

December 22, 2008

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

**Re: Human Biosystems
Amendment No. 1 to Form S-1
Filed December 10, 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. 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.

General

1. We note your response to comment 1 of our comment letter dated November 21, 2008 and that you have reduced the size of your offering to 36,675,551 shares. To the extent that substantially all the shares previously registered on the registration statement that was declared effective on February 13, 2008 have not been resold, we will continue to consider the total number of shares being registered on the previous registration statement and this registration statement

when determining whether the offering appears to be a primary or a secondary offering. Since substantially all the shares previously registered have not been resold, this offering appears to be a primary offering and can only proceed on an at the market basis under Rule 415(a)(4) if the company is eligible to conduct a primary offering on Form S-3. Since you are not eligible to conduct a primary offering on Form S-3, please withdraw the registration statement. You may register the resale of shares issued under this agreement after the exercise of each put. Alternatively, further reduce the number of shares being registered on this registration statement.

Please note, we will treat as a different transaction any registration statement that registers securities for resale by an investor after the later of:

- 60 days after the time that the investor and its affiliates have resold substantially all of the securities registered for resale under a prior registration statement; or
 - Six months after the effective date of a prior registration statement for the same investor or its affiliates.
2. We note your response to comment 2 of our comment letter dated November 21, 2008. Please describe to us in detail the transaction or series of transactions whereby Dutchess Private Equities Fund Ltd. became successor in interest to Dutchess Private Equities Fund, II, L.P. Please explain whether or not the Investment Agreement dated as of June 20, 2004 by and between Human Biosystems and Dutchess Private Equities Fund, II, L.P. was assigned to Dutchess Private Equities Fund Ltd. Please note that our equity line provisions do not permit assignments. If the rights and obligations under the investment agreement were assigned from Dutchess Private Equities Fund, II, L.P. to Dutchess Private Equities Fund Ltd., the assignment would not be permissible under our equity line provisions and the registration statement should be withdrawn. You would be able to file a new registration statement if the investment agreement were renegotiated.
 3. We note your response to comment 3. We object to the registration of an indirect primary offering when there is an intention to use the equity line to repay the company's indebtedness to the investor unless the company includes a representation that it has the ability to repay the indebtedness without recourse to the funds received or to be received under the equity line agreement and the amount of indebtedness may not be reduced or relieved by the issuance of shares under the equity line. Since you have indicated your intention to use the proceeds of the equity line to repay your indebtedness to the investor and you were not able to make the representation that you have the ability to repay the indebtedness without recourse to the monies to be received under the equity line, your transaction does not comply with our equity line provisions and you may not register the offering as an indirect primary offering.

4. We note your response to comment 4 of our comment letter dated November 21, 2008. Based upon your response, it appears that the selling shareholder has discretion with respect to the manner and timing of execution of the puts related to the equity agreement. This discretion gives the investor the ability to determine the timing and pricing of common stock issuable under the equity line agreement which is not permissible under our equity line accommodations. Please withdraw the registration statement. You may renegotiate the agreement and then file a new registration statement.
5. The equity line provisions require that the investor be irrevocably bound to purchase the shares when puts are exercised by the Company. It appears that the Investment Agreement on August 20, 2007. If the agreement was extended or if a new agreement was entered into please tell us when this occurred and file the amendment, extension or new agreement as an exhibit to the registration statement.

* * *

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

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- 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, Suzanne Hayes at 202-551-3675 or me at 202-551-3715 with any questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: Gregg E. Jaclin, Esq.
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