



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

May 28, 2009

Caesar J. Belbel  
Executive Vice President, Chief Legal Officer and Secretary  
Clinical Data, Inc.  
One Gateway Center, Suite 702  
Newton, Massachusetts 02458

**Re: Clinical Data, Inc.**  
**Registration Statement on Form S-3**  
**Filed May 7, 2009**  
**File No. 333-159039**

Dear Mr. Belbel:

We have limited our review of your filing to the 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 comments are 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 or may not 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.

Selling Stockholders, page 8

1. Please revise the table to show clearly the aggregate beneficial ownership of the individual who beneficially owns the shares held in the name of the entities identified in the table.

2. Given the nature and size of the transaction being registered, as well as the pattern of involvement that the selling shareholders and their affiliates have had in your registered offerings in the past three years, advise the staff of the company's basis for determining that the transaction is appropriately characterized as a transaction that is eligible to be made on a shelf basis under Rule 415(a)(1)(i).
3. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure of the dollar amount of each payment (including the value of any payments to be made in common stock) in connection with the transaction that you have made or may be required to make to any selling shareholder, any affiliate of a selling shareholder, or any person with whom any selling shareholder has a contractual relationship regarding the transaction (including any interest payments, liquidated damages, payments made to "finders" or "placement agents," and any other payments or potential payments). Please provide footnote disclosure of the terms of each such payment. Please do not include any repayment of principal on the convertible notes in this disclosure.

Further, please provide us, with a view toward disclosure in the prospectus, with disclosure of the net proceeds to the issuer from the sale of the convertible notes and the total possible payments to all selling shareholders and any of their affiliates in the first year following the sale of convertible notes.

4. Please tell us whether the selling stockholders are broker-dealers or affiliates of a broker-dealer.
5. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure of all prior securities transactions between the issuer (or any of its predecessors) and the selling shareholders, any affiliates of the selling shareholders, or any person with whom any selling shareholder has a contractual relationship regarding the transaction (or any predecessors of those persons), with the table including the following information disclosed separately for each transaction:
  - the date of the transaction;
  - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction;
  - the number of shares of the class of securities subject to the transaction that were outstanding prior to the transaction and held by persons other than the selling shareholders, affiliates of the company, or affiliates of the selling shareholders;

- the number of shares of the class of securities subject to the transaction that were issued or issuable in connection with the transaction;
  - the percentage of total issued and outstanding securities that were issued or issuable in the transaction (assuming full issuance), with the percentage calculated by taking the number of shares issued or issuable in connection with the applicable transaction, and dividing that number by the number of shares issued and outstanding prior to the applicable transaction and held by persons other than the selling shareholders, affiliates of the company, or affiliates of the selling shareholders;
  - the market price per share of the class of securities subject to the transaction immediately prior to the transaction (reverse split adjusted, if necessary); and
  - the current market price per share of the class of securities subject to the transaction (reverse split adjusted, if necessary).
6. Please provide us, with a view toward disclosure in the prospectus, with tabular disclosure comparing:
- the number of shares outstanding prior to the convertible note transaction that are held by persons other than the selling shareholders, affiliates of the company, and affiliates of the selling shareholders;
  - the number of shares registered for resale by the selling shareholders or affiliates of the selling shareholders in prior registration statements;
  - the number of shares registered for resale by the selling shareholders or affiliates of the selling shareholders that continue to be held by the selling shareholders or affiliates of the selling shareholders;
  - the number of shares that have been sold in registered resale transactions by the selling shareholders or affiliates of the selling shareholders; and
  - the number of shares registered for resale on behalf of the selling shareholders or affiliates of the selling shareholders in the current transaction.

In this analysis, the calculation of the number of outstanding shares should not include any securities underlying any outstanding convertible securities, options, or warrants.

7. Please provide us detailed information regarding when shares registered for resale by Randal Kirk or his affiliates in prior registration statements were resold by that selling shareholder.
8. Please tell us, with a view toward disclosure in the prospectus, whether – based on information obtained from the selling shareholders – any of the selling shareholders have an existing short position in the company’s common stock and, if any of the selling shareholders have an existing short position in the company’s stock, the following additional information:
  - the date on which each such selling shareholder entered into that short position; and
  - the relationship of the date on which each such selling shareholder entered into that short position to the date of the announcement of the convertible note transaction and the filing of the registration statement (*e.g.*, before or after the announcement of the convertible note transaction, before the filing or after the filing of the registration statement, *etc.*).
9. Please include in your prospectus a materially complete description of the relationships and arrangements that have existed in the past three years or are to be performed in the future between the issuer (or any of its predecessors) and the selling shareholders, any affiliates of the selling shareholders, or any person with whom any selling shareholder has a contractual relationship regarding the transaction (or any predecessors of those persons) – the information provided should include, in reasonable detail, a complete description of the rights and obligations of the parties in connection with the sale of the convertible notes.

Also, please tell us where you have filed all agreements regarding these relationships and arrangements.

Undertakings, page 10

10. Please provide the undertakings required by Regulation S-K Item 512(a)(5)(ii) and 512(a)(6).

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 submission or in response to our comments on your submission.

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.

Caesar J. Belbel  
Clinical Data, Inc.  
May 28, 2009  
Page 6

Please contact Mary Beth Breslin at (202) 551-3625 or me at (202) 551-3617 with any questions.

Sincerely,

Russell Mancuso  
Branch Chief

cc (via facsimile): Marc A. Recht, Esq.  
Cooley Godward Kronish LLP