INSTITUTIONAL BIOSAFETY COMMITTEE
UNIVERSITY of WASHINGTON

Meeting Minutes

Date: Wednesday, June 19, 2019
Time: 10:00 AM – 12:00 PM

Location: Foege N130A

Members Present:
1. Thea Brabb, Comparative Medicine *(Animal Containment Expert)*
2. H.D. "Toby" Bradshaw, Biology *(Plant Expert)*
3. Richard Grant, Washington National Primate Research Center
4. Garry Hamilton (*Community Member*)
5. Kevin Hybiske, Allergy and Infectious Diseases
6. David Koelle, Allergy and Infectious Diseases
7. Stephen Libby, Laboratory Medicine (*IBC Chair*)
8. Scott Meschke, Environmental & Occupational Health Sciences
9. Jason Smith, Microbiology (*IBC Vice Chair*)
10. Eric Stefansson, Environmental Health & Safety (*Biosafety Officer, Animal Containment Expert)*

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 10:02 a.m. A quorum was present. A new community member was introduced and welcomed to the Committee. A retiring committee member was thanked for his five years of service to the IBC. The new director of Environmental Health & Safety was announced.

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 May 15, 2019 meeting.
   - A member made a motion to approve the May 15, 2019 minutes. Another member seconded the motion.
   - The committee voted unanimously to approve the May 15, 2019 meeting minutes. There were two abstentions.

4. **OLD BUSINESS:**
   - At the July 2018 meeting, Dr. Patel's BUA was approved pending a lab inspection. This is still pending.
   - At the October 2018 meeting, Dr. Stuber's BUA was approved pending a lab inspection and room changes to the BUA letter. This is still pending.
   - At the November 2018 meeting, Dr. Bornfeldt's BUA was approved pending additions to the BUA letter. This is still pending.
   - At the February 2019 meeting, Dr. Nahmani's BUA was approved pending a lab inspection and verification of third generation lentiviral vectors. This is still pending.
   - At the March 2019 meeting, Dr. Bajjalieh's BUA was approved pending additional information to the BUA. This is still pending.
   - At the March 2019 meeting, Dr. Moreno's BUA was approved pending a successful lab inspection and training completion. This is still pending.
   - At the April 2019 meeting, Dr. Gottlieb's BUA was approved pending an addition to the BUA letter. This is still pending.
   - At the May 2019 meeting, Dr. Chavkin's BUA was approved pending a change to the BUA application. This change has been made, and the BUA letter has been sent out.
   - At the May 2019 meeting, Dr. Golden's BUA was approved pending review of the IACUC protocol. The BUA letter has been sent out.
   - At the May 2019 meeting, Dr. Hernandez's BUA was approved pending a successful lab inspection and removal of an agent from their IACUC protocol. The lab has been inspected and the protocol has been updated. The BUA letter has been sent out.
   - At the May 2019 meeting, Dr. Murphy's BUA was approved pending an addition to the BUA letter. This addition has been made, and the BUA letter has been sent out.
   - At the May 2019 meeting, Dr. Murry's BUA was approved pending a change to the BUA application. This change has been made, and the BUA letter has been sent out.
   - At the May 2019 meeting, Dr. Odom's BUA was approved pending a change to the BUA application and a change to the BUA letter. These changes have been made, and the BUA letter has been sent out.
   - At the May 2019 meeting, Dr. Park's BUA was approved pending a successful lab inspection. The BUA letter has been 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. Rosenberg was approved for a new BUA, *Combinatorial Barcoding for Single-Cell RNA-sequencing*. This research uses human blood, tissue, body fluids, and cell lines.
        - Dr. Rathod's BUA *Genomic Tools to Characterize Hypermutating Plasmodium falciparum* added the use of Foege Flow Facility for previously approved agents.
        - Dr. Eisenberg's BUA *Eisenberg's Anthropological Genetics Lab - Starting up lab* added a new room for use of human and non-human primate materials.
        - Dr. Murphy's BUA *NHP Study* added the WaNPRC I-wing vivarium.
        - Dr. Stoll renewed the BUA *Proteins for EPR Spectroscopy*. This research uses non-pathogenic strains of Escherichia coli.
        - Dr. Geisse was approved for a new BUA*, Development of cultureware and devices for human cell in vitro research*. This research uses human blood, tissue, body fluids, and cell lines.
        - Dr. Bush was approved for a new BUA, *The degronome of yeast*. This research uses non-pathogenic strains of Escherichia coli.
        - Dr. Carlson renewed the BUA *Synaptic Laminin and the Calcium Channel*. This research uses non-pathogenic strains of Escherichia coli and human blood, tissue, body fluids, and cell lines.
        - Dr. Rabinovitch's BUA *Biology of Aging* added the use of human blood, tissue, body fluids, and cell lines to previously approved rooms.
        - Dr. Fu's BUA *Multimodal optical microscopy* added the use of previously approved human cells in mice.
        - Dr. Hoofnagle renewed the BUA *Analysis of human samples for the development of novel diagnostic assays in the clinical laboratory and for the investigation into nutrition, obesity, kidney disease, and cardiovascular disease*. This research uses human blood, tissue, body fluids, and cell lines.
        - Dr. Nilsson's BUA *Microbial Lipid Extraction* added the use of non-recombinant Staphylococcus species for in vitro work.
        - Dr. Hyde's BUA *Contribution of virus-host interactions to viral pathogenesis* added new mutants of previously approved VEE and Sindbis viruses, and was approved for new non-viral gene transfer techniques.
        - 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.
        - <u>The Committee unanimously voted to approve this month's Biosafety Officer Report.</u>

6. **DURC REPORT:** The Dual Use Research of Concern Institutional Review Entity (DURC IRE) did not meet this month because there were no applications to review.

7. **INDIVIDUAL PROJECT REVIEWS**

    a. Buckner, Frederick, renewal, *Buckner antiparasitic and antibacterial drug discovery*
        - The assigned IBC Primary Reviewer presented the Primary Review.

- This lab researches drug discovery for diseases caused by pathogenic protozoan parasites and a variety of risk group 2 bacteria.
- The greatest stated biohazard risk to lab personnel is handling of pathogens during animal injections, primarily G. intestinalis.
- None of the parasites are infectious grown in culture.
- 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. Buckner pending a change to the BUA application.
- The Committee voted unanimously to approve the draft BUA for Dr. Buckner pending a change to the BUA application.

b. Darvas, Martin, change, *Genetic analysis of mouse behavior*

- The assigned IBC Primary Reviewer presented the Primary Review.
- This lab works to understand the influence of genes on neural activity and connectivity. The group will make and use non-integrating recombinant foamy viruses to express fluorescent proteins (EGFP, UnaG) and Cas9 and then test the new foamy viruses in mice, human fibroblasts, and microglia.
- The lab was recently inspected, so a new lab inspection was not required for this change.
- All of the required trainings have been completed.
- An IACUC amendment has not been submitted for this work. The stated mouse work is included on the lab's triennial protocol submission currently in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Darvas pending a change to the BUA letter and removal of mouse work from the BUA letter until their triennial renewal application is reviewed next month.
- The Committee voted unanimously to approve the draft BUA for Dr. Darvas pending the changes suggested by the Primary Reviewer.

c. Disis, Mary, change, *Evaluation of Immunity to Cancer in a Rodent Model*

- The assigned IBC Primary Reviewer presented the Primary Review.
- Bacteria, including Lactobacillus acidophilus, lactobacillus delbrueckii, lactobacillus iners, bacillus cereus, and non-pathogenic E. coli (already approved for work in vitro), will be added to this research for use in transgenic mice and cell culture.
- 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. Disis.
- The Committee voted unanimously to approve the draft BUA for Dr. Disis.

d. Fuller, Deborah, new, *Enhanced Hepatitis B Vaccine for Immunocompromised Animals*

- The assigned IBC Primary Reviewer presented the Primary Review.
- This lab works with recombinant plasmids expressing HBV antigens in pigtail macaques. The goal is to demonstrate improved immune responses in order to

overcome current hurtles to development of chronic hepatitis B infection immunotherapy in HIV infected patients.
- 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. Fuller.
- The Committee voted unanimously to approve the draft BUA for Dr. Fuller.

e. Garden, Gwen, change, *Cell-Cell Communication in Neurodegeneration*
- The assigned IBC Primary Reviewer presented the Primary Review.
- The lab is adding recombinant foamy viral and canine adenoviral vectors expressing GFP for in vitro transduction of mouse cells.
- 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. Garden.
- The Committee voted unanimously to approve the draft BUA for Dr. Garden.

f. Geisse, Nicholas, change, *Development of cultureware and devices for human cell in vitro research*
- The assigned IBC Primary Reviewer presented the Primary Review.
- This lab will add use of induced pluripotent stem cell lines generated by lentiviral vectors and non-viral, non-plasmid RNA-based methods.
- 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. Geisse.
- The Committee voted unanimously to approve the draft BUA for Dr. Geisse.

g. Hille, Bertil, renewal, *Molecular Properties of Ionic Permeability of Nerve; Electric Studies of Excitation, Secretion and Contraction; Trafficking mechanisms for secretory vesicles in pancreatic duct epithelial cells*
- The assigned IBC Primary Reviewer presented the Primary Review.
- This lab uses a variety of plasmids to investigate the mechanisms underlying the modulation of cellular responses.
- 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. Hille.
- The Committee voted unanimously to approve the draft BUA for Dr. Hille.

h. Kiem, Hans-Peter, renewal, *Cell and Gene Therapy for HIV Cure*
- The assigned IBC Primary Reviewer presented the Primary Review.

- This lab uses gene therapy as a treatment or potential cure for HIV infections. This BUA only covers administration of cell lines [constructed at the Fred Hutch Cancer Research Center (FHCRC)] to non-human primates at UW.
- A lab inspection is not required. All primate center spaces used are currently under a core approval.
- 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. Kiem.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Kiem.</u>

i. Moritz, Chet, change, *Neural Engineering in Rats*

- The assigned IBC Primary Reviewer presented the Primary Review.
- This lab is adding recombinant Pseudorabies virus harboring fluorescent reporter genes to infect rats.
- The attenuated recombinant Pseudorabies virus has been shown to shed, and will kill rats but not pigs.
- 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. Moritz with consultation with Comparative Medicine and pending a change to the BUA letter.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Moritz pending the changes above.</u>

j. Plymate, Stephen, renewal, *Mechanisms of transition to castrate resistant prostate cancer*

- The assigned IBC Primary Reviewer presented the Primary Review.
- This lab studies the androgen receptor and related genes in prostate cancer. Created cell lines will be implanted subcutaneously into immunocompromised mice to study effects on tumor growth.
- The lab was recently inspected, so a new lab inspection was not required for this change.
- All of the required trainings have been completed.
- This project is pending IACUC triennial submission.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Plymate pending IACUC submission.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Plymate pending IACUC submission.</u>

k. Sokurenko, Evgeni, renewal, *Molecular Adaptation of Uropathogenic E. coli; Pathoadaptive Evolution of Salmonella; Properties of Bacterial Adhesins; Pathogenic Adaptation of Microbial Adhesins, New Statistical Methods for Neutral Phylogenetic Reconstruction*

- The assigned IBC Primary Reviewer presented the Primary Review.
- This lab works with various risk group 2 bacterial isolates from patients. They are tested for susceptibility to antibiotics and genotyped to determine clone-specific resistance patterns, and tests are developed to recognize the clones. They are also

tested for adhesive properties using binding assays. Recombinant E. coli is used in this work.
- The lab was inspected and no deficiencies were identified.
- All of the required trainings have been completed.
- The PI must offer laboratory personnel the vaccine for S. Typhi.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Sokurenko.
- The Committee voted unanimously to approve the draft BUA for Dr. Sokurenko.

l. Villen, Judit, renewal, *Cell signaling and proteomics*
- The assigned IBC Secondary Reviewer presented the Primary Review.
- The goal of this project is to develop and apply novel experimental and computational technologies for global proteome characterization to answer fundamental questions in cell biology and disease.
- The greatest risk to laboratory personnel is work with yeast and E. coli, as well as work with human blood, tissue, body fluids, and cell lines.
- 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 Secondary Reviewer made a motion to approve the draft BUA for Dr. Villen.
- The Committee voted unanimously to approve the draft BUA for Dr. Villen.

8. SUBCOMMITTEE REPORTS:

m. Hawn, Thomas, change, *Innate Immunity and Susceptibility to Infectious Disease (rats)*
- Three members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- Mycobacterium bovis is to be added to this existing protocol. Human cells are to be infected with the wild type risk group 3 pathogen. No work is being done with animals.
- 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. Hawn.
- The Committee voted unanimously to approve the draft BUA for Dr. Hawn.

n. Mallhi, Kanwaldeep, new, *A Phase 3 Study Evaluating Gene Therapy by Transplantation of Autologous CD34+ Stem Cells Transduced Ex Vivo with the LentiGlobin BB305 Lentiviral Vector in Subjects with Sickle Cell Disease*
- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This clinical trial will reintroduce a specific modified gene variant into study participants with Sickle Cell Disease. IV administration will be given at UWMC after myeloablative conditioning.

- There is a theoretical risk of Graft vs host disease (GVHD) to health care workers parenterally exposed to the cell product, but the risk is not modified by lentiviral modification of cells. There is a similar theoretical risk of exposure to replication-competent lentivirus in the cell product.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Mallhi. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Mallhi.

o. Maloney, David, renewal, *Phase I study of adoptive immunotherapy for advanced ROR1+ malignancies with define*

- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This trial will treat patients with lymphoid cancers and solid tumors that express ROR1. It is hoped that relatively selective expression on the cancer cells more so than on normal cells will mediate an antitumor effect with acceptable bystander cell toxicity. Study participants will be administered CAR-T cells at UWMC.
- There is minimal risk of GVHD to health care workers parenterally exposed to the cell product. There is minimal risk for transduction of health care worker cells if there was residual transduction competent lentivirus in the cell product.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Maloney. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Maloney.

p. Specht, Jennifer, new, *Phase I study of adoptive immunotherapy for advanced MUC1* positive breast cancer with autologous T cells engineered to express a chimeric antigen receptor, huMNC2-CAR44 specific for a cleaved form of MUC1 (MUC1*)*

- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is a first in humans, dose-finding, open label trial of a new CAR-T therapy for patients with breast cancer. Patients will have leukapheresis, cells will be transduced and manufactured at FHCRC, and patients will be lymphodepleted prior to infusion at UWMC.
- 15 years of blood collection is standard practice in many protocols, including this protocol.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Specht. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Specht.

10. FOR YOUR INFORMATION:

- **NIH Incident Report:**
  - An individual stuck their thumb with a needle that contained human 381T embryonal RMS cells harvested from immunodeficient mice. The individual was trying to homogenize the cells with a needle and syringe, which is not their standard operating procedure. The needle became clogged. While trying to

aspirate the cells, the individual poked their thumb. The individual followed post exposure procedures correctly and followed up with employee health for medical evaluation. This incident was reported to the NIH. The NIH OSP stated that the University's response was appropriate, and that no further action was required.

- A research scientist experienced a needle stick from a needle that had been used on a pigtail macaque non-human primate (NHP) on an in vivo passage study. It had received a blood transfusion from a NHP (NHP2) that was positive for HIV-1 and had also received a blood transfusion from a NHP (NHP3) that had been inoculated with a recombinant HSIV virus. The research scientist was attempting to draw blood from the left leg saphenous vein on the NHP1. Upon withdrawing the needle from the vein, the animal moved its leg. The researcher kept a hold of pressure and the gauze on the leg and moved in unison with the primate's leg. The researcher felt a prick in the left thumb and noticed that the thumb was bleeding. The individual followed post exposure procedures correctly and is being monitored by employee health. This incident was reported to the NIH. The NIH OSP stated that the University's response was appropriate, and that no further action was required.
- A researcher poked their finger while disposing of a bone marrow needle into a sharps container. The bone marrow needle had been used on a non-human primate that had been inoculated with SHIV. This incident is being investigated and the NIH has been notified.

- **Eagleson Conference Attendees:** An overview of the occupational health and IBC portions of the Eagleson Conference in Alexandria, VA was provided by this year's attendees, including Steve Libby, IBC Chair, and two members of EH&S.

11. ISSUES FROM THE FLOOR & PUBLIC COMMENTS:

There were no issues from the floor, and no public comments.

12. MEETING ADJOURNED AT APPROXIMATELY 11:28 A.M.