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October 25, 2011

United States Securities and Exchange Commission Division of Corporate Finance Mail Stop 4720 100 F Street, N.E. Washington, D.C. 20549 Attn: Jeffrey Riedler Staci Shannon Lisa Vanjoske Jennifer Riegel Daniel Greenspan

Re: NewLink Genetics Corporation Registration Statement on Form S-1 (File No. 333-171300)

Dear Mr. Riedler, Ms. Shannon, Ms. Vanjoske, Ms. Riegel and Mr. Greenspan:

Enclosed for electronic filing via EDGAR pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on behalf of our client NewLink Genetics Corporation (the "Company"), is Amendment No. 5 ("Amendment No. 5") to the Company's Registration Statement on Form S-1 (the "Registration Statement") originally filed with the Securities and Exchange Commission (the "Commission") on December 21, 2010 and amended by Amendment No. 1 to the Registration Statement originally filed with the Commission on February 28, 2011, Amendment No. 2 to the Registration Statement originally filed with the Commission on March 18, 2011, Amendment No. 3 to the Registration Statement originally filed with the Commission on September 14, 2011 and Amendment No. 4 to the Registration Statement ("Amendment No. 4") originally filed with the Commission on October 4, 2011. The copy of Amendment No. 5 that is enclosed with the paper copy of this letter is marked to show changes from Amendment No. 4.

Amendment No. 5 is being filed in response to comments received from the staff of the Commission (the "*Staff*") by phone on October 13, 2011 with respect to Amendment No. 4. Except where otherwise indicated, page references in the text of the responses below correspond to the page numbers of Amendment No. 5.

Staff Comments and Company Responses

<u>General</u>

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

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Response: The Company acknowledges the Staff's comment and respectfully submits that the IPO price range and the reverse stock split are reflected throughout Amendment No. 5.

Notes to Consolidated Financial Statements 16. Net Loss per Common Share, page F-41

2. We note your response to prior comment 9 and will complete our review of the pro forma financial information when you file the pricing amendment to reflect the conversion of the Series *E* Preferred stock based on the midpoint of the estimated IPO range.

Response: The Company acknowledges the Staff's comment and respectfully submits that Amendment No. 5 reflects the conversion of the Series E Preferred stock based on the midpoint of the estimated IPO range.

The Company plans to commence its road show on Friday, October 28, 2011 and respectfully requests the Staff's assistance in completing the review of the Registration Statement and Amendment No. 5 as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions regarding Amendment No. 5 or this response letter to me at (720) 566-4010 or Brent D. Fassett at (720) 566-4025.

Sincerely,

Cooley LLP

/S/ James C. T. Linfield