accounting officer. Please include this signature in an amended filing. If Harry Masuda, the Acting CFO, also serves as the controller or principal accounting officer, his signature should be captioned as such in your amended filing. See Instruction 1 to the Signatures section of Form S-1.

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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. 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 Act of 1933 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please contact Nandini Acharya at (202) 551-3495, Sonia Barros at (202) 551-3655 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director

cc: Gregg E. Jaclin, Esq.  
Anslow & Jaclin, LLP  
195 Route 9 South, Suite 204  
Manalapan, NJ 07726