Meeting Minutes
Location: Evans 720
April 12th, 2011
Start time: 12:00 PM
End time: 2:30 PM

Absent: K. Tuohey, K. Hardcastle, J. Gonsalves, K. Kirsch, R. Ingalls
Guests: A. Hartnett, S. Reno
Staff: B. Xiarhos, M. Hatton

I. Review of March Minutes
Recommendation: Approved

For: 11
Against: 0
Abstained: 1

II. New Business
A. **IBC Training Session**: An overview of the NIH Guidelines was presented as a round-table discussion, with a focus on the revised version dated January 2011.

B. **Chairperson Report**: The follow-up quarterly report for the lab with an incident in November 2010 was distributed, and the committee was asked for their input.

C. **Technical Committees Report**

1. **Approved Applications**: Of the 17 Applications reviewed at the last meeting, 8 have been approved so far.

2. **Amendments in RIMS**: The possibility of accepting amendments in RIMS for applications in RIMS was discussed. It was suggested that evaluation of reviewable amendments would require access to the "compare" function within RIMS.

D. **Biosafety Report**: The Boston Public Health Commission will be inspecting the BSL-3 program at BU on May 16; further BSL-3 inspections will likely be annual. There will be another round of Lab Safety Coordinator meetings coming up soon.

**ROHP Update**: As part of efforts to ensure compliance with ROHP for IBC Applications, a report was presented for the non-compliant applications from those reviewed at the March 15, 2011 IBC meeting.

III. **Protocol Review:**

**Meeting is not closed**

A. **New Submissions**

1. **New Submissions**

1) **Protocol #1403**

   Title: “HAT HBO1 in epithelial cell cycle and kidney injury”
   Category: rDNA/Bhz
   Biosafety Level: BSL-2
   Brief Protocol Description: This project concerns novel regulatory mechanism of mammalian cell proliferation. We will use cultured cells to determine how novel protein complex regulates DNA replication in normal conditions and after the stress. The successful completion of this project might identify novel target for drug development to treat cancer disease or for cell regeneration after an injury.
   PI needs to:
- remove discussion of future lentiviral and radioisotope use or add specific details of this aspect of the project
- uncheck synthetic nucleic acids
- add HEK cells to the rDNA section
Recommendation: Approved Pending
For: 12
Against: 0
Abstain: 0

2. 3 Year Resubmissions

2) Protocol # 886
Title: “Serum aggregates of transthyretin as intermediates in the mechanism of senile systemic amyloidotic cardiomyopathy; Small molecule inhibitors of immunoglobulin light chain aggregation: potential therapeutic agents for AL amyloidosis; Molecular mechanism of cardiac amyloidosis in senile systemic amyloid disease”
Category: rDNA/Bhz
Biosafety Level: BSL-2
Brief Protocol Description: Amyloidosis is a generic term which describes a collection of diseases all featuring abnormal protein deposits in tissues and organs throughout the body. We are studying several proteins normally found in blood which precipitate in the hearts of patients with two separate forms of amyloid disease. The presence of amyloid deposits has catastrophic consequences as they interfere with normal tissue structure and function. Our goal is to identify chemical changes in the proteins that cause them to become insoluble by comparing the blood and tissue-deposited forms. Our studies also aim to identify other components present in blood or in the tissue which may be important in the disease process. We test our findings by recreating the process of amyloid formation (using proteins of unlimited supply purified from bacterial sources) first in the test tube and then in cell-based studies using cultured cardiac cells that are obtained from commercial sources.
PI needs to:
- add the PI in the personnel list and answer questions of experience.
- clarify whether the tissue is always fixed or fresh/frozen
- add human material in the hazardous materials section
- add more description of the sample transport
Recommendation: Approved Pending
For: 12
Against: 0
Abstain: 0

3) Protocol #890
Title: “Hematopoietic Cell Fates in the Developing Lung”
Category: rDNA
Biosafety Level: BSL-1
Brief Protocol Description: We are interested in understanding the interaction of the developing blood system and the developing lung. Our goal is to identify the signals involved in these events.
PI needs to:
- expand on the description of laboratory procedures
- clarify the use of live animals and whether it involves rDNA or biohazardous agents
- specify the genes or specific libraries of cDNA to be expressed
- correct the BSL level and description of genes in the BPHC form
Recommendation: Conditionally Approved
For: 12
4) Protocol #529

Title: "Molecular analysis of BRD2 signaling and B cell function; Biomarkers for lymphoma in a new transgenic mouse model; A novel, inducible nuclear kinase linked to leukemia; BRD2 signaling and B cell proliferation; B cell proliferation regulated through BRD2 signaling; Mechanisms of Brd2 immunoprotection from insulin resistance"

Category: rDNA/Bhz

Biosafety Level: BSL-2, ABSL-1

Brief Protocol Description: The proposed research is important for public health because the genes and signal transduction pathways that couple diet-induced obesity to inflammation and insulin resistance and its life-threatening sequelae, including Type 2 diabetes and cardiovascular disease, are not fully understood. Much like a class of metabolically healthy but obese patients, who comprise about 25% of the adult obese population and who are relatively protected from Type 2 diabetes, the Brd2-hypomorphic mice described in this application demonstrate immunological protection against obesity-associated insulin resistance, suggesting novel therapeutic pathways for obese patients at risk for Type 2 diabetes. This project is important because it will investigate mechanisms that control inflammatory responses known to contribute to insulin resistance and Type 2 diabetes, which affects 171 million people worldwide, a figure that may easily double by 2030.

PI needs to:
- expand on the use of retroviral vectors, vector packaging, and how these agents are handled
- expand on the use of human tissue and include specifics of where it was obtained
- remove E. coli from the list of Hazardous Biological Agents
- include specific details on the expressed genes in the project description and in the rDNA section, and add details on the specific mouse model used in the animal rDNA experiments
- shorten the Layman's Terms
- specify the source of the lentiviral constructs

Recommendation: Conditionally Approved

For: 11
Against: 0
Abstain: 1

5) Protocol #1052

"Role of heat shock proteins in regulation of the p53 pathway"

Category: rDNA/Bhz

Biosafety Level: BSL-2, ABSL-2

Brief Protocol Description: Tumor formation is promoted by special proteins called oncogenes. Normally, cells have a capacity to recognize the danger and inhibit tumor growth. Unfortunately, often cells accumulate proteins that stimulate tumor growth. The project is to investigate how these tumor-stimulatory proteins affect the protective pathways.

PI needs to:
- add the PI to the project, with details on training and experience
- add all personnel working on the components of the project
- in the project description, include more details on the knock-down experiments, especially the specific vectors
- correct typos and errors in the Layman's Description
- include animal handling/inoculations among the list of lab procedures
- expand on the treatment and disposal of biohazardous wastes
- add HEK cells to the list of Biohazardous agents
- include more details in the rDNA section on the prokaryotic and eukaryotic experiments

Recommendation: Conditionally Approved
6) **Protocol #1139**

“Toxin Studies relevant to 1) Primate model and pathogenesis of anthrax sepsis; 2) Development, validation, and standardization of a non-human primate model of anthrax to evaluate new immunologic technologies derived from basic research; 3) Shiga-toxins: Pre-clinical animal model development and therapeutic testing ID: 08-038”

Category: Bhz

Biosafety Level: BSL-2+, ABSL-2+

Brief Protocol Description:

Project 1 seeks to understand how anthrax disease develops so we can identify better therapeutics. Project 2 also seeks to understand how our immune system protects us from anthrax disease. Developing a vaccine is an important priority because it will protect the military, defense contractors or hospital personnel who may be exposed. Project 3 focuses on certain strains of dangerous E.coli bacteria that contaminate our food. Toxins from these bacteria cause disease and this project develops animal models to test new drugs.

PI needs to:
- clarify the project description by adding a sentence at the beginning that work is off-site, as well as that anthrax toxin work is BSL-2 and shiga-toxin work is BSL-2+
- clarify the slicing and homogenizing of tissues
- shorten the Layman's Terms, while keep details on nature of toxins
- include up-to-date IBC and IACUC approval information for off-site institutions
- clarify the source of recombinant anthrax toxins

Recommendation: Conditionally Approved

For: 11

Against: 0

Abstain: 0

7) **Protocol #1154**

“Bacteria studies relevant to 1) Primate model and pathogenesis of anthrax sepsis; 2) Development, validation and standardization of a non-human primate model of anthrax to evaluate new immunologic technologies derived from basic research; 3) Shiga-toxins: Pre-clinical animal model development and therapeutic testing ID: 08-058”

Category: Bhz

Biosafety Level: BSL-2+, ABSL-2+

Brief Protocol Description:

PI needs to:
- include more details on the therapeutic treatments
- include more details on the proposed upcoming experiments involving Ames strain samples handled and treated off-site
- include up-to-date IBC and IACUC approval information for off-site institutions
- clarify the slicing and homogenization of tissues

Recommendation: Conditionally Approved

For: 11

Against: 0

Abstain: 0

8) **Protocol #1150**

“Mechanisms of neural stem cell self-renewal and differentiation”

Category: rDNA

Biosafety Level: BSL-1/ABSL-1

Brief Protocol Description: Neural stem cells are precursor cells that can produce themselves and other types of cells. Several human diseases, such as brain development disorders (autism,
mental retardation, etc.), brain injury, and brain cancer, can potentially be treated with neural stem cell-based therapies. This project aims to obtain neural stem cell-related knowledge that may be used in the future for improving the treatment of these diseases.
Recommendation: Approved
For: 11
Against: 0
Abstain: 0

9) Protocol #691
"Mechanism of Hydrogen Peroxide Regulation of Myocardial Remodeling"
Category: rDNA/Bhz
Biosafety Level: BSL-2
Brief Protocol Description: Oxidants like hydrogen peroxide are known to be produced by cells. These can affect organs and result in a harmful result leading to heart failure. We will use adenoviral vectors that are not transmissible to humans to determine the roles of the genes that may affect oxidant function in heart failure in cells.
PI needs to:
- include details on training and experience for the PI (as well as CV)
- add details on the homogenization under the project description, as well as details on the transport of samples to imaging facility; make the project description more logical, with details on where tissue is coming from
- clarify the indication of animal PPE and animal use with sharps
- add 293 cells to the list of hazardous biologicals
Recommendation: Conditionally Approved
For: 11
Against: 0
Abstain: 0

10) Protocol #1129
"Evaluating the efficacy of Vitamin D and Vitamin D analogues on a variety of human cancer cell lines"
Category: Bhz
Biosafety Level: BSL-2 / ABSL-2
Brief Protocol Description:
Vitamin D is known to inhibit cellular growth and our studies in the past have shown that the addition of vitamin D has slowed and/or prevented tumor growth in prostate and colon cancer. The problem with using vitamin D as a treatment is that it is a main regulator of calcium balance, and in excess amounts will cause blood calcium to increase above normal levels. Thus vitamin D will slow cellular growth, but will come at a cost to blood calcium balance. The goal of this project is to find the vitamin D analogues which have an increased effect on tumor growth but a lesser effect on calcium balance. We will use many cell lines to paint a comprehensive picture of vitamin D and its analogues overall effects.
PI needs to:
- add the PI and include details on training and experience
- include more of a description of animal work and where it is done, including IACUC info
- include more details on the source of the unfixed tissue and the proposed experiments using this tissue
- add details on the transport of biologicals, including the places it is transported from and to
- shorten the Layman's terms
Recommendation: Conditionally Approved
For: 11
Against: 0
Abstain: 0
11) **Protocol #482**

“Study of molecules involved in stem cell self-renewal and differentiation”

Category: rDNA/Bhz
Biosafety Level: BSL-2, ABSL-1

Brief Protocol Description: Bone marrow stem cells are capable of originating all cells present in the blood system. We propose to introduce specific genes in mouse stem cells and study their function in vivo. By manipulating these multipotent cells we hope to better understand the molecules involved in stem cell functions. Successful manipulation of mouse bone marrow stem cells would enable further work in animal models and ultimately development of better therapies for human blood disease.

PI needs to:
- add the PI and include details on training and experience
- complete the Host-Vector-Donor system information in the BPHC form
- add ‘mouse’ to the Layman’s terms

Recommendation: Approved Pending
For: 11
Against: 0
Abstain: 0

IV. Amendments

1) **Protocol #1000**

“Mammalian bombesin like peptides and their receptors (Bn-r) in health and disease”

Category: rDNA/Bhz
Biosafety Level: BSL-2

Brief Amendment Description: The amendment seeks to add a viral vector to use luciferase expression and also further take these expression elements into mice.

PI needs to:
- as the parent protocol includes no description of animal work and a different project focus, the proposed animal work needs to be submitted separately as a separate application; IACUC approval will be required
- separate the in vitro vector experiments out in a simplified amendment for approval

Recommendation: Conditionally Approved
For: 11
Against: 0
Abstain: 0

2) **Protocol #1370**

“The role of pheomelanin in melanoma development”

Category: rDNA/Bhz
Biosafety Level: BSL-2

Brief Amendment Description: The amendment seeks to add the use of lentiviral vectors to the project, with the addition of experienced personnel in the lab.

PI needs to:
- Fix the typo on the training date

Recommendation: Approved Pending
For: 11
Against: 0
Abstain: 0
Approved Expedited Amendments:

V. Renewal of Protocols with Minor Changes

VI. Renewal of Protocols with no Proposed Changes