INSTITUTIONAL BIOSAFETY COMMITTEE

UNIVERSITY of WASHINGTON

Meeting Minutes

Date: Wednesday, May 16, 2018
Time: 10:00 AM – 12:00 PM

Location: Foege N-130A

Members Present:
1. Thea Brabb, Comparative Medicine *(Animal Containment Expert)*
2. H.D. "Toby" Bradshaw, Biology *(Plant Expert)*
3. Lesley Colby, Comparative Medicine *(Animal Containment Expert)*
4. Richard Grant, Washington National Primate Research Center
5. Kevin Hybiske, Allergy and Infectious Diseases
6. Stephen Libby, Laboratory Medicine (*IBC Chair*)
7. Scott Meschke, Environmental & Occupational Health Sciences
8. Matthew R. Parsek, Microbiology
9. Tina Rogers (*Community Member*)
10. Jason Smith, Microbiology (*IBC Vice Chair*)
11. Eric Stefansson, Environmental Health & Safety (*Biosafety Officer, Animal Containment Expert*)
12. Paul Swenson, Seattle-King Co. Dept. of Public Health (*Community Member*)

Commonly Used Abbreviations
IBC: Institutional Biosafety Committee
BSO: Biological Safety Officer
BUA: Biological Use Authorization
BSL: biosafety level
PI: Principal Investigator
IACUC: Institutional Animal Care and Use Committee
NIH: National Institutes of Health
DURC: Dual Use Research of Concern
SOP: standard operating procedure

1. **CALL TO ORDER:** The Institutional Biosafety Committee (IBC) Chair called the meeting to order at 10:05 am. A quorum was present.

2. **REMINDER:** The IBC Chair reminded attendees that any notes that they retain are subject to public disclosure. A statement was also made about conflict of interest and voting on research proposals as described in the IBC Charter. This includes sharing a grant or a familial relationship.

3. **APPROVAL OF MINUTES:**
   - The IBC Chair sought a motion to approve the minutes from the April 18, 2018 meeting.
   - A member made a motion to approve the April 18, 2018 minutes. Another member seconded the motion.
   - The committee voted unanimously, with six abstentions, to approve the April 18, 2018 meeting minutes.

4. **OLD BUSINESS:**
   - At the April meeting, Dr. Hu's BUA was approved pending the transfer of the IACUC protocol from Dr. Klatt to Dr. Hu. The IACUC protocol is still undergoing triennial review under Dr. Klatt and the plan is to transfer the protocol to Dr. Hu once the triennial review is approved.
   - At the April meeting, Dr. Kerr's BUA was approved pending completion of the PI's biosafety training. The training was completed and the letter was sent out.
   - At the April meeting, Dr. Schechner's BUA was approved pending a final lab inspection and pending a chemical review by the industrial hygienist. The PI is still getting things set up. The industrial hygienist will perform the chemical review during the final lab inspection.
   - At the April meeting, Dr. Theriot's BUA was approved pending a lab inspection. The investigator has still not arrived at UW. The inspection will be conducted when the investigator arrives in July.
   - At the April meeting, Dr. Xin's BUA was approved pending a lab inspection and the addition of third-generation lentiviral vectors with oncogenes to the BUA letter. The agent was added to the BUA letter, but the PI hasn't yet arrived at the university, so the lab inspection is still pending.
   - At the April meeting, Dr. Maloney's BUA was approved pending clarification that all vector safety specifications are met. The subcommittee reviewed documents sent by the PI from the manufacturer stating that all safety specifications are met. The letter was sent out.

5. **BIOSAFETY OFFICER (BSO) REPORT***:* The Biosafety Officer Report includes (1) projects involving recombinant or synthetic nucleic acids covered under section III-E and III-F of the *NIH Guidelines,* (2) proposals involving non-recombinant biohazardous agents requiring BSL-1 and BSL-2 containment, and (3) administrative updates, such as room additions.

   a. Biosafety Officer Report
      - Dr. Hampe closed her IACUC protocol, so in vivo work was removed from her BUA.
      - Dr. Murry added a new room to his approval.
      - Dr. Rabinovitch added murine cells transfected with previously approved adenoviral vectors.
      - Dr. Drury-Stewart received a new BUA approval for human blood.
      - Dr. Kueh added the cell analysis facility to his BUA.
      - Dr. Van Voorhis added a new non-recombinant Risk Group 2 agent, *Elizabethkingia meningospetica*, to his approval.
      - Dr. Brewer renewed a BUA involving Risk Group 1 yeasts.

- Dr. Presland received a new BUA letter for human saliva collected after a dental procedure.
- Dr. Robinson received a new BUA for human samples.
- Dr. Yager renewed a BUA involving many different species of non-recombinant Risk Group 2 bacteria and viruses.
- Dr. Patton added the ARCF vivarium to her approval.
- Dr. Hsu added the ARCF vivarium to his approval.
- Dr. Thompson-Iritani received a new core BUA for the ARCF primate center housing and procedure rooms. This BUA covers the use of non-human primates and their tissue, blood, body fluids, and cells within the WaNPRC Animal Research & Care Facility. Research with known infectious agents or recombinant DNA must be approved separately.
- The IBC Chair sought a motion to approve this month's Biosafety Officer Report.
- A member made a motion to approve this month's Biosafety Officer Report. Another member seconded the motion.
- The Committee unanimously voted to approve this month's Biosafety Officer Report.

6. INDIVIDUAL PROJECT REVIEWS

1. Clark, Edward, renewal, *Lymphocyte Activation (Role of CD22 & Syk Kinase)*
- The assigned IBC Primary Reviewer presented the Primary Review.
- The overall goal of the research is to understand how effective antibodies and sustained protection against West Nile Virus and Zika virus can be induced to create vaccines.
- Wild-type Salmonella Typhimurium, Zika virus, and West Nile virus are used on the project. These agents are also used in a transgenic mouse model. The use of wild-type Risk Group 2 and 3 agents in a transgenic mouse model falls under section III-D of the NIH Guidelines.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Clark.
- The Committee voted unanimously to approve the draft BUA for Dr. Clark.

2. Crispe, Ian, change, *Innate Immune Response to Hepatocyte Death; sessile Kupffer cells in liver tolerance; innate immune response in liver*
- The assigned IBC Primary Reviewer presented the Primary Review.
- This is a change to add recombinant malaria sporozoites that express a fluorescent reporter.
- The lab was inspected with no deficiencies noted. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Crispe.
- The Committee voted unanimously to approve the draft BUA for Dr. Crispe.

3. Fink, Susan, change, *Host-Pathogen Interactions During Viral Infection*
- The assigned IBC Primary Reviewer presented the Primary Review.
- This is a change to add amphotropic gammaretroviral vectors, gammaretroviral vectors with other pseudotypes, and flavivirus replicons for in vitro work.

- The lab was inspected with no deficiencies noted. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Fink.
- The Committee voted unanimously to approve the draft BUA for Dr. Fink.

4. Frevert, Charles, change, *Proteoglycans and Influenza Infection: Gene-targeted mouse models to study versican*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The change was to add lentiviral vectors for in vitro use and in vivo administration to mice.
- The lab was recently inspected, so a new lab inspection was not required for this change. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Frevert.
- The Committee voted unanimously, with one abstention, to approve the draft BUA for Dr. Frevert, pending completion of the IACUC protocol.

5. Froehner, Stanley, renewal, *Froehner Muscular Dystrophy Projects*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The overall goals of the research are to understand muscle function and the causes of muscle disease, and to test potential therapies.
- AAV (adeno-associated viral vectors) will be used in mice.
- The lab was inspected and no deficiencies were identified. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Froehner.
- The Committee voted unanimously to approve the draft BUA for Dr. Froehner.

6. Gu, Liangcai, new, *Study of small molecule-controlled CAR-T cell activation in mice*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The overall goal of the research is to engineer small-molecule drug-controlled protein biosensors to improve efficacy and safety of CAR-T cell based cancer immunotherapy.
- Human cells and lentiviral vectors will be used.
- The lab was inspected and no deficiencies were identified. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Gu.
- The Committee voted unanimously to approve the draft BUA for Dr. Gu.

7. Kim, Jeansok, renewal, *Using molecular biological approaches to understand fear related behavior in predatory prey interactions*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The lab researches fear-related behaviors in semi-naturalistic settings using molecular biology techniques to control neurons in specific fear-related brain circuits.

- AAV and CAV-2 (canine adenoviral vector) are used in rats. The vectors are replication deficient.
- The lab was inspected and no deficiencies were identified. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Kim.
- The Committee voted unanimously to approve the draft BUA for Dr. Kim.

8. Murphy, Sean, new, *NHP Malaria Studies*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The goal of this project is to develop a new non-human primate model for evaluating malaria infections and to test a promising vaccine strategy.
- A DNA vaccine and *Plasmodium falciparum* or *Plasmodium knowlesi* sporozoites will be used.
- The lab was inspected and no deficiencies were identified. All of the required trainings have been completed.
- The IACUC protocol has not yet been submitted.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Murphy.
- The Committee voted unanimously to approve the draft BUA for Dr. Murphy, pending the IACUC protocol.

9. Mustari, Michael, renewal, *Neural Mechanisms for Vision*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The overall goal of the research is to discover how the brain produces normal and abnormal eye movements.
- AAV, lentiviral vectors, and herpes viral vectors are used in a macaque model. The vectors are obtained from a collaborator and no in vitro work is done in the Mustari lab. No oncogenic inserts are used.
- Some questions on the BUA application are not yet completed. The biosafety officer will work with the PI to make sure the application is completed.
- The lab was inspected and the air flow still needs to be modified. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Mustari.
- The Committee voted unanimously to approve the draft BUA for Dr. Mustari, pending fixing the air flow and finishing the BUA application edits.

10. Rettie, Allan, new, *Functional Characterization of CYP4Z1 and CYP4X1*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The overall goal of the research is to identify inhibitors that would make chemotherapy more effective.
- Human cell lines and lentiviral vectors are used on the project.
- The lab was inspected and no deficiencies were identified. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Rettie.
- The Committee voted unanimously to approve the draft BUA for Dr. Rettie.

11. Starita, Lea, new, *Brotman Baty Advanced Technology Lab: General Research*

- The assigned IBC Primary Reviewer presented the Primary Review.
- This is a new PI. The research applies functional genomics to the practice of precision medicine.
- A lentiviral vector and human cell lines will be used.
- The biosafety officer did a preliminary inspection, but things are still getting set up. A final lab inspection will be required. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Starita.
- The Committee voted unanimously to approve the draft BUA for Dr. Starita, pending the final lab inspection and clarification of whether oncogenes will be used.

12. Tang, Gale, renewal, *Mechanism of Arteriogenesis in Mice and Rats*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The overall focus of the research is to understand the molecules that stimulate collateral arteries to grow and also what stops their growth and to develop an animal model to see why human saphenous vein grafts fail.
- Human tissues and siRNA are used.
- The draft BUA letter was shown.
- All of the required trainings have been completed. The lab inspection is scheduled for later this month.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Tang.
- The Committee voted unanimously to approve the draft BUA for Dr. Tang, pending the lab inspection.

13. Woodward, Joshua, renewal, *Probiotic mediated treatment of metabolic and immune disorders*

- The assigned IBC Primary Reviewer presented the Primary Review.
- The investigator is developing probiotic bacteria that specifically target small molecule activated transcription factors, for therapeutic use in treating autoimmune, metabolic, and developmental diseases.
- A variety of Risk Group 1 probiotic bacteria, including *Lactobacillus acidophilus* and *Streptococcus thermophilus*, will be used on this project. Human cells will also be used.
- The lab was recently inspected, so a new lab inspection was not required for this project. All of the required trainings have been completed.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Woodward.
- The Committee voted unanimously to approve the draft BUA for Dr. Woodward.

SUBCOMMITTEE REPORTS:

14. Becker, Pamela, renewal, *Gene Transfer for Patients with Fanconi Anemia Complementation Group A (FANCA)*

- Three members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.

- This is a renewal of a clinical trial. The objective is to develop hematopoietic stem cell gene therapy for patients with Fanconi anemia (FA). A lentiviral vector is used.
- All of the required trainings have been completed.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Becker. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Becker.

15. Shadman, Mazyar, new, *A Clinical Trial of Gene-Modified Stem Cells to Generate HIV-Resistant Cells in Conjunction with Standard Chemotherapy for the Treatment of Lymphoma Patients with HIV Infection*

- Three members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This study seeks to determine whether an autologous stem cell transplant with stem cells modified to confer HIV resistance is safe and feasible in HIV-positive patients with Hodgkin or Non-Hodgkin Lymphoma who have completed first-line treatment and are in remission. The study also seeks to determine whether in vivo selection with a low dose of chemotherapy will increase the level of gene modified cells.
- The RAC performed an initial review of this proposal, but determined that no in-depth review or public RAC discussion was required.
- Third-generation lentiviral vectors are used. The vectors are created by an outside company. The activities performed at UWMC (UW Medical Center), including handling and re-infusion of transduced cells, require BSL-2 containment.
- The informed consent documents were reviewed by the subcommittee appear to clearly state the objectives of the study, as well as the risks, some of which are unknown.
- The investigator still needs to complete the biosafety training.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Shadman. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Shadman, pending completion of the PI's biosafety training.

16. Kiem, Hans-Peter, renewal, *"Autologous transplantation and stem cell based-gene therapy with LVsh5/C46 (CAL-1), a dual anti-HIV lentiviral vector, for the treatment of HIV-associated lymphoma"*

- Three members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This study seeks to determine whether an autologous stem cell transplant with Cal-1 modified stem cells is safe and feasible in HIV-positive patients with Hodgkin or Non-Hodgkin Lymphoma. Cal-1 seeks to make target cells (CD4+ T lymphocytes) resistant to HIV infection. The research participants who participate in the study are already eligible to receive an autologous stem cell transplant as standard of care.
- The RAC performed an initial review of this proposal in 2015, but determined that no in-depth review or public RAC discussion was required.
- Third-generation lentiviral vectors are used. The vectors are created by an outside company. The activities performed at UWMC, including handling and re-infusion of transduced cells, require BSL-2 containment.

- As with the previous study, the informed consent documents were reviewed by the subcommittee appear to clearly state the objectives of the study, as well as the risks, some of which are unknown. The consent forms will also be reviewed by the Fred Hutchinson Cancer Research Center IRB (institutional review board).
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Kiem. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Kiem.

ISSUES FROM THE FLOOR & PUBLIC COMMENTS:
There were no issues from the floor, and no public comments.

MEETING ADJOURNED AT APPROXIMATELY 11:25 a.m.