

# 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.

1. **Grantee Institution:** The Pennsylvania State University
2. **Reporting Period (start and end date of grant award period):** 1/1/2010 - 12/31/2013
3. **Grant Contact Person (First Name, M.I., Last Name, Degrees):** John Anthony, MPA
4. **Grant Contact Person’s Telephone Number:** 814 935 1081
5. **Grant SAP Number:** 4100050904
6. **Project Number and Title of Research Project:** 58. Research Infrastructure - Central Research Sample Storage Facility
7. **Start and End Date of Research Project:** 6/1/2013 - 12/31/2013
8. **Name of Principal Investigator for the Research Project:** Bruce Stanley, PhD
9. **Research Project Expenses.**

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

\$ 328,260

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, First 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, First Name	Position Title	% of Effort on Project
Stanley, Bruce	PI	< 2%

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
Kelvin Liquid Nitrogen Generator	Allows for Liquid Nitrogen production and use in cryostorage and ultra low freezers. Eliminates dependence on LN <sub>2</sub> delivery service and allows for self-sustaining LN <sub>2</sub> production.	\$108,240
Taylor Wharton 24K Cryo Storage System	Allows substantial number of samples to be stored in a lockable LN <sub>2</sub> deep freezer.	\$13,432
Fisher Ultra Low Freezer (2X)	Allows substantial number of samples to be stored in two lockable -80°C freezers.	\$26,836
-20°C Freezer	Allows for contingency storage if any freezer malfunctions and storage is not available in other -80°C freezers	\$860
Chart LN <sub>2</sub> Storage Unit (2X)	Allows substantial number of samples to be stored in a lockable LN <sub>2</sub> deep freezer.	\$41,806

**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   X   No \_\_\_\_\_

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

\$40,000 Department match

**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 X

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?

The project has been met with a lot of enthusiasm and excitement from our researchers. We will be scaling up operations by ordering more freezers (using central funds) in the upcoming months to meet the demand of the various departments and institutes. We are also looking into making space for radioactive and other unique research samples.

**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				
<b>Total</b>				

	Undergraduate	Masters	Pre-doc	Post-doc
Hispanic				
Non-Hispanic				
Unknown				
<b>Total</b>				

	Undergraduate	Masters	Pre-doc	Post-doc
White				
Black				
Asian				
Other				
Unknown				
<b>Total</b>				

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

Yes \_\_\_\_\_ No X \_\_\_\_\_

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 X \_\_\_\_\_ No \_\_\_\_\_

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

The Central Research Sample Storage Facility is a valuable resource that allows researchers to reduce risk to their essential and non-replaceable research samples while also reducing the effort and resources that researchers have to expend in procuring storage services from an

external entity. They can then put the saved resources to better use.

**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 \_\_\_\_\_ No X \_\_\_\_\_

If yes, please describe the collaborations:

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 agreement). 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 ( $\alpha$ ) and beta ( $\beta$ ) should not print as boxes ( $\square$ ) and include the appropriate citation(s). DO NOT DELETE THESE INSTRUCTIONS.**

The scope of the project was to design and build an essential research sample storage facility that allows researchers to store their non-commercially available and other unique biological specimens in freezers for long-term storage. Collection of biological specimens is time-consuming and expensive, but critical to effectively test the efficacy of compounds, map biological processes and pathways, and obtain genetic information. One of the most important and vulnerable aspects of this research is storage of the specimens, which may be irreplaceable. Failure to store the specimens at strictly regulated temperatures will result in their rapid degradation, sometimes within hours. The aims of this project are to design and renovate a research sample storage facility that will house multiple freezers and will allow researchers to store duplicate aliquots of their samples in a secondary location for long-term storage, and to create a core facility. Creation of a central freezer facility in a location with safeguards will allow the samples to be protected against threats like power outages, flooding, excessive heating and/or humidity, amongst others. Based on an engineering study, a location on the ground floor of the Penn State Hershey Cancer Institute will be renovated to meet these standards. The facility will be composed of multiple freezers for storage of biological samples from various institutional labs as well as the biorepository of the Institute for Personalized Medicine. The types of freezers will range from  $-80^{\circ}\text{C}$  freezers to liquid nitrogen cryovial containers for long-term deep-freezing of samples. This facility will be built to meet the unique needs of the institution and is a much needed resource for the research community.

Specific aim 1: To design and renovate a research samples storage facility that will house multiple freezers and will allow researchers to store duplicate aliquots of their samples in a secondary location for long-term storage.

This aim has been achieved. The facility has been fully designed and built. A centrally located room of approximately 1216 square feet was identified (Figure 1). The location was first surveyed to determine the necessary design steps that would be needed to ensure that the specific safety and security measures as detailed in the strategic plan are implemented. These include

back-up CO<sub>2</sub> access, Wi-Fi Alarm system, temperature monitoring system, water detection system, and card readers for access control. The freezers are also connected to the back-up power grid for the Cancer Institute building. This will ensure that the facility will function even in the event of a power outage.

One of the primary reasons that the location was chosen was based on ease of access for retrieval of the samples during an emergency should the need arise. The location is also within a few feet of a freight elevator and a wide access staircase that will allow movement of the samples up to the main entrance where freezer trucks could be waiting should evacuation of the building be necessary. The area is not near an inpatient ward and hence the sample retrieval efforts will not be interfered by significant patient traffic during an evacuation. The facility will also use a sample logging system that will allow the samples to be retrieved successfully during day to day operations and in the event of a disastrous incident. The water detection system that has been installed will alert the respective individuals immediately so that the appropriate steps can be taken.

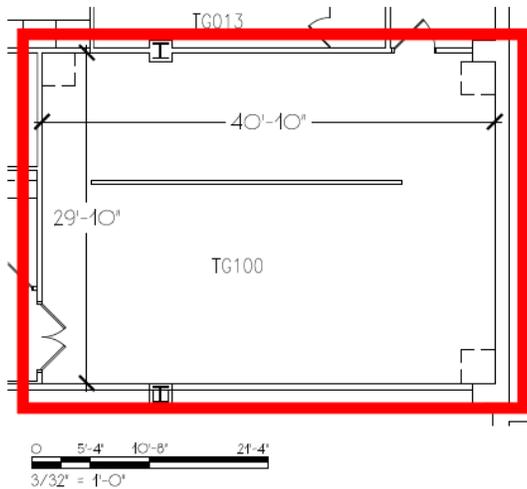
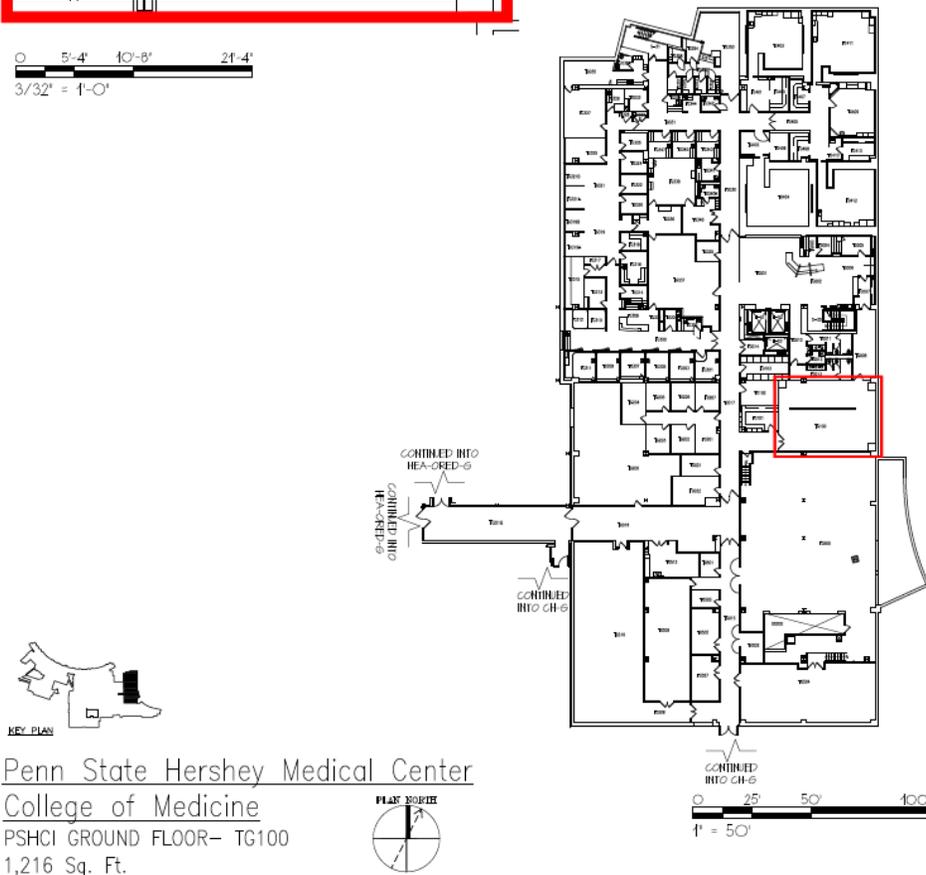


Figure 1. Map of the Facility



Six freezers have been purchased and installed to meet the initial demand for freezer space. There are two freezers that operate at  $-80^{\circ}\text{C}$ , three that operate at  $-140^{\circ}\text{C}$  and one that operates at  $-20^{\circ}\text{C}$ . The  $-140^{\circ}\text{C}$  cryostorage units are fed with  $\text{LN}_2$  from the  $\text{LN}_2$  generator (Figure 2) that was purchased with project funds. This allows for deep, long-term storage of samples which are not required for current research but allows for archiving of samples from recently completed research projects. The  $-20^{\circ}\text{C}$  freezer allows for back-up storage if any of the other freezers fail. Wi-Fi monitors and alarms are also connected to each freezer that allows for remote monitoring of each freezer's temperature and also allows for the notification of the appropriate parties in the event of a failure. The water detection system that has been installed will trigger an alarm at the central facilities department if any trace of water is detected in the premises. An institutional -

80°C, 25cu. ft. emergency freezer has also been incorporated into the facility for labs to use should any of the freezers fail. This will allow for the appropriate corrective action to be taken without any damage to the samples.



**Figure 2. Liquid Nitrogen Generator**

Measures have been incorporated into the facility design to ensure the security of the samples as well. There will be samples from various departments and labs housed at this location, some relating to unpublished data. A badge reader has been placed at the entrance that will only grant access to pre-approved individuals from the labs that have opted to place their samples in the freezers. The individual freezers also have locks on them that will prevent unauthorized individuals from gaining access to freezers that are holding samples from other labs and departments.

Policies have been developed for the operations of the facility. Principal Investigators and Departments who wish to place samples into the facility will have to submit applications stating the type of samples and the justification for placing it in the facility. The Research Quality Assurance Office will be reviewing these applications and also managing the day to day operations of the facility like monitoring access, temperatures, alarm status, maintaining the chemical fire suppressant system, etc.

**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, and an abbreviated title of the publication. For example, if you submit two publications for Smith (PI for Project 01), one publication for Zhang (PI for Project 03), and one publication for Bates (PI for Project 04),

the filenames would be:

- Project 01 – Smith – Three cases of isolated
- Project 01 – Smith – Investigation of NEB1 deletions
- Project 03 – Zhang – Molecular profiling of aromatase
- Project 04 – Bates – Neonatal intensive care

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):
1. 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.

# BIOGRAPHICAL SKETCH

NAME Bruce A. Stanley, Ph.D.	POSITION TITLE
eRA COMMONS USER NAME (credential, e.g., agency login) bastanley	Director, Scientific Programs

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Tufts University, Medford, MA	B.A.	1979	Psychology
University of Massachusetts, Amherst, MA		1978-1979	Biochemistry
Cornell University, Ithaca, NY	M.S.	1984	Biochemistry/Toxicology
Cornell University, Ithaca, NY	Ph.D.	1987	Nutritional Biochemistry
Pennsylvania State University, Hershey, PA	PostDoc.	1986-1989	Physiology

## A. Personal Statement.

I created the Penn State College of Medicine Mass Spectrometry facility in 1998, and later added all of the current proteomic and small molecule capacities and instrumentation. I have personally directed all instrument purchases as well as all staff hires and staff time developing all of the current capacities of the facility, and have been fully responsible for development/implementation of the extensive mass spectrometric and biostatistical/bioinformatics methodologies currently utilized in the facility. I maintain an up-to-date knowledge of all mass spectrometric and methodological advances in the field, and am therefore able to keep the facility's capacities at the forefront necessary for advanced research in biomedical and life sciences fields. As Director of the Section of Research Resources, I also have many years of experience in successfully managing and administering multiple institutional Core Facilities, including DNA Sequencing and Genotyping, Flow Cytometry, Microscopy Imaging, Magnetic Resonance Imaging, and Macromolecular Synthesis, as well as helping other Core Facilities with business, management, and promotion issues.

## B. Positions and Honors.

### Positions and Employment

1986-1989	National Institutes of Health Postdoctoral Trainee, Department of Physiology, The Milton S. Hershey Medical Center, The Pennsylvania State University, Hershey, PA. Laboratory of Dr. Anthony E. Pegg
1989-1998	Assistant Professor, Department of Cellular and Molecular Physiology, The Pennsylvania State University College of Medicine, Hershey, PA
1998-Pres.	Director, Scientific Programs, Section of Research Resources, The Pennsylvania State University College of Medicine, Hershey, PA

### Honors and Other Experience

1996	Chateaubriand Scientific Exchange Fellowship from the French government, laboratory of Dr. Nikolaus Seiler, Merrell-Dow International Research Center, Strasbourg, France
1996	Teaching Excellence Award, Penn State College of Medicine
1998-Pres.	Sole Consulting Editor, Physiology, McGraw-Hill Encyclopedia of Science and Technology

**C. Selected Peer-Reviewed Publications (in chronological order, selected from 48 total).  
Most relevant to the current application**

1. Dennis MD, Shenberger JS, **Stanley BA**, Kimball SR, Jefferson LS. [Hyperglycemia Mediates a Shift from Cap-Dependent to Cap-Independent Translation via a 4E-BP1 Dependent Mechanism](#). *Diabetes*. (2013 Feb). 62(7): 2204-14. doi: 10.2337/db12-1453. PMID: 23434932
2. Das A., Bortner Jr. JD, Aliaga CA, Baker A, Stanley A, **Stanley BA**, Kaag M, Richie Jr. JP, El-Bayoumy K. (2013) [Changes in Proteomic Profiles in Different Prostate Lobes of Male Rats throughout Growth and Development and Aging Stages of the Life Span](#). *The Prostate* 73(4):363-75. PMID: 22911278
3. Skibinski CG, Thompson HJ, Das A, Manni A, Bortner JD, Stanley A, **Stanley BA**, El-Bayoumy K. [Proteomic changes induced by effective chemopreventive ratios of n-3:n-6 fatty acids and tamoxifen against MNU-induced mammary cancer in the rat](#). *Cancer Prev Res (Phila)*. (2013 July 23) ;6(9):979-88. doi: 10.1158/1940-6207.CAPR-13-0152. PMID: 23880232
4. Bansal R, Helmus RA, **Stanley BA**, Zhu J, Liermann LJ, Brantley SL, Tien M [Survival During Long Term Starvation: Global Proteomics Analysis of \*Geobacter sulfurreducens\* under Prolonged Electron Acceptor Limitation](#). *J. Proteome Res.* (2013 Aug 27) 2 (10), pp 4316–4326. DOI: 10.1021/pr400266m
5. Wase N, Black P, **Stanley B**, DiRusso C. [Integrated Quantitative Analysis of Nitrogen Stress Response in \*Chlamydomonas Reinhardtii\* Using Metabolite and Protein Profiling](#). *J. Proteome Res.* (2014), Just Accepted Manuscript. DOI: 10.1021/pr400952z. Publication Date (Web): February 14, 2014

**Additional recent publications of importance to the field (of 48 total, in chronological order)**

1. Culnan DM, Cooney RN, **Stanley B**, Lynch CJ. [Apolipoprotein A-IV, a Putative Satiety/Antiatherogenic Factor, Rises After Gastric Bypass](#). *Obesity* (Silver Spring). (2009) Jan;17(1):46-52. PMID: 18948973
2. Sundstrom JM, Tash BR, Murakami T, Flanagan JM, Bewley MC, **Stanley BA**, Gonsar KB, Antonetti DA [Identification and Analysis of Occludin Phosphosites: A Combined Mass Spectrometry and Bioinformatics Approach](#). *J Proteome Res.* (2009) 8(2):808-17. PMID: 19125584
3. Zhao Z, **Stanley BA**, Zhang W, Assmann SM [ABA-regulated G protein signaling in \*Arabidopsis guard cells: a proteomic perspective\*](#). *J Proteome Res.* (2010) Apr 5;9(4):1637-47. PMID: 20166762
4. Khanna MR, **Stanley BA**, Thomas GH. [Towards a membrane proteome in \*Drosophila\*: a method for the isolation of plasma membrane](#). *BMC Genomics*. (2010) May 12;11(1):302. PMID: 20462449
5. Bortner JD, Richie JP, Das A, Liao J, Umstead TM, Stanley A, **Stanley BA**, Belani CP, El-Bayoumy K. [Proteomic Profiling of Human Plasma by iTRAQ Reveals Down-Regulation of ITI-HC3 and VDBP by Cigarette Smoking](#). *J Proteome Res.* (2011) Mar 4;10(3):1151-9. PMID: 2118683
6. Fogle RL, Hollenbeak CS, **Stanley BA**, Vary TC, Kimball SR, Lynch CJ [Functional proteomic analysis reveals sex-dependent differences in structural and energy-producing myocardial proteins in rat model of alcoholic cardiomyopathy](#). *Physiol Genomics*. (2011) Apr 12;43(7):346-56. PMID: 21245415
7. Liu, X, Liu, D, Qian, D, Dai, J, An, Y, Jiang, S, **Stanley, B**, Yang, J, Wang, B, Liu, X, Liu, DX. [Nucleophosmin \(NPM1/B23\) Interacts with Activating Transcription Factor 5 \(ATF5\) Protein and Promotes Proteasome- and Caspase-dependent ATF5 Degradation in Hepatocellular Carcinoma Cells](#). *J Biol Chem*. (2012) Jun 1;287(23):19599-609. PMID: 22528486
8. Moon, MS, McDevitt, E., **Stanley, B**, Krzeminski, J., Amin, S., Aliaga, C., Miller, T., Isom, H. [Elevated Hepatic Iron Activates NF-E2-Related Factor 2 \(NRF2\) Regulated Pathway in a Dietary Iron Overload Mouse Model](#) *Toxicol. Sci.* (2012) Sep;129(1):74-85. PMID: 22649188
9. Jones KA, Kim PD, Patel BB, Kelsen SG, Braverman A, Swinton DJ, Gafken PR, Jones LA, Lane WS, Neveu JM, Leung HC, Shaffer SA, Leszyk JD, **Stanley BA**, Fox TE, Stanley A, Hall MJ, Hampel H, South CD, de la Chapelle A, Burt RW, Jones DA, Kopelovich L, Yeung AT. [Immunodepletion plasma proteomics by tripleTOF 5600 and Orbitrap elite/LTQ-Orbitrap Velos/Q exactive mass](#)

[spectrometers](#). J Proteome Res. (2013 Oct 4) 12(10):4351-65. doi: 10.1021/pr400307u. PMID: 24004147

10. Giardina BJ, **Stanley BA**, Chiang HL. [Glucose induces rapid changes in the secretome of \*Saccharomyces cerevisiae\*](#). Proteome Sci. (2014 Feb 12) 12(1):9. doi: 10.1186/1477-5956-12-9. PMID: 24520859

#### **D. Research Support.**

##### **Ongoing Research Support**

8 UL1 TR000127-02 (Sinoway)

03/01/2014-02/28/2015

NCRR (NIH)

Penn State Clinical and Translational Science Institute

The Specific Aims of this project are to establish the Penn State Clinical and translational Science Institute as a member of the national CTSA Consortium, and to advance clinical and translational research at the Pennsylvania State University.

##### **Completed Research Support (Recent)**

4100054865 (Stanley)

01/01/2011-12/31/2013

Pennsylvania Tobacco Settlement Funds

Research Infrastructure Renovation to Create a Biomedical Research Imaging Core Facility

The Specific Aims of this project are to design and renovate space for a Biomedical Research Microscopy Imaging facility. This is an equipment only grant and no effort is required.

4100047645 Stanley (PI)

01/01/2009-12/31/2012

Pennsylvania Tobacco Settlement Funds

Role: Principal Investigator

Genomics and Proteomics Instrumentation

The main goal of this project is to acquire and support advanced instrumentation for Proteomics, Metabolomics, and Genomics studies.

PA Tobacco Settlement Fund Yr 7 ORA No.10519 (Stanley, PI) 01/01/2008 – 06/30/2011

Pennsylvania Department of Health

The goal of this project is to increase and support the analytic capacities of multiple Core Facilities at the Penn State College of Medicine.

PA Tobacco Settlement Fund Yr 8 OSP No. 136780 (Stanley, PI) 01/01/2009 – 06/30/2012

Pennsylvania Department of Health

The goal of this project is to increase and support the analytic capacities of multiple Core Facilities at the Penn State College of Medicine.

NIH SIG (Deighton, PI)

04/01/2011-03/31/2012

NIH SIG (S10) application

Role on Project - CoPI

The goal of this project is to acquire an LTQ Orbitrap Velos mass spectrometer for the Huck Institute Mass Spectrometry Facility