

Response Form for the Final Performance Review Report*

1. Name of Grantee: West Chester University
2. Year of Grant: 2009 Formula Grant

A. For the overall grant, briefly describe your grant oversight process. How will you ensure that future health research grants and projects are completed and required reports (Annual Reports, Final Progress Reports, Audit Reports, etc.) are submitted to the Department in accordance with Grant Agreements? If any of the research projects contained in the grant received an “unfavorable” rating, please describe how you will ensure the Principal Investigator is more closely monitored (or not funded) when conducting future formula funded health research.

As the principal investigator of this grant, my role was to oversee the research in this proposal being conducted by undergraduates at West Chester University. The experiments involved with examination of DNA polymerase expression at the RNA level were completed, but examination at the protein level was not, in part, due to the lack of the student's time spent in the lab. The samples were collected and could be examined at a future time. In the future when proposing experiments involving undergraduate students, the goals of the project should not be too involved, allowing them to be completed in a timely fashion. Submission of the reports and other documentation is my responsibility.

* Please note that for grants ending on or after July 1, 2007, grantees' Final Performance Review Reports, Response Forms, and Final Progress Reports ***will be made publicly available on the CURE Program's Web site.***

Project Number: 0991501
Project Title: DNA Polymerase Expression of Human Colon Cell Lines
following Chemotherapeutic Treatment
Investigator: Gestl, Erin

B. Briefly describe your plans to address each specific weakness and recommendation in Section B of the Final Performance Summary Report using the following format. As you prepare your response please be aware that the Final Performance Review Summary Report, this Response Form, and the Final Progress Report will be made publicly available on the CURE Program's Web site.

Reviewer Comment on Specific Weakness and Recommendation (*Copy and paste from the report the reviewers' comments listed under Section B - Specific Weaknesses and Recommendations*):

Response (*Describe your plan to address each specific weakness and recommendation to ensure the feedback provided is utilized to improve ongoing or future research efforts*):

Reviewer 1:

The group finished the study goal with the very limited funding. The project supported several undergraduate students, one of whom entered medical school. The PI is encouraged to seek additional funding to continue the project, including assaying the expression of DNA polymerases at protein levels, and determining the biological significance of polymerase changes during drug responses.

Response:

Additional funding will be sought in the future to complete the examination of the polymerase expression at the protein level and advance this project further. The protein samples were collected and frozen and could easily be completed in a future project. Also, while five different polymerases were examined in this proposal, future proposals could be expanded to include some of the other 10 known polymerases yet to be studied.

Reviewer 2:

The project had two objectives: Compare the levels of polymerases in normal and cancer cells, and perform the same comparison in cells that have been treated with chemotherapeutic agents. The objectives were not completed because:

1. Specific Weakness: The design of the study was not sound. There was an emphasis on comparing normal to cancer cells, while there was not a normal control.

Recommendation: It would have been better to look for changes in expression in real tumors and normal controls.

2. Specific Weakness: The execution of the plan was sub-optimal.

Recommendation: It would have been much better to focus on completing the set of experiments in some of the cell lines.

Response:

In the initial proposal colon cell line LS123 was mistakenly identified as a normal cell line. During completion of the project, the mistake was discovered and after further research and personal discussions with other investigators, it was found that NO normal colon cell lines exist commercially. However, since the completion of the final report, an investigator was found that may have constructed a normal cell line. If further funding is acquired, this cell line may be obtained and the comparisons to normal cell lines completed, including examination of gene expression at the protein level.

Examination of changes in expression in real tumors and normal controls is not realistic at this time, since West Chester University is primarily an undergraduate institution without a Ph.D. program or an associated medical school. This makes acquiring patient samples very difficult. Two ways of overcoming this would be to purchase commercial samples at a very high cost (\$800 per sample) or establish collaboration with an investigator at such an institution. Both are possibilities, but were not being considered at the time of the current proposal at a budget of approximately \$4000. Continuation of the project with additional funding in the range of \$25,000 would provide enough samples to compare expression in tumor versus normal controls.

The experiments involved with examination of DNA polymerase expression at the RNA level were completed, but examination at the protein level was not, in part, due to the lack of the student's time spent in the lab. In the future when proposing experiments involving undergraduate students, the goals of the project should not be too involved, allowing them to be completed in a timely fashion. The results of this project were not written up for publication at this time since the findings were not conclusive, but the resulting data may be included with findings from additional experiments for publication.

Reviewer 3:

1. It would have been appropriate to have completed enough research to submit a publication on the completed work.
2. The principal investigator should be applying for additional funding to advance these projects.

Response:

The results of this project were not written up for publication at this time since the findings were not conclusive, but the resulting data may be included with findings from additional experiments for publication.

Additional funding will be sought in the future to complete the examination of the polymerase expression at the protein level and advance this project further. The protein samples were collected and frozen and could easily be completed in a future project. Also, while five different polymerases were examined in this proposal, future proposals could be expanded to include some of the other 10 known polymerases yet to be studied.

C. If the research project received an “unfavorable” rating, please indicate the steps that you intend to take to address the criteria that the project failed to meet and to modify research project oversight so that future projects will not receive “unfavorable” ratings.

Response: This project received a Favorable rating.

D. Additional comments in response to the Final Performance Review Report (OPTIONAL):

Response: