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

DIVISION OF
CORPORATION FINANCE

September 28, 2011

Charles J. Link, Jr.
Chief Executive Officer
NewLink Genetics Corporation
2503 South Loop Drive
Ames, IA 50010

Re: NewLink Genetics Corporation
Amendment No. 3 to Registration Statement on Form S-1
Filed on September 14, 2011
File No. 333-171300

Dear Dr. Link:

We have reviewed your amended registration statement filed September 14, 2011 and response letters filed September 14, 2011 and September 21, 2011 and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. We will complete our review of your filing when the IPO price and reverse stock split to be effected before the completion of the offering is reflected throughout the document.

Business
Analysis of Historical Controls, page 91

2. We note that you have deleted the descriptions of the clinical trials conducted in surgically-resected Stage I/II pancreatic cancer that was previously disclosed on pages 91 to 92 of your Amendment No. 2 to Form S-1. Please reinstate this disclosure in your filing as it provides material background information on the clinical trials you disclose on pages 92 and 93 of your Amendment No. 3 to Form S-1.

3. We note that a total of 538 patients were enrolled in the RTOG 97-04 clinical trial. Of this number, it appears that the RTOG 97-04 investigators performed a primary analysis of a subpopulation of 451 patients, only 221 of which received gemcitabine along with adjuvant 5-FU-based chemoradiation. In your discussion of RTOG 97-04 on pages 88-93, please revise your disclosure where necessary to make clear to the reader what patient population you are referring to: the total number of patients; the subpopulation of 451 patients; or the 221 patients who received gemcitabine. For example, on page 90, please clarify which RTOG 97-04 patient population the Kaplan-Meier estimate of 18.8 months median overall survival is based on.

4. We note that the overall survival at 1 year for the subset of 221 patients in the RTOG 97-04 study was 69%, as disclosed in the table on page 92. On page 91, however, you provide a table indicating that the overall survival at 1 year was also 69% for "all patients" in the RTOG 97-04 trial. Please confirm to us that the overall survival at 1 year was 69% for all patients in the RTOG 97-04 trial as well as for the subpopulation of 221 patients in such trial.

5. We note that you removed the columns "Local invasion", "High Tumor Grade", and "Disease Free Survival Median" from your table on page 92. Please reinstate these columns. Alternatively, please provide us with a detailed analysis which supports your conclusion that this information is not material despite your inclusion of a discussion of these characteristics on pages 91 to 92.

6. We note that you removed the data from ESPAC-1, ESPAC-3 and CONKO-001 from your table on page 92. Please reinstate this information as it provides a context for your disclosure under "European studies" on page 93.

Clinical Trials, page 99

7. Please define hypophysitis and disclose the impact of this condition.

BPS Grants and Contracts with the United States Government, page 102

8. You disclose that on March 24, 2011, BPS received a second grant from NIH to continue the study of yellow fever and arena viruses. The original grant is filed as Exhibit 10.74 to this registration statement. Please file a copy of this subsequent grant as an exhibit to this registration statement. Alternatively, please provide us with an analysis that supports your conclusion that you are substantially dependent on the original grant, but are not substantially dependent on this additional grant.

Notes to Consolidated Financial Statements

16. Net Loss per Common Share, page F-41

9. We note that, on page F-43, you have assumed a conversion price of $6.25. We also note, on page F-30, that you indicate if you close an IPO on or before December 31, 2011, the Series E conversion price will automatically be adjusted to a price equal to the product of (A) the price at which shares of your Common Stock are sold to the public in the IPO and (B) 0.85. Please tell us why you have utilized $6.25 as the conversion price instead of the conversion price based on the mid-point of your estimated IPO price range in the conversion of your preferred stock, and revise your disclosure as appropriate. Also, please tell us whether your pro forma information throughout the filing, or as included in your supplemental response dated September 20, 2011, reflects the conversion of your Series E preferred stock based on the mid-point of your estimated IPO price range instead of the $6.25 conversion price. We believe that your pro forma information should reflect the estimated IPO price range, including the Series E preferred stock conversion. Please revise your disclosure as appropriate.

21. Subsequent Events (Unaudited), page F-49

10. Please revise your disclosure to address how you will account for your amendment to change the vesting period for the initial grant of stock options from five to three years, and the extent to which this amendment will impact your results of operations.

Item 16. Exhibits and Financial Statement Schedules, page II-4

11. On page F-49, you describe two amendments to your Restated Certificate of Incorporation. Please file copies of these amendments prior to seeking acceleration of your registration statement. Please note that we will need time to review these amendments after they are filed.

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Staci Shannon at (202) 551-3374 or Lisa Vanjoske at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Jennifer Riegel at (202) 551-3575, Daniel Greenspan at (202) 551-3623 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Daniel Greenspan for

Jeffrey Riedler
Assistant Director

cc: James C.T. Linfield
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