

Final Progress Report for Research Projects Funded by Health Research Grants

Instructions: Please complete all of the items as instructed. Do not delete instructions. Do not leave any items blank; responses must be provided for all items. If your response to an item is “None”, please specify “None” as your response. “Not applicable” is not an acceptable response for any of the items. There is no limit to the length of your response to any question. Responses should be single-spaced, no smaller than 12-point type. The report **must be completed using MS Word**. Submitted reports must be Word documents; they should not be converted to pdf format. Questions? Contact Health Research Program staff at 717-783-2548.

1. **Grantee Institution:** The Wistar Institute
2. **Reporting Period (start and end date of grant award period):** 01/01/2011 – 6/30/2012
3. **Grant Contact Person (First Name, M.I., Last Name, Degrees):** Russel E. Kaufman, M.D.
4. **Grant Contact Person’s Telephone Number:** 215-898-3926
5. **Grant SAP Number:** 4100054879
6. **Project Number and Title of Research Project:** 4 - Laboratory Renovation Research Infrastructure
7. **Start and End Date of Research Project:** 01/01/2011 – 6/30/2012
8. **Name of Principal Investigator for the Research Project:** Dario Altieri, M.D.
9. **Research Project Expenses.**

9(A) Please provide the amount of health research grant funds spent on this project for the entire duration of the grant, including any interest earned that was spent:

\$ 344,067.20

9(B) Provide the last names (include first initial if multiple individuals with the same last name are listed) of **all** persons who worked on this research project and were supported with health research funds. Include position titles (Principal Investigator, Graduate Assistant, Post-doctoral Fellow, etc.), percent of effort on project and total health research funds expended for the position. For multiple year projects, if percent of effort varied from year to year, report in the % of Effort column the effort by year 1, 2, 3, etc. of the project (x% Yr 1; z% Yr 2-3).

Last Name	Position Title	% of Effort on Project	Cost
None			

9(C) Provide the names of **all** persons who worked on this research project, but who *were not* supported with health research funds. Include position titles (Research Assistant, Administrative Assistant, etc.) and percent of effort on project. For multiple year projects, if percent of effort varied from year to year, report in the % of Effort column the effort by year 1, 2, 3, etc. of the project (x% Yr 1; z% Yr 2-3).

Last Name	Position Title	% of Effort on Project
Dario Altieri	Director, The Wistar Institute Cancer Center	Less than 1%

9(D) Provide a list of **all** scientific equipment purchased as part of this research grant, a short description of the value (benefit) derived by the institution from this equipment, and the cost of the equipment.

Type of Scientific Equipment	Value Derived	Cost
None		

10. Co-funding of Research Project during Health Research Grant Award Period. Did this research project receive funding from any other source during the project period when it was supported by the health research grant?

Yes No

If yes, please indicate the source and amount of other funds:

Wistar Institute funds - \$435,536.37

11. Leveraging of Additional Funds

11(A) As a result of the health research funds provided for this research project, were you able to apply for and/or obtain funding from other sources to continue or expand the research?

Yes No

If yes, please list the applications submitted (column A), the funding agency (National Institutes of Health—NIH, or other source in column B), the month and year when the application was submitted (column C), and the amount of funds requested (column D). If you have received a notice that the grant will be funded, please indicate the amount of funds to be awarded (column E). If the grant was not funded, insert “not funded” in column E.

Do not include funding from your own institution or from CURE (tobacco settlement funds). Do not include grants submitted prior to the start date of the grant as shown in Question 2. If you list grants submitted within 1-6 months of the start date of this grant, add a statement below the table indicating how the data/results from this project were used to secure that grant.

A. Title of research project on grant application	B. Funding agency (check those that apply)	C. Month and Year Submitted	D. Amount of funds requested:	E. Amount of funds to be awarded:
None	<input type="checkbox"/> NIH <input type="checkbox"/> Other federal (specify:____) <input type="checkbox"/> Nonfederal source (specify:_)		\$	\$

11(B) Are you planning to apply for additional funding in the future to continue or expand the research?

Yes _____ No x

If yes, please describe your plans:

12. Future of Research Project. What are the future plans for this research project?

None

13. New Investigator Training and Development. Did students participate in project supported internships or graduate or post-graduate training for at least one semester or one summer?

Yes _____ No x

If yes, how many students? Please specify in the tables below:

	Undergraduate	Masters	Pre-doc	Post-doc
Male				
Female				
Unknown				
Total				

	Undergraduate	Masters	Pre-doc	Post-doc
Hispanic				
Non-Hispanic				
Unknown				
Total				

	Undergraduate	Masters	Pre-doc	Post-doc
White				
Black				
Asian				
Other				
Unknown				
Total				

14. Recruitment of Out-of-State Researchers. Did you bring researchers into Pennsylvania to carry out this research project?

Yes _____ No _____

If yes, please list the name and degree of each researcher and his/her previous affiliation:

15. Impact on Research Capacity and Quality. Did the health research project enhance the quality and/or capacity of research at your institution?

Yes _____ No _____

If yes, describe how improvements in infrastructure, the addition of new investigators, and other resources have led to more and better research.

The newly renovated laboratory and its infrastructure will be instrumental for the recruitment of new biomedical researchers to the Wistar Institute. Specifically, the Wistar Institute has been pursuing the recruitment of a senior investigator in the area of tumor immunology. This is in line with the long-standing interest of the institute in vaccine and other forms of immunotherapy, and emphasis will be now placed on the enhancement of patients' immune system to oppose tumor growth in vivo. The candidate faculty member under consideration has already visited Wistar several times and has been enthusiastic about the prospect of joining our organization and occupying the newly renovated laboratory space. We anticipate that this recruitment effort will be successfully completed by the beginning of 2013, with occupancy of the newly renovated laboratory space by a new research team focused on ovarian cancer immunotherapy.

16. Collaboration, business and community involvement.

16(A) Did the health research funds lead to collaboration with research partners outside of your institution (e.g., entire university, entire hospital system)?

Yes X No _____

If yes, please describe the collaborations:

The research project completed with the allocated funds will now enable a broad set of collaborative studies with the Helen Graham Cancer Center, member of the Christiana Health Care System in the state of Delaware, with which the Wistar Institute has recently signed a broad collaborative agreement. Specifically, the availability of new research space in the 1894 Wistar building will now allow the thematic expansion of a new research initiative on ovarian cancer centered on potential new immunologic approaches for treatment options in women with advanced and recurrent disease. The Helen Graham Cancer Center will participate in this initiative by providing Wistar investigators involved in this program with access to fresh, clinically annotated ovarian cancer specimens for further molecular analysis and prospective therapeutic approaches.

16(B) Did the research project result in commercial development of any research products?

Yes _____ No x _____

If yes, please describe commercial development activities that resulted from the research project:

16(C) Did the research lead to new involvement with the community?

Yes _____ No x _____

If yes, please describe involvement with community groups that resulted from the research project:

17. Progress in Achieving Research Goals, Objectives and Aims.

List the project goals, objectives and specific aims (as contained in the grant application’s strategic plan). Summarize the progress made in achieving these goals, objectives and aims for the period that the project was funded (i.e., from project start date through end date). Indicate whether or not each goal/objective/aim was achieved; if something was not achieved, note the reasons why. Describe the methods used. If changes were made to the research goals/objectives/aims, methods, design or timeline since the original grant application was submitted, please describe the changes. Provide detailed results of the project. Include evidence of the data that was generated and analyzed, and provide tables, graphs, and figures of the data. List published abstracts, poster presentations and scientific

meeting presentations at the end of the summary of progress; peer-reviewed publications should be listed under item 20.

This response should be a DETAILED report of the methods and findings. It is not sufficient to state that the work was completed. Insufficient information may result in an unfavorable performance review, which may jeopardize future funding. If research findings are pending publication you must still include enough detail for the expert peer reviewers to evaluate the progress during the course of the project.

Health research grants funded under the Tobacco Settlement Act will be evaluated via a performance review by an expert panel of researchers and clinicians who will assess project work using this Final Progress Report, all project Annual Reports and the project's strategic plan. After the final performance review of each project is complete, approximately 12-16 months after the end of the grant, this Final Progress Report, as well as the Final Performance Review Report containing the comments of the expert review panel, and the grantee's written response to the Final Performance Review Report, will be posted on the CURE Web site.

There is no limit to the length of your response. Responses must be single-spaced below, no smaller than 12-point type. If you cut and paste text from a publication, be sure symbols print properly, e.g., the Greek symbol for alpha (α) and beta (β) should not print as boxes (\square) and include the appropriate citation(s). DO NOT DELETE THESE INSTRUCTIONS.

The goal of this infrastructure project was to renovate approximately 2000 square ft of laboratory space including:

1. Removing old, outdated equipment.
2. Conducting demolition of interior walls and doors, and moving existing sinks/plumbing, necessary to prepare designated research laboratory space for reconfiguration/renovation.
3. Constructing new interior walls as necessary for space reconfiguration.
4. Installing necessary distilled water supply line, drains, ventilation system, electrical power, internet connections.
5. Installing new and salvaged lab benches to create a more efficient use of space and provide a more functional layout.
6. Replacing existing light fixtures with new energy efficient ones.
7. Replacing outdated pneumatic controls and thermostats with digital zone controllers, electro-pneumatic transducers and space sensors along with all cabling and programming to achieve better temperature control and improved energy efficiency.

The goal of the project was achieved by providing for the renovation of a main research lab and tissue culture lab space for two researchers on the 1st floor of the 1894 Building covering 2,271 square feet. The renovation included:

Existing Researcher Lab Expansion:

- An expanded and dedicated tissue culture lab of 138 square feet. New flooring,

cove base, ceiling grid, and lighting.

- An expanded main research lab of 346 square feet with two new rows of lab benches, equipment space, and new microscope room. New floor, cove base, ceiling grid, and lighting provided. T-5 fluorescent tubes and ceiling mounted occupancy sensor installed for energy savings.
- A new chemical fume hood

Lab for New Researcher:

- A new main research lab of 1,070 square feet. with nine rows of benches with two lab sinks to accommodate eleven lab techs, chemical area with chemical fume hood, and equipment space for freezers, refrigerators and reach-in cold boxes. Lab benches fit-out with three tiers of reagent racks for supplies and equipment, and a high capacity nonmetallic electrical raceway. HVAC system designed with laminar flow diffusers. Two new terminal units with hot water coils installed to supplement existing variable air volume boxes, and all new thermostats. New floor, cove base, ceiling grid, and lighting provided. T-5 fluorescent tubes and ceiling mounted occupancy sensor installed for energy savings.
- Two tissue culture labs totaling 392 square feet to accommodate six biological safety cabinets, three double-stack CO2 incubators, lab benches with sinks, space for bench-top centrifuge, refrigerators and microscope table. Tissue culture lab space also designed with laminar flow diffusers. New floor, cove base, ceiling grid, and lighting provided.
- New office for researcher with furniture, new carpet tile, cove base, ceiling grid, and lighting provided. Wall mounted occupancy sensor installed for energy savings.
- Two new 120/208V 3-phase 4-wire branch circuit distribution panels furnished and installed.

18. Extent of Clinical Activities Initiated and Completed. Items 18(A) and 18(B) should be completed for all research projects. If the project was restricted to secondary analysis of clinical data or data analysis of clinical research, then responses to 18(A) and 18(B) should be “No.”

18(A) Did you initiate a study that involved the testing of treatment, prevention or diagnostic procedures on human subjects?

Yes
 No

18(B) Did you complete a study that involved the testing of treatment, prevention or diagnostic procedures on human subjects?

Yes
 No

If “Yes” to either 18(A) or 18(B), items 18(C) – (F) must also be completed. (Do NOT complete 18(C-F) if 18(A) and 18(B) are both “No.”)

18(C) How many hospital and health care professionals were involved in the research project?

_____Number of hospital and health care professionals involved in the research project

18(D) How many subjects were included in the study compared to targeted goals?

_____Number of subjects originally targeted to be included in the study
_____Number of subjects enrolled in the study

Note: Studies that fall dramatically short on recruitment are encouraged to provide the details of their recruitment efforts in Item 17, Progress in Achieving Research Goals, Objectives and Aims. For example, the number of eligible subjects approached, the number that refused to participate and the reasons for refusal. Without this information it is difficult to discern whether eligibility criteria were too restrictive or the study simply did not appeal to subjects.

18(E) How many subjects were enrolled in the study by gender, ethnicity and race?

Gender:

_____Males
_____Females
_____Unknown

Ethnicity:

_____Latinos or Hispanics
_____Not Latinos or Hispanics
_____Unknown

Race:

_____American Indian or Alaska Native
_____Asian
_____Blacks or African American
_____Native Hawaiian or Other Pacific Islander
_____White
_____Other, specify: _____
_____Unknown

18(F) Where was the research study conducted? (List the county where the research study was conducted. If the treatment, prevention and diagnostic tests were offered in more than one county, list all of the counties where the research study was conducted.)

19. Human Embryonic Stem Cell Research. Item 19(A) should be completed for all research projects. If the research project involved human embryonic stem cells, items 19(B) and 19(C) must also be completed.

19(A) Did this project involve, in any capacity, human embryonic stem cells?

Yes
 No

19(B) Were these stem cell lines NIH-approved lines that were derived outside of Pennsylvania?

Yes
 No

19(C) Please describe how this project involved human embryonic stem cells:

20. Articles Submitted to Peer-Reviewed Publications.

20(A) Identify all publications that resulted from the research performed during the funding period and that have been submitted to peer-reviewed publications. Do not list journal abstracts or presentations at professional meetings; abstract and meeting presentations should be listed at the end of item 17. **Include only those publications that acknowledge the Pennsylvania Department of Health as a funding source** (as required in the grant agreement). List the title of the journal article, the authors, the name of the peer-reviewed publication, the month and year when it was submitted, and the status of publication (submitted for publication, accepted for publication or published.). Submit an electronic copy of each publication or paper submitted for publication, listed in the table, in a PDF version 5.0.5 (or greater) format, 1,200 dpi. Filenames for each publication should include the number of the research project, the last name of the PI, the number of the publication and an abbreviated research project title. For example, if you submit two publications for PI Smith for the “Cognition and MRI in Older Adults” research project (Project 1), and two publications for PI Zhang for the “Lung Cancer” research project (Project 3), the filenames should be:

Project 1 – Smith – Publication 1 – Cognition and MRI

Project 1 – Smith – Publication 2 – Cognition and MRI

Project 3 – Zhang – Publication 1 – Lung Cancer

Project 3 – Zhang – Publication 2 – Lung Cancer

If the publication is not available electronically, provide 5 paper copies of the publication.

Note: The grant agreement requires that recipients acknowledge the Pennsylvania Department of Health funding in all publications. Please ensure that all publications listed acknowledge the Department of Health funding. If a publication does not acknowledge the funding from the Commonwealth, do not list the publication.

Title of Journal Article:	Authors:	Name of Peer-reviewed Publication:	Month and Year Submitted:	Publication Status (check appropriate box below):
None				<input type="checkbox"/> Submitted <input type="checkbox"/> Accepted <input type="checkbox"/> Published

20(B) Based on this project, are you planning to submit articles to peer-reviewed publications in the future?

Yes _____ No x

If yes, please describe your plans:

21. Changes in Outcome, Impact and Effectiveness Attributable to the Research Project.

Describe the outcome, impact, and effectiveness of the research project by summarizing its impact on the incidence of disease, death from disease, stage of disease at time of diagnosis, or other relevant measures of outcome, impact or effectiveness of the research project. If there were no changes, insert “None”; do not use “Not applicable.” Responses must be single-spaced below, and no smaller than 12-point type. DO NOT DELETE THESE INSTRUCTIONS. There is no limit to the length of your response.

None

22. Major Discoveries, New Drugs, and New Approaches for Prevention Diagnosis and Treatment.

Describe major discoveries, new drugs, and new approaches for prevention, diagnosis and treatment that are attributable to the completed research project. If there were no major discoveries, drugs or approaches, insert “None”; do not use “Not applicable.” Responses must be single-spaced below, and no smaller than 12-point type. DO NOT DELETE THESE INSTRUCTIONS. There is no limit to the length of your response.

None

23. Inventions, Patents and Commercial Development Opportunities.

23(A) Were any inventions, which may be patentable or otherwise protectable under Title 35 of the United States Code, conceived or first actually reduced to practice in the performance of work under this health research grant? Yes _____ No x

If “Yes” to 23(A), complete items a – g below for each invention. (Do NOT complete items a - g if 23(A) is “No.”)

- a. Title of Invention:
- b. Name of Inventor(s):
- c. Technical Description of Invention (describe nature, purpose, operation and physical, chemical, biological or electrical characteristics of the invention):
- d. Was a patent filed for the invention conceived or first actually reduced to practice in the performance of work under this health research grant?
Yes_____ No____

If yes, indicate date patent was filed:

- e. Was a patent issued for the invention conceived or first actually reduced to practice in the performance of work under this health research grant?
Yes_____ No____
If yes, indicate number of patent, title and date issued:
Patent number:
Title of patent:
Date issued:

- f. Were any licenses granted for the patent obtained as a result of work performed under this health research grant? Yes_____ No____

If yes, how many licenses were granted?_____

- g. Were any commercial development activities taken to develop the invention into a commercial product or service for manufacture or sale? Yes___ No___

If yes, describe the commercial development activities:

23(B) Based on the results of this project, are you planning to file for any licenses or patents, or undertake any commercial development opportunities in the future?

Yes_____ No___x_____

If yes, please describe your plans:

24. Key Investigator Qualifications. Briefly describe the education, research interests and experience and professional commitments of the Principal Investigator and all other key investigators. In place of narrative you may insert the NIH biosketch form here; however, please limit each biosketch to 1-2 pages. *For Nonformula grants only – include information for only those key investigators whose biosketches were not included in the original grant application.*

Dr. Altieri, the Principal Investigator on the present application is currently the Robert and Penny Fox Professor of Cancer Research and member of the Wistar program in Cellular and Molecular Oncogenesis. Dr. Altieri is also the Director of the Wistar Institute NCI-designated Cancer Center and Chief Scientific Officer of the Wistar Institute. Recruited to fill these leadership positions at Wistar in 2010, Dr. Altieri is the former founding Chair of the Department of Cancer Biology at the University of Massachusetts Medical School and Director of the Cancer Center at the same organization. Trained in medicine and specialized in clinical and experimental immunology, Dr. Altieri has over twenty-five years of experience in basic and translational cancer research, and has been continuously funded by the National Institutes of Health throughout his entire career. Dr. Altieri's research interest focuses on mechanisms of tumor cell survival, in particular a process called apoptosis, and novel developmental therapeutics in solid epithelial malignancies, in particular advanced and metastatic prostate cancer. The author of over 190 publications in the peer-reviewed biomedical literature, and an inventor on seven patent applications, Dr. Altieri is continuing his studies on novel molecular therapies of prostate cancer at The Wistar Institute. Since joining Wistar, Dr. Altieri has recruited five new faculty members at all academic ranks, reorganized the three NCI Cancer Center programs, launched a new educational initiative in collaboration with the University of the Sciences of Philadelphia and signed a broad-based agreement with the Helen Graham Cancer Center, a member of Christiana Health Care to foster collaborations on basic and translational cancer research, including ovarian cancer.