James C. T. Linfield
(720) 566-4010
linfieldjct@cooley.com

February 28, 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. 1 (***"Amendment No. 1"***) 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. The copy of Amendment No. 1 that is enclosed with the paper copy of this letter is marked to show changes from the Registration Statement as originally filed on December 21, 2010, and includes updates to reflect, among other things, inclusion of the Company's 2010 audited financial statements and 2010 executive compensation information.

Amendment No. 1 is being filed in response to comments received from the staff of the Commission (the ***"Staff"***) by letter dated January 18, 2011 with respect to the Registration Statement (the ***"Comment Letter"***). The numbering of the paragraphs below corresponds to the numbering in the Comment Letter, the text of which we have incorporated into this response letter for convenience. Except where otherwise indicated, page references in the text of the responses below correspond to the page numbers of Amendment No. 1.

Staff Comments and Company Responses

General

1. Please note that when you file a pre-effective amendment containing pricing-related information, we may have additional comments. As you are likely aware, you must file this amendment prior to circulating the prospectus.

Response: The Company acknowledges the Staff's comment and will not circulate the prospectus prior to filing a pre-effective amendment to the Registration Statement that includes pricing-related information.

2. Please note that when you file a pre-effective amendment that includes your price range, it must be bone fide. We interpret this to mean that your range may not exceed $2 if you price below $20 and 10% if you price above $20.

Response: The Company acknowledges the Staff's comment.

3. Please provide us proofs of all graphic, visual or photographic information you will provide in the printed prospectus prior to its use, for example in a preliminary prospectus. Please note that we may have comments regarding this material.

Response: The Company acknowledges the Staff's comment and will provide the Staff with proofs of any additional graphic, visual or photographic information beyond what is included in Amendment No. 1 that the Company intends to include in the printed prospectus prior to its use.

4. Please note that where we provide examples to illustrate what we mean by our comments, they are examples and not exhaustive lists. If our comments are applicable to portions of the filing that we have not cited as examples, make the appropriate changes in accordance with our comments.

Response: The Company acknowledges the Staff's comment and has made appropriate changes throughout Amendment No. 1 as requested.

Prospectus Summary, page 1

5. Please revise your summary on pages 1 and 2 to remove the discussion of the results of your clinical trials. In order to provide a proper context for the results of these trials, the data should be balanced with a full discussion of the results of these trials. A full discussion of the results of each of the trials is not appropriate in your Prospectus Summary. Accordingly, please remove the discussion of the results of your clinical trials from your summary.

Response: The Company respectfully acknowledges the Staff's comment, but the Company believes that its current disclosure of preliminary indications from its clinical trials is one of the more important pieces of information for prospective investors regarding the Company and the status of its product candidates. The Company believes that the "Business" section does fully describe the status of each of its clinical trials and where those trials fit into the FDA approval process. The Company respectfully submits that inclusion of a summary of those clinical results as part of the overall summary of the Company's business is a fair and balanced disclosure. In response to the Staff's comments we have revised the disclosure to the summary on page 1 of Amendment No. 1 to help ensure that readers understand the summary nature of the disclosure. In addition, we have revised our disclosure regarding our clinical trials on pages 1 and 2 to include additional information clarifying the nature of the clinical trials.

6. Please revise your disclosure to attribute the below statements and other statements to the source from which you obtained the information. In addition, where you cite your own estimates, please explain how you arrived at those estimates and disclose any third-party sources you relied upon.

- *Pages 1 and 84: "As a result, a 96% mortality rate is associated with [pancreatic cancer], with one-year and five-year survival rates of 24% and 5%, respectively."*
- *Pages 1 and 84: "Approximately 20% of patients in the United States are eligible for resection at initial diagnosis."*
- *Pages 1 and 84: "Resection followed by chemotherapy or chemoradiotherapy, known as adjuvant therapy, extends median survival to approximately 18 months."*
- *Page 92: "About 85% to 90% of lung cancers are classified as NSCLC…About 80% of NSCLC cases are detected when they have progressed to stages III or IV. The current expected overall survival for a nonresectable stage IIIB or IV NSCLC patient who has failed first line treatment is approximately seven months."*
- *Page 94: "...while overall five-year survival rates for cases of prostate cancer approach 100%, the outlook for advanced, metastasized cases is poor with five-year survival rates of 31.7%.*
- *Page 98: "Median survival for the most common metastatic breast cancer is approximately three years."*

Response: The Company acknowledges the Staff's comment and has included the sources for the above information at the specified places throughout Amendment No. 1 as requested. The Company has also revised the statements on pages 93, 95 and 99 of Amendment No. 1 based on the use of updated sources.

Our Risks, page 3

7. Please expand your disclosure in this section to disclose that to date you have not had a product candidate that has been approved for sale by the FDA.

Response: The Company acknowledges the Staff's comment and has provided additional disclosure on page 4 of Amendment No. 1 as requested.

8. Please quantify the amount of your outstanding debt and the amount of debt that may be accelerated as early as March 18, 2011.

Response: The Company acknowledges the Staff's comment and has provided additional and updated disclosure on page 4 of Amendment No. 1 as requested.

9. Please disclose the amount of your net losses for the nine-months ended September 30, 2010 and the fiscal year ended December 31, 2009 and the amount of your accumulated deficit in the penultimate bullet-point.

Response: The Company acknowledges the Staff's comment and has provided additional disclosure on page 5 of Amendment No. 1 as requested.

Risk Factors
"Failure to attract and retain key personnel could impede our ability, …" page 17

10. To the extent that you have experienced problems attracting or retaining key personnel, or are aware of the imminent departure of key personnel, please expand your disclosure to describe these problems.

Response: The Company acknowledges the Staff's comment and respectfully submits that it has not historically experienced problems attracting or retaining key personnel and it is not currently aware of the imminent departure of key personnel.

"We will require substantial additional capital in the future ... " page 25

11. You disclose that the projections you provide in the risk factor are based on expenditures related to continued preclinical and clinical development of your product candidates during this period falling within budgeted levels. Please disclose your budgeted level of expenditures for your continued preclinical and clinical development.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on pages 24-25 of Amendment No. 1 to remove the list of assumptions for the funding forecast. Discussions of the considerations that went into our funding forecast occur under the headings "Use of Proceeds" on page 44 of Amendment No. 1 and "Operating Capital Requirements" on pages 67-68 of Amendment No. 1.

"Even though we have received governmental support in the past, we may not receive support at the same level or at all." page 28

12. Please revise your risk factor to identify the government entities that you are referring to in this risk factor. Based on your disclosure on page 55, it appears that this risk factor is referring to your grants and contracts with the Departments of Defense and the National Institute of Health. Please

also file copies of these agreements and expand your Business section to disclose the material terms of these agreements, including, but not limited to any payment provisions, a range of royalty rates, aggregate milestones, usage restrictions, obligations/rights to defend, duration and termination provisions. Alternatively, please provide us with an analysis that supports your conclusion that these agreements are not required to be filed.

Response: The Company acknowledges the Staff's comment and has expanded the disclosure on page 27 of Amendment No. 1 to identify the particular government entities that have provided support in the past. The Company has filed copies of the government contracts and grants the Company believes to be material with Amendment No. 1 and expanded the disclosure beginning on pages 101-102 of Amendment No. 1 to disclose the material terms of these agreements.

"We rely on single source vendors for some key components ... " page 32

13. Please identify each of your single source suppliers used in the manufacturing process for your HyperAcute immunotherapy product candidates. Please also file copies of these agreements and expand your Business section to disclose the material terms of these agreements, including, but not limited to any payment provisions, a range of royalty rates, aggregate milestones, usage restrictions, obligations/rights to defend, duration and termination provisions. Alternatively, please provide us with an analysis that supports your conclusion that these agreements are not required to be filed.

Response: The Company acknowledges the Staff's comment and respectfully submits that it currently uses a single manufacturer for one component used in the manufacture of its HyperAcute product candidates, but knows of at least one alternative manufacturer for the same component and believes it could switch manufacturers without significantly delaying its current development plans and without a material increase in the Company's costs. The Company respectfully advises the Staff that there is no single-source supplier of a critical component for the manufacture of its HyperAcute product candidates for which there is no commercially reasonable alternative source available. The Company has revised its disclosure on page 31 of Amendment No. 1 accordingly.

"We may be subject to litigation with respect to the ownership and use of intellectual property…" page 34

14. To the extent you are aware of any pending claims or have experienced any of the events described in this risk factor, please revise the risk factor to describe your experience or pending claims.

Response: The Company acknowledges the Staff's comment and respectfully submits that it is neither currently aware of any pending claims with respect to the ownership and use of intellectual property nor has it experienced litigation with respect to the ownership and use of intellectual property.

"We are exposed to potential product liability or similar claims, and insurance against these claims…" page 35

15. Please expand your disclosure to disclose the level of your product liability insurance coverage. Please also disclose the cost to you of such coverage, if material. Similarly, please revise your risk factor on page 20 regarding your insurance coverage.

Response: The Company acknowledges the Staff's comment and has expanded the disclosure on pages 19 and 34 of Amendment No. 1 to disclose the level of its insurance coverage. The Company respectfully submits that the cost of such coverage, which is $27,208 per year for product liability insurance and $10,568 per year for property insurance, is not material.

Cautionary Note Regarding Forward-Looking Statements, page 43

16. Please delete the statements "we have not independently verified market and industry data from third-party sources" and "neither such research nor these definitions have been verified by any independent source," These statements appear to imply that you are not taking liability for the statistical and other industry and market data included in your registration statement. It is not appropriate to state or imply that you do not have liability for the statements in your registration statement. Alternatively, please expand your disclosure to include a statement specifically accepting liability for this information.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on page 43 of Amendment No. 1 to remove the requested statements.

Use of Proceeds, page 45

17. You disclose that you intend to use approximately $ million of the net proceeds from this offering to fund your Phase 3 clinical trial and related development activities for HyperAcute Pancreas. Please expand your disclosure to disclose the stage of development for HyperAcute Pancreas that you expect this portion of the offering proceeds will enable you to complete. Similarly, please revise your disclosure for your other HyperAcute immunotherapy product candidates and IDO pathway inhibitor product candidates to state the stage of development you expect those proceeds will enable you to complete.

Response: The Company acknowledges the Staff's comment and has expanded its disclosure on page 44 of Amendment No. 1 to disclose the stages of development for the HyperAcute immunotherapy product candidates and IDO pathway inhibitor product candidates that the Company expects the offering proceeds will enable it to complete.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Financial Overview
Research and Development Expenses, page 55

18. Please tell us whether you track research and development expense by product candidate. If so, please disclose research and development expense by product candidate for each period presented and to date. If not, please revise your tabular disclosure of research and development expense on page 56 to also include expense incurred to date for each technology type presented.

Response: The Company acknowledges the Staff's comment and respectfully submits that it does not track research and development expense by product candidate. The Company does track research and development expense by technology type and has revised its tabular disclosure to research and development expense on pages 53 and 54 to include expenses incurred to date for each of those types.

Critical Accounting Policies and Significant Judgments and Estimates
Stock-Based Compensation
Common Stock Fair Value

Common Stock Valuations, page 60

19. You disclose on page 61 that your valuation specialist performed two distinct valuations for two different purposes, and you disclose on page 60, "We engaged a third-party valuation specialist to value our common stock ..." Please revise your disclosure to clearly state whether your Board, management, or your valuation specialist determined the fair value of your common stock for the purpose of calculating compensation expense for options grants. If fair value was determined by your valuation specialist, please name them and identify them as an expert in your disclosure, and include a signed and dated consent from the valuation expert.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on page 58 of Amendment No. 1 to disclose that the Company's Board of Directors, after taking into account recommendations from the Company's management based on valuation reports from the Mentor Group, Inc. ("***Mentor***"), a third-party valuation specialist, adopted the fair values of the Company's common stock. The Company has identified Mentor as an expert on page 183 of Amendment No. 1 and filed Mentor's consent to be named an expert valuation specialist as exhibit 23.2 to Amendment No. 1.

Fair Value Estimates, page 63

20. Please revise your grant dates to reflect the grant dates that comply with GAAP, and ensure your disclosure herein is consistent with your disclosure in the Notes to Consolidated Financial Statements, or explain why you believe no revision is necessary.

Response: The Company acknowledges the Staff's comment and has revised the table on page 61 of Amendment No. 1 by labeling the first column as the "Approval Date" and has added an additional column entitled "GAAP Measurement Date". The Company believes the disclosure is correct as the grants were legal commitments by the Company on the dates we have disclosed; however, the grant measurement dates did not occur under GAAP until the "GAAP Measurement Date," which we have added to the table.

21. Please disclose the following information relating to your issuances of options to purchase common stock:

- *A discussion of each significant factor contributing to the difference between the fair value of your common stock as of each grant date through September 30, 2010, the fair value as of the date of each grant subsequent to September 30, 2010 through the date of your filing, and the estimated IPO price; and*
- *The anticipated effects on results of operations for equity issuances made subsequent to the date of your financial statements (i.e., September 30, 2010) through the date of your filing.*

Response: The Company acknowledges the Staff's comment and has expanded its disclosure on pages 61-63 of Amendment No. 1 to disclose the requested information.

Loan Agreements
March 2005 Iowa Department of Economic Development Loan, page 66

22. You disclose that you do not anticipate fulfilling the requirements for loan forgiveness under this agreement by March 18, 2011, but based on your progress on the project you anticipate asking for and believe you can obtain a further one-year extension of the project completion date from the IDED. Please provide us with your basis for your belief that you can obtain a further one-year extension of the project completion date.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on page 66 of Amendment No. 1 to reflect that the Company has obtained a further one-year extension.

23. Please expand your disclosure to disclose the consequences, including the approximate amount that you will need to pay, if you do not fulfill the requirements of the loan and you cannot obtain a further extension.

Response: The Company acknowledges the Staff's comment and has expanded its disclosure on page 66 of Amendment No. 1 to disclose the approximate amount it would need to pay (as of December 31, 2010) if it does not fulfill the requirements of the loan and cannot obtain a further extension.

Contractual Obligations and Commitments, page 69

24. Please revise your Contractual Obligations Due table to include cash payment obligations related to each of your Licensing Agreements as disclosed in Note 16 to your Consolidated Financial Statements. Where uncertainties prevent making a reasonable estimate of the obligations, explain the uncertainties in your disclosure below the table. Quantify aggregate license and milestone obligations, their timing, events triggering their payment and

expected effects on financial position, operations and capital resources. Also, revise Note 16 to your Consolidated Financial Statements to include this disclosure.

Response: The Company acknowledges the Staff's comment and has revised the disclosure below the Contractual Obligations Due table and Note 16 on beginning on pages 68 and F-34 of Amendment No. 1, respectively, to include a discussion of aggregate milestone obligations and annual maintenance fees. The Company's believes all the future milestone obligations under the licenses are based on development milestones. The Company has not included disclosure of individual license and milestone obligations, milestone timing or events triggering milestone payment in either the Contractual Obligations Due table or Note 16. The Company has requested confidential treatment with respect to such financial terms and would respectfully request that the Staff consider the disclosure in Amendment No. 1 together with the Company's request for confidential treatment that was previously submitted to the Staff. The Company believes that disclosing such financial information would cause the Company to suffer substantial competitive injury as described in detail in the Company's request for confidential treatment that was previously submitted to the Staff.

The Company respectfully submits that the timing of when the company may meet particular development milestones is uncertain at the present time. Therefore, the Company has not

disclosed precise expected effects of the milestone payments on financial position, operations or capital resources. However, the Company has included additional disclosure on page 25 of Amendment No. 1 with respect to certain potential effects of the payment of milestone obligations on the Company's financial position, operations and capital resources.

Collaborative Agreements with Medical Institutions, page 71

25. *Please file a copy of your December 22, 2007 Cooperative Research & Development Agreement with Public Health Services and revise your Business section to disclose the material terms of this agreement, including, but not limited to any payment provisions, duration and termination provisions, Alternatively, please provide us with an analysis that supports your conclusion that this agreement is not required to be filed.*

Response: The Company acknowledges the Staff's comment and respectfully submits that the date of this Cooperative Research & Development Agreement (CRADA) with Public Health Services is incorrect and should be January 4, 2004. This CRADA, as amended, was formerly filed as exhibits 10.27 to 10.29. However, this CRADA has expired and, as a result, these agreements are not material to the Company and have been removed from the exhibit list to Amendment No. 1.

Acquisition of BioProtection Systems Corporation, page 73

26. *Please file copies of the relevant agreement(s) related to your acquisition of the minority ownership of BPS.*

Response: The Company acknowledges the Staff's comment and has filed with Amendment No. 1 the following documents related to its acquisition of the minority ownership of BPS:

- Certificate of Merger of BPS Merger Sub, Inc. into BioProtection Systems Corporation filed in Delaware on January 7, 2011
- Agreement and Plan of Merger dated December 1, 2010 by and among NewLink Genetics Corporation, BPS Merger Sub, Inc., BioProtection Systems Corporation and BPS Stockholder Representative, LLC

27. *Please disclose when this closing occurred or when you expect this closing to occur.*

Response: The Company acknowledges the Staff's comment and has made appropriate changes throughout Amendment No. 1 to reflect that the closing occurred on January 7, 2011.

Related Party Transactions, page 74

28. *Please file copies of the loan and forgiveness agreements disclosed in this section pursuant to Item 601(b)(10)(ii)(B) of Regulation S-K.*

Response: The Company acknowledges the Staff's comment and has filed the following loan agreements as Exhibits 10.19 through 10.24 to Amendment No. 1:

- Promissory Note with an initial payment amount of $500,000 dated July, 2008 between Registrant and Gordon Link.
- Promissory Note with an initial payment amount of $225,000 dated May 2, 2008 between Registrant and Dr. Charles Link.
- Amendment Agreement dated July 1, 2010 between Registrant and Dr. Charles Link (modifying options).
- Promissory Note with an initial payment amount of $31,500 dated April 18, 2000 between Registrant and Dr. Nicholas Vahanian.
- Amendment Agreement dated July 1, 2010 between Registrant and Dr. Nicholas Vahanian (modifying options).
- Promissory Note with an initial payment amount of $125,000 dated August 20, 2008 between Registrant and Dr. Nicholas Vahanian.

The following actions were taken pursuant to resolutions by NewLink's board of directors and do not have corresponding formal, written agreements:

- May 11, 2010 forgiveness of accrued interest of $10,052 on Gordon Link's $500,000 loan.
- January 22, 2009 bonus grant to Dr. Charles Link of $78,149.
- April 24, 2009 loan to Dr. Charles Link of $350,000.
- May 7, 2010 forgiveness of note plus accrued interest of $25,170 on Dr. Charles Link's $350,000 loan.
- July 2, 2010 bonus paid to Dr. Charles Link in the amount of $180,226.
- July 1, 2010 forgiveness of note plus accrued interest of $10,000 on Dr. Nicholas Vahanian's $31,500 loan.

- July 2, 2010 bonus paid to Dr. Nicholas Vahanian in the amount of $12,010.
- January 22, 2009 bonus paid to Dr. Nicholas Vahanian in the amount of $55,037.

In lieu of formal agreements, the Company has filed written acknowledgments (Exhibits 10.25 through 10.29) describing the above loans and executed by the Company and the respective executive officers.

Quantitative and Qualitative Disclosures about Market Risk, page 76

29. You disclose that you may be subject to fluctuations in foreign currency rates in connection with your global contract research organization and investigational site agreements. Please disclose the foreign currencies to which you have exposure. Also, tell us which quantitative disclosure alternative you have utilized under Item 305(a) of Regulation S-K with respect to your foreign currency exchange rate risk, and revise your disclosure to comply with this Item.

Response: The Company acknowledges the Staff's comment and respectfully submits that its only current exposure to fluctuations in foreign currency rates are BPS's payments to Her Majesty the Queen in Right of Canada ("***Canada***") in Canadian dollars under the license agreement between BPS and Canada dated May 4, 2010 described on page 112 of

Amendment No. 1. The Company submits that the foreign currency exchange risk associated with the aggregate amount of potential milestone payments (up to C$205,000 per licensed product) is immaterial. Accordingly, the Company has revised the disclosure on page 76 of Amendment No. 1 to remove the reference to fluctuations in foreign currency rates.

Business, page 77

30. Please expand your disclosure in this section to provide the material terms of your research agreements with Medical College of Georgia Research Institute, Inc. which you file as exhibits 10.42 through 10.45, including, but not limited to any payment provisions, duration and termination provisions.

Response: The Company acknowledges the Staff's comment and respectfully submits that the research agreements with Medical College of Georgia Research Institute, Inc. (the "***MCGR Agreements***") are not material to the Company as determined in accordance with Item 601(b)(10)(ii) of Regulation S-K.

The Company respectfully submits that the MCGR Agreements are not material to the Company under Item 601(b)(10)(ii) because they are the type of contracts such as ordinarily accompany the kind of business conducted by the Company and also are immaterial in amount or significance. The MCGR Agreements are standard research agreements that are ordinarily entered into by biopharmaceutical companies, like the Company, that are studying, developing and testing their product candidates. Biopharmaceutical companies developing new product candidates will commonly utilize third-party research institutions to perform research studies involving such product candidates in the ordinary course of business. Under the MCGR Agreements, the Company contracted with Medical College of Georgia Research Institute, Inc. ("***MCGR***") to perform these types of research studies involving the Company's IDO technology. The Company does not view the MCGR Agreements to be material to the Company in amount or significance because 1) the MCGR Agreements have both expired and therefore do not call for future expenditures by or payments to the Company, 2) neither MCGR Agreement involved the in-licensing of technology and 3) NewLink paid MCGR a total of less than $215,000 to perform studies under both agreements ($75,000 and $138,257) over the course of three years. Moreover, the MCGR Agreements do not fall into any of the categories set forth in Item 601(b)(10)(ii)(A)-(D) that would require contracts made in the ordinary course of the Company's business to be filed as a material agreements.

As a result, the Company has removed former exhibits 10.42 through 10.45 from the exhibit list to Amendment No. 1.

31. Please expand your disclosure in this section to provide the material terms of your cooperative research and development agreements with the National Cancer Institute which you file as exhibits 10.27 through 10.36, including, but not limited to any payment provisions, duration and termination provisions.

Response: The Company acknowledges the Staff's comment and respectfully submits that, as discussed in the Company's response to comment 25, the Cooperative Research &

Development Agreement (CRADA) with Public Health Services dated January 4, 2004 has expired and exhibits 10.27 through 10.29 have been removed from the exhibit list to Amendment No. 1. The Company has revised its disclosure on page 71 of Amendment No. 1 to provide the material terms of the Letter of Intent for a Cooperative Research & Development Agreement with the National Cancer Institute, filed as exhibits 10.38 through 10.45.

Our HyperAcute Cancer Immunotherapy Product Candidates, page 77

32. We note that you disclose the "most common non-serious adverse events" for each product candidate. Please revise your disclosure throughout the prospectus to disclose all adverse events, including pages 77-78, 86, 93 and 94.

Response: The Company acknowledges the Staff's comment and has revised its disclosure throughout Amendment No. 1 to disclose the most common treatment-emergent adverse reactions (experienced by at least 5% of patients) associated with the all HyperAcute Pancreas clinical trials, taken together, and the 54-patient Phase 1/2 clinical trial for HyperAcute Lung, including the frequency of each of the known adverse effects. The Company has revised its disclosure on page 87 of Amendment No. 1 regarding the adverse events observed in the Phase 2 HyperAcute Pancreas clinical trial, specifically, by noting that the nature and frequency of adverse events observed in that clinical trial are consistent with the adverse events observed in all clinical trials for HyperAcute Pancreas, as reported on page 77 of Amendment No. 1.

With respect to HyperAcute Melanoma, the Company respectfully submits that as of December 2010, the adverse event data for HyperAcute Melanoma is only complete for a six-patient Phase I study. The company does not believe the Phase 1 study had enough patients to provide meaningful data on adverse events, however those adverse events observed in that trial were similar to those observed in the clinical trials for HyperAcute Pancreas and HyperAcute Lung. The Phase 2 trial of HyperAcute Melanoma (NLG0204) is an ongoing Investigator-initiated study of 25 patients that is anticipated to provide more meaningful summary data on adverse events with respect to HyperAcute Melanoma by December 2011.

BioProtection Systems Corporation, page 100

33. Please expand your disclosure in this section to disclose the material terms of the license agreement by and between the Regents of the University of California and BPS and the license agreement by and between Her Majesty the Queen in Right of Canada and BPS, including, but not limited to the payments to date, a range of royalty rates, aggregate milestones, usage restrictions, obligations/rights to defend, duration and termination provisions, Alternatively, please provide us with an analysis that supports your conclusion that these agreements are not required to be filed.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on pages 111 and 112 of Amendment No. 1 to include summaries of the material terms of the license agreement by and between the Regents of the University of California and BPS and the license agreement by and between Her Majesty the Queen in Right of Canada and BPS. The Company has not included disclosure of payments to date for either agreement, but those

amounts are reflected as research and development expenses in the Company's financial statements, as discussed on pages 53 to 54 of Amendment No. 1. The Company has requested confidential treatment with respect to such confidential financial terms and would respectfully request that the Staff consider the disclosure in Amendment No. 1 together with the Company's request for confidential treatment that was previously submitted to the Staff. The Company believes that disclosing such financial information would cause the Company to suffer substantial competitive injury as described in detail in the Company's request for confidential treatment that was previously submitted to the Staff.

Manufacturing, page 100

34. Please expand your disclosure in this section to disclose the name of your existing contract manufacturer for D-1MT and the components used in the HyperAcute product candidates.

Response: The Company acknowledges the Staff's comment and has expanded its disclosure on page 102 of Amendment No. 1 to disclose the name of the contract manufacturer for D-1MT. The Company manufactures the components used in the HyperAcute product candidates and therefore no manufacturer has been included.

Intellectual Property, page 102

35. Please revise your disclosure regarding each material owned or licensed patent family to disclose the number of patents in such family and the range of expiration dates.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on pages 104 to 105 of Amendment No. 1 to disclose the number of patents in each material owned or licensed patent family and the range of expiration dates.

License Agreements, page 104

36. For each of the agreements disclosed in this section, please disclose the date of the last to expire patent licensed under the respective agreement.

Response: The Company respectfully submits that including the expiration date of the last to expire patents for all licenses could be confusing to investors and would be more appropriate on a case-by-case basis if such expiration were in the near future. None of the last-to-expire patents under the Company's licenses is due to expire in the near future, so the Company has not included these dates in the descriptions of the licenses in Amendment No. 1.

Including the expiration date of the current last-to-expire patent under each license would likely be confusing to investors because it would not necessarily represent the actual date, or even the likely date, that the last patent under the agreement will actually expire. The term of patents covered by a particular license may be reduced or extended based on a number of events including delays by the company or the patent office in prosecuting and reviewing the applicable patent application and extensions available under various regulatory schemes in

connection with the regulatory approval process. Additionally, some licenses could cover patents issued with respect to improvements on existing patents and patent applications, which could lead to additional patents with later expiration dates. Therefore, including such an expiration date risks giving investors a misleading sense of understanding as to how long the licenses and the corresponding intellectual property protection and financial obligations are likely to continue.

In addition, none of the current last-to-expire patents under the Company's license agreements described in Amendment No. 1 expires in the near future. The patents covered by the licenses currently have varying expiration dates ranging from 2015 for two of the licenses (those with Bresagen and the University of British Columbia) to 2029 (the LIMR IDO Agreement, as defined in Amendment No. 1). Since even the earliest currently anticipated dates of expiration of the last-to-expire patents under the Company's licenses are approximately four years away, the Company respectfully submits that any benefit to investors in knowing this estimated expiration date is outweighed by the confusion that would result from this disclosure.

37. Please expand your disclosure here and on page 69 regarding your agreement with Central Iowa Health System to disclose when your royalty obligations expire under the agreement, the shares of common stock issued to CIHS and a range of royalty payments (e.g. low single-digit or a range not to exceed ten percent) as we believe these are material terms of this agreement.

Response: The Company acknowledges the Staff's comment and has revised the disclosure beginning on pages 69 and 105 of Amendment No. 1 to disclose the range of royalty payments due under the agreement. The Company has not included disclosure of when its royalty obligations expire under the agreement or the shares of common stock issued to CIHS under the agreement. The Company has requested confidential treatment with respect to such financial terms and would respectfully request that the Staff consider the disclosure in Amendment No. 1 together with the Company's request for confidential treatment that was previously submitted to the Staff. The Company believes that disclosing such financial information would cause the Company to suffer substantial competitive injury as described in detail in the Company's request for confidential treatment that was previously submitted to the Staff.

38. Please expand your disclosure here and on pages 69-71 for each agreement with your remaining licensors to disclose the payments made to date, the aggregate milestone payments and a range of royalty payments (e.g. low single-digit or a range not to exceed ten percent) as we believe these are material terms of these agreements.

Response: The Company acknowledges the Staff's comment and has revised the disclosure throughout pages 69-72 and 105-112 of Amendment No. 1 to disclose the potential aggregate milestone payments and ranges of royalty payments. The Company has not included disclosure of the payments made to date under the agreements, but those amounts are reflected as research and development expenses in the Company's financial statements, as discussed on pages 53 to 54 of Amendment No. 1. The Company has requested confidential treatment with respect to such financial terms and would respectfully request that the Staff

consider the disclosure in Amendment No. 1 together with the Company's request for confidential treatment that was previously submitted to the Staff. The Company believes that disclosing such financial information would cause the Company to suffer substantial competitive injury as described in detail in the Company's request for confidential treatment that was previously submitted to the Staff.

Executive and Director Compensation

39. Please expand your disclosure in this section to disclose the material terms of your employment agreements with your executive officers.

Response: The Company acknowledges the Staff's comment and has expanded the disclosure on Executive and Director Compensation beginning on page 139 of Amendment No. 1 to disclose the material terms of its employment agreements with its executive officers.

Compensation Discussion and Analysis
Role of Our Board and Compensation Committee in Setting Executive Compensation, page 125

40. It appears that you use the data described on the top of page 125 as a reference point on which, wholly or in part, to base, justify or provide a framework for your compensation decisions. Please revise your disclosure to disclose all the names of the companies included in these benchmarks. If you benchmarked against a survey in its entirety, you may provide the name of the survey. See Question 118.05 of the Regulation S-K Compliance and Disclosure Interpretations.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on page 128 of Amendment No. 1 to (i) disclose the names of the companies included in Syzygy Consulting Group's 2010 report and (ii) include the name of the name of the survey used for Syzygy Consulting Group's 2009 report.

Elements of our Executive Compensation Program, page 126

41. You disclose that in establishing the 2009 base salaries of your executive officers, your Compensation Committee and Board of Directors took into account a number of factors, including the executive's seniority, position, functional role and level of responsibility and individual performance during 2008. Please disclose for each executive officer whether such executive's salary remained the same as 2008, increased or decreased. If there was a change in salary, please disclose the amount or percentage of the change.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on page 130 of Amendment No. 1 to disclose that each executive officer's salary increased from 2008, and the percentage of those increases in salaries.

42. Please revise your disclosure to clarify whether corporate and/or individual performance goals were established and communicated to your named executive officers in the beginning of your fiscal year. If such goals were established, please expand your disclosure to

disclose the corporate and/or individual goals that were established and communicated to your executives, an analysis of the company's performance against those goals and how that achievement led to the bonus awarded. If such goals were not established and communicated to your executives, please revise your disclosure to clarify that no such goals were established and the corporate and individual accomplishments are solely evaluated at the time the bonus is awarded.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on pages 131 and 132 of Amendment No. 1.

Certain Relationships and Related Party Transactions, page 151

43. You disclose that your Series A preferred stock will convert into one share of common stock. Based on your disclosure on pages 158 and F-26, it appears that each share of Series A preferred stock will convert into 1.389 shares of your common stock. Please revise to remove the inconsistency.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on page 158 of Amendment No. 1 to remove the inconsistency.

Description of Capital Stock, page 158

44. Please disclose your conversion ratio or how such ratio will be calculated for your Series E preferred stock. On page 152, you disclose that each share of Series E preferred stock will convert into five shares of common stock.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on pages 158 to 159 of Amendment No. 1 to disclose how the Series E preferred stock conversion ratio will be calculated and to remove the inconsistency.

Index to Financial Statements
Consolidated Balance Sheets, page F-3

45. Please revise your pro forma as adjusted columns within your Consolidated Financial Statements to remove the offering proceeds as presentation of the offering proceeds is not appropriate within the historical financial statements. Please also note that your pro forma earnings per share that you present alongside your historical basic and diluted earnings per share within your Consolidated Statements of Operations should exclude offering proceeds.

Response: The Company acknowledges the Staff's comment and has removed the pro forma as adjusted columns within its Consolidated Financial Statements on pages F-4 and F-5 of Amendment No. 1.

Consolidated Statements of Equity (Deficit), page F-7

46. Please revise your Consolidated Statement of Equity (Deficit) at September 30, 2010 on page F-9 to disclose that statement for the interim period ending September 30, 2010 was unaudited.

Response: The Company acknowledges the Staff's comment and has updated its Consolidated Statement of Equity (Deficit) on page F-8 of Amendment No. 1 with audited December 31, 2010 information.

Notes to Consolidated Financial Statements, page F-12

47. Please revise your Notes to Consolidated Financial Statements to include a Note related to your grant revenue. Specifically, disclose the terms and your obligations under the grants that you have received for the periods presented, including grant received from the Department of Defense and National Institute of Health, the amount recognized under each grant, and the amounts available under each grant received thus far.

Response: The Company acknowledges the Staff's comment and has revised its Notes to Consolidated Financial Statements on page F-12 of Amendment No. 1 to include a Note related to grant revenue.

2. Significant Accounting Policies
(k) Unaudited Pro Forma and Pro Forma as Adjusted Stockholders' Equity, page F-14

48. Please revise your disclosure to indicate the date as of which you assumed the pro forma adjustments within your Consolidated Pro forma and Pro forma as adjusted Balance Sheets as of September 30, 2010 and Pro forma as adjusted Basic and Diluted Net loss per share for the Nine Months Ended September 30, 2010. Refer to Rule 1-02(b)(6) of Regulation S-X for guidance.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on page F-12 of Amendment No. 1 as requested. The Company has also updated the disclosure to December 31, 2010 and removed all references to pro forma as adjusted.

49. You disclose on page F-15 that because the number of common shares that will be issued upon conversion of the Series E preferred stock depends upon the initial public offering price per share in this offering, the actual number of common shares issuable upon such conversion will likely differ from the respective number of shares set forth within your pro forma adjustments. Please tell us and disclose whether you are using the midpoint of the price range in order to estimate the number of common shares issuable upon conversion of your Series E preferred stock.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on page F-22 of Amendment No. 1 to disclose that it is using the current Series E conversion price of $6.25 in order to estimate the number of common shares issuable upon conversion of the Series E preferred stock, but that the Series E conversion price is subject to adjustment based

on the price at which shares of the Company's Common Stock are sold to the public in this initial public offering.

Stock Option Valuation, page F-16

50. In May 2009 you granted 2,234,000 options which began vesting on June 29, 2007 (page 128). In December 2009 you granted 1,700,000 options which began vesting in December 2009 but have a GAAP grant measurement date in 2010. Tell us how you accounted for these grants in the financial statements and the basis for your accounting. We refer to ASC 718·10-55-111 and 55-112.

Response: The Company acknowledges the Staff's comment and respectfully submits that it recognized the cumulative ratable portion of the share-based compensation expense associated with these grants and computed on a straight line basis, covering the time period from their vesting start date through the date of our financial statements. The awards have graded-vesting over a 5-year period in the case of the May 2009 options and over a 4-year period in the case of the December 2009 options. There was credit for prior service under the terms of these grants to reflect the portion of share-based compensation related to awards vested and available for exercise; however, there was and is a substantial future service requirement for the employees to vest in the full

amount of these grants. The share-based compensation expense associated with these options was recognized on a to-date basis, i.e. from the vesting commencement date through the reporting date, in the period in which the measurement date occurred under GAAP. The measurement date for the May 2009 options occurred in 2009 and the measurement date for the December 2009 options occurred in 2010. The Company will recognize the remaining ratable portion of the share-based compensation expense associated with these grants on a straight line basis over the remainder of their vesting term.

3. Acquisition of OncoRx Corporation, page F-19

51. Please revise your Note disclosure to address the following:

- *The nature of the technology you acquired including that it is the fundamental technology for your IDO pathway inhibitor product candidates as you disclose on page 72; and*
- *The terms of the July 29, 2010 amendment to your purchase agreement, including the consideration issued and the valuation of the consideration.*

Response: The Company acknowledges the Staff's comment and has revised its Note on pages F-16 and F-17 of Amendment No. 1 as requested.

Note 12 - Common Stock Equity Incentive Plan, page F-29

52. Tell us how you determined the expected volatility you used in determining stock based compensation expense and why the volatility used for the BPS plan is such higher than for the NewLink plan, Also, tell us how you determined the risk-free interest rate of .1%.

Response: The Company acknowledges the Staff's comment and respectfully submits that it determined the volatility for both NewLink and BPS by selecting between four and seven public comparables and computing an average volatility for those public comparables as of the appropriate grant date. The updated range of volatility computed for NewLink for calendar year 2010 was 57.4% to 62.5% and the updated range of volatility computed for BPS for calendar year 2010 was 61.7% to 63.2%. These differences in volatility seem reasonable given the differences in product focus between the companies. The risk-free interest rate of .1% was applied to four option grants which were issued with immediate vesting in March of 2010. The Company utilized the 1-month Treasury constant maturity rate for March 3, 2010, of 0.09% to determine the stock-based compensation expense of these grants using the Black-Scholes model.

16. Licensing Agreements, page F-37

53. Please revise your disclosure to include the amount of payments made in the periods presented for each of your license agreements and the accounting treatment for each. Additionally, you disclose that you have exclusive rights to the use and sublicensing of the technologies in question for the duration of the intellectual property patent protection in question. Please expand your disclosure to specify the duration and termination provisions of each agreement.

Response: The Company acknowledges the Staff's comment and has revised the disclosure beginning on page F-34 of Amendment No. 1 to disclose the duration and termination provisions of each license agreement. The Company has also revised the disclosure on page F-34 of Amendment No. 1 to disclose that the Company expenses all payments made in the period they occur. The Company has not included disclosure of the amount of payments made in the periods presented for each of its license agreements, but those amounts are reflected as research and development expenses in the Company's financial statements, as discussed on pages 53 to 54 of Amendment No. 1. The Company has requested confidential treatment with respect to such financial terms and would respectfully request that the Staff consider the disclosure in Amendment No. 1 together with the Company's request for confidential treatment that was previously submitted to the Staff. The Company believes that disclosing such financial information would cause the Company to suffer substantial competitive injury as described in detail in the Company's request for confidential treatment that was previously submitted to the Staff.

18. Related Party Transactions, page F-39

54. You disclose in Note 4 that you modified outstanding options with officers to increase the exercise price by an amount equal to the amount of notes and interest forgiveness plus the bonus paid, and in Note 18, you disclose that the options for officers were modified to increase intrinsic value equal to the amount of the loan forgiveness. As increasing the exercise price typically reduces intrinsic and fair value, these statements appear to be inconsistent. Please reconcile these statements and revise your disclosure as appropriate.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on page F-39 of Amendment No. 1 to remove the inconsistency.

19. Subsequent Events (Unaudited as to events after July 21, 2010), page F-39

55. You disclose on page F-40 that you entered into an agreement on December 1, 2010, to acquire all of the minority interest in BPS, and the acquisition is treated as an equity transaction. Please revise your Note disclosure to address the following:

- *The value assigned to the net assets received in the transaction;*
- *The basis for the value and method of determining the value you assigned to the preferred stock issued in the transaction;*
- *Whether you recorded a loss on the transaction and if so, where it is reflected in your Pro Forma Stockholders' Equity for the Nine Months Ended September 30, 2010, and where it will be in your Consolidated Financial Statements for the Fiscal Year Ended December 31,2010; and*
- *The terms of your series E preferred stock issued in the transaction, including whether it is redeemable, and if so, the redemption value, and your accounting treatment of such redeemable shares.*

Response: The Company acknowledges the Staff's comment and has revised its disclosure on page F-39 of Amendment No. 1 as requested. The Company respectfully submits that NewLink retained control of BPS both before and after the merger transaction, which, under ARB 51 as amended by Statement 160 (ASC Subtopic 810-10), leads to no gain or loss recognized as a result of the change in the parent's (NewLink's) ownership of a subsidiary (BPS). Given this non-recognition of gain or loss, the value assigned to the net assets was the value at which the assets were then carried on the books of BPS. The terms of the Series E preferred stock are now described in Note 10 to the consolidated financial statements.

56. You disclose all options to purchase shares of BPS stock will become options to purchase your common stock. Please tell us and revise your disclosure to address how you determined the number of options into which the outstanding BPS options will convert and how you will account for the exchange of options.

Response: The Company acknowledges the Staff's comment and has revised its disclosure on page F-39 of Amendment No. 1 to disclose that each outstanding BPS option was converted into the right to receive that number of NewLink options equal to the product of (A) the number of shares of BPS common stock subject to such BPS option multiplied by (B) a fraction, the numerator of which is $1.0825 and the denominator of which is $4.02, which was the fair market value of one share of NewLink common stock as of September 30, 2010. The exchange of options will be accounted for as a modification of an equity-classified award.

The Company respectfully requests the Staff's assistance in completing the review of the Registration Statement and Amendment No. 1 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. 1 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

James C. T. Linfield