`

INSTITUTIONAL BIOSAFETY COMMITTEE

UNIVERSITY of WASHINGTON

Meeting Minutes

Date: Wednesday, November 13, 2024
Time: 10:00 a.m. – 12:00 p.m.

Location: Zoom

Members Present:

1. Jim Boonyaratanakornkit, Allergy and Infectious Diseases
2. Lesley Colby, Comparative Medicine *(Animal Containment Expert)*
3. Lesley Decker, Environmental Health & Safety (*Biosafety Officer*)
4. Jennifer Iwamoto, Office of Animal Welfare *(Animal Containment Expert)*
5. Erin Heiniger, Department of Bioengineering *(Laboratory Specialist*)
6. David Koelle, Allergy and Infectious Diseases
7. Stephen Libby, Laboratory Medicine *(Animal Containment Expert)*
8. Scott Meschke, Environmental & Occupational Health Sciences
9. Susan Parazzoli *(Community Member)*
10. Jason Smith, Microbiology (*IBC Chair*)
11. Paul Swenson, Seattle-King Co. Dept. of Public Health (*Community Member*)

Commonly Used Abbreviations
AAV: adeno-associated viral vector
BSL: biosafety level
BSL-2w/3: BSL-2 with BSL-3 practices
BSO: biosafety officer
BUA: Biological Use Authorization
DURC: Dual Use Research of Concern
IACUC: Institutional Animal Care and Use Committee
IBC: Institutional Biosafety Committee
iPSCs: induced pluripotent stem cells
NHP: non-human primate
NIH: National Institutes of Health
PI: Principal Investigator
rDNA: recombinant or synthetic DNA/RNA
RG: Risk Group
SOP: standard operating procedure
Source material: blood, tissue, body fluids, and cell lines

1. **CALL TO ORDER:** The Institutional Biosafety Committee (IBC) Chair called the meeting to order at 10:00 a.m. 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 October 16, 2024, meeting.
   - A member made a motion to approve the October 16, 2024, meeting minutes. Another member seconded the motion.
   - The committee voted unanimously with two abstentions to approve the October 16, 2024, meeting minutes.

4. **OLD BUSINESS:**
   - At the October 16, 2024 meeting, Dr. Bruchas's BUA was approved pending successful completion of the lab inspection. This BUA is still pending.
   - At the October 16, 2024 meeting, Dr. Reh's BUA was approved pending successful completion of the lab inspection. This BUA has been sent.
   - At the October 16, 2024 meeting, Dr. Starita's BUA was approved pending clarification of lab practices. This BUA has been sent.
   - At the October 16, 2024 meeting, Dr. Kruse-Jarres's BUA was approved pending confirmation of room locations. This BUA has been sent.

5. **BIOSAFETY OFFICER (BSO) REPORT***:* The Biosafety Officer Report includes projects involving: (1) recombinant or synthetic nucleic acids covered under Sections III-E and III-F of the *NIH Guidelines,* (2) non-recombinant biological agents requiring BSL-2 with BSL-3 practices containment or lower, and (3) administrative updates, such as room additions.
   a. Biosafety Officer Report
      - Dr. Zhang renewed work with human source material at BSL-2 and rDNA on the BUA *Exosomal protein study for breast cancer cell and Reat time electrochemical sensing of spike protein.* (Section III-F)
      - Dr. Zhang added work with Risk Group 2 wildtype bacteria at BSL-2 on the BUA *Molecular MR Imaging of Tumors*.
      - Dr. Barker-Haliski added work with rDNA and moved work to rooms in HSB H-wing on the BUA *Evaluating the anticonvulsant drugs in a mouse model of infection-induced seizures.* (Section III-F)
      - Dr. Mulligan renewed work with human source material at BSL-2 and rDNA on the BUA *Mediators Involved in Direct Lung Ischemia Reperfusion Injury of Lung.* (Section III-F)
      - Dr. Soberg registered work with agents not meeting the IBC's definition of a biohazard (mouse cells administered to mice) on the BUA *IPD In Vivo Core.*
      - Dr. Hsu renewed work with transgenic mice and rDNA on the BUA *Transgenic Resources Program.* (Section III-E and III-F)
      - Dr. Fu added work with Risk Group 2 wildtype bacteria at BSL-2 on the BUA *Mechanoregulatory mechanisms of von Willebrand disease and thrombosis.*
      - Dr. Amory started new work with human source material at BSL-2 on the BUA *Ongoing Research at UWMC Translation Research Unit (TRU).*

- Dr. Telfer renewed work with human source material at BSL-2 on the BUA *Robotic system to study injuries and surgical treatments of the joints of the human body.*
- Dr. Baker added work with recombinant Risk Group 1 bacteria on the BUA *Institute for Protein Design and Affiliate Investigators.* (Section III-E)
- Dr. Colby renewed the core approval for ABSL-2 and ABSL-2w/3 work in Comparative Medicine animal research facilities on the BUA *Comparative Medicine Animal Biosafety Level 2 Biocontainment Facilities*. Specific biological agents are approved for investigators prior to use in these approved spaces.
- Dr. Mitchell added work with wildtype strains of measles virus at BSL-2 on the BUA *Evolutionary, genetic, and molecular basis of host-pathogen interactions.*
- Dr. Scott took over the work previously overseen by Dr. Catterall on the BUA *Catterall Biohazards.* (Section III-D, III-E, and III-F)
- Dr. Gelb added work with human source material transduced with AAV on the BUA *Analysis of Inborn Error of Metabolism in Human Blood Samples*. (Section III-E)
- Dr. Pepple added work with previously approved agents in the Immunology Cell Analysis Facility on the BUA *The role of innate and adaptive immune system in a novel model of uveitis.* (Section III-D)
- The IBC Chair 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 with one recusal.

6. INDIVIDUAL PROJECT REVIEWS

a. Basso, Michele, renewal, *Brain circuits of perceptual decision-making in mice*

- NIH Guidelines Section III-D
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Basso lab studies how neurons and their interconnections give rise to complex behavior by manipulating and measuring neuronal activity in mice and performing in vitro experiments in NHP material.
- The lab works with NHP material in vitro at BSL-2. They also work with AAV and third generation lentiviral vectors in vitro and in mice.
- The lab was inspected and all deficiencies have been corrected.
- All required trainings are complete.
- The IACUC protocol is still pending.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Basso.
- The Committee voted unanimously to approve the draft BUA for Dr. Basso, pending submission and review of the IACUC protocol.

b. Basso, Michele, renewal, *Decision-making under uncertainty*

- NIH Guidelines Section III-D
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Basso lab studies how the brain controls decision-making by manipulating and measuring brain activity in NHPs while they perform sophisticated behavioral and cognitive tasks.
- The lab works with AAV and third generation lentiviral vectors in NHPs at ABSL-2.

- A lab inspection was not required as all work takes place inside a vivarium.
- All required trainings are complete.
- The IACUC protocol is still pending.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Basso.
- The Committee voted unanimously to approve the draft BUA for Dr. Basso, pending submission and review of the IACUC protocol.

c. Fuller, Deborah, new, *Vaccine Tumor Models*

- NIH Guidelines Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Fuller lab studies treatment of tumors with DNA and RNA vaccines in mice.
- The lab works with rDNA including enhanced gene delivery methods in mice and in vitro, as well as E. coli non-pathogenic strains in vitro.
- A lab inspection has been performed and is still pending a response.
- All required trainings are complete.
- This project has an IACUC protocol in review.
- 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, pending successful completion of the lab inspection.

d. Keene, Dirk, renewal, *Neurodegenerative Disease & Disorder*

- NIH Guidelines Section III-D
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Keene lab studies cell and animal models of neurological disease to better understand the causes and develop effective therapies.
- The lab works with NHP material and human source material in vitro at BSL-2. They also work with AAV and rDNA.
- The lab inspection is scheduled for after the IBC meeting.
- All required trainings are complete.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Keene.
- The Committee voted unanimously to approve the draft BUA for Dr. Keene, pending successful completion of the lab inspection.
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e. Koelle, David, change, *Koelle Laboratory at UW*

- NIH Guidelines Section III-D
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Koelle lab has various research efforts in T-cell response to infection, virology, viral cancers, and vaccines. This change is to process samples from a clinical trial for a malaria vaccine that contains recombinant Plasmodium falciparum.
- The lab is adding in vitro work with recombinant Plasmodium falciparum at BSL-2.
- A lab inspection was not required as the lab was recently inspected.
- All required trainings are complete.
- A medical management plan is in place for Plasmodium species.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Koelle.

- The Committee voted unanimously with one recusal to approve the draft BUA for Dr. Koelle.

f. Marchiano, Silvia, change, *Pharmacology of cell-based therapy*

- NIH Guidelines Section III-D
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Marchiano lab studies the treatment of heart diseases by administering genetically modified human stem cell-derived cardiomyocytes to rabbits.
- They are adding in vitro work with human source material at BSL-2, as well as third generation lentiviral vectors, E. coli K-12, and rDNA.
- The lab was inspected, and no deficiencies were noted.
- All required trainings are complete.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Marchiano.
- The Committee voted unanimously to approve the draft BUA for Dr. Marchiano.

g. Nghiem, Paul, renewal, *Merkel Cell Carcinoma Studies*

- NIH Guidelines Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Nghiem lab studies the underlying mechanisms of Merkel cell carcinoma, identifies patient-specific T cell receptors that recognize skin cancers, and develops methods of prevention and treatment.
- The lab works with amphotropic gammaretroviral vectors, human source material, lentiviral vectors with oncogenic inserts, and NHP material in vitro at BSL-2. They also work with rDNA, E. coli K-12 derivative strain, non-pathogenic E. coli strains, and S. cerevisiae in vitro.
- A lab inspection has been performed and is still pending a response.
- All required trainings are complete.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Nghiem.
- The Committee voted unanimously to approve the draft BUA for Dr. Nghiem with one recusal, pending successful completion of the lab inspection.

h. Pun, Suzie, renewal, *Biomaterials for biomedical applications*

- NIH Guidelines Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Pun lab works to develop biomaterials for various medical applications including anti-cancer treatments, central nervous system afflictions, kidney disease, and traumatic injuries.
- The lab works with human source material, human and murine cells transduced with lentiviral vectors, gammaretroviral vectors (ecotropic and amphotropic), and rDNA including enhanced gene delivery methods in mice at ABSL-2. They do in vitro work with human source material, lentiviral vectors, ecotropic and amphotropic gammaretroviral vectors at BSL-2, as well as rDNA including enhanced gene delivery methods and E. coli K-12 derivative strains.
- A lab inspection has been performed and is still pending a response.
- All required trainings are complete.

This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Pun.
- The Committee voted unanimously to approve the draft BUA for Dr. Pun, pending successful completion of the lab inspection.

i. Simpson, Cory, renewal, *Skin cell differentiation, regeneration, and disease models*
- NIH Guidelines Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Simpson lab studies potential treatments for human skin diseases using cell culture and organoids.
- The lab works with amphotropic gammaretroviral vectors, recombinant HSV-2, human source material, and lentiviral vectors at BSL-2. They also work with rDNA including enhanced gene delivery methods and E. coli K-12 strains.
- The lab was inspected, and no deficiencies were noted.
- All required trainings are complete.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Simpson.
- The Committee voted unanimously to approve the draft BUA for Dr. Simpson.

j. Stetson, Daniel, change, *Mechanisms and Consequences of Innate Immune Detection of Nucleic Acids*
- NIH Guidelines Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Stetson lab studies how eukaryotic cells detect nucleic acids, typically in the context of infection or cancer, and what sensor and effector molecules are involved in this type of innate immune sensing.
- The lab is adding in vitro work with AAV.
- A lab inspection was not required as the lab was recently inspected.
- All required trainings are complete.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Stetson.
- The Committee voted unanimously to approve the draft BUA for Dr. Stetson.

k. Wang, Wang, renewal, *Role of mitochondria in cardiac physiology and disease*
- NIH Guidelines Sections III-D, III-E, and III-F
- The assigned IBC Primary Reviewer presented the Primary Review.
- The Wang lab uses in vitro and in vivo models to study the role of mitochondrial functions such as respiration, calcium, reactive oxygen species and dynamics in the heart under normal and disease conditions.
- The lab works with human cells transduced with adenoviral vectors (E1a deleted, with and without oncogenic inserts) and third generation lentiviral vectors with and without oncogenic inserts in rats at ABSL-2. They have invitro work with those vectors and human source material at BSL-2. They also work with AAV in mice and in vitro, rDNA including enhanced gene delivery methods, and E. coli K-12 and non-pathogenic strains.
- The lab was inspected, and all deficiencies have been corrected.
- All required trainings are complete.

- This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Wang.
- The Committee voted unanimously to approve the draft BUA for Dr. Wang.

7. SUBCOMMITTEE REPORTS:

l. Grivas, Petros, new, *MULTICENTER STUDY EVALUATING THE EFFICACY AND SAFETY OF AUTOGENE CEVUMERAN PLUS NIVOLUMAB VERSUS NIVOLUMAB AS ADJUVANT THERAPY IN PATIENTS WITH HIGH-RISK MUSCLE-INVASIVE UROTHELIAL CARCINOMA*

- NIH Guidelines Sections III-C, III-E
- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is a multi-site, company sponsored, first-in-humans clinical trial for autogene cevumuran, a product that stimulates T cell response to a patient's individual mutant tumor neoantigens to provide a synergistic antitumor effect with licensed cancer therapies.
- The lab prepares and administers an mRNA vaccine to study participants.
- The required trainings are still pending.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Grivas. Another member seconded the motion.
- The Committee voted unanimously with one abstention to approve the draft BUA for Dr. Grivas, pending completion of the required trainings.

m. Harris, William, new, *An Open-Label, Dose Escalation, Multi-Center Phase I/II Clinical Trial of ECT204 T-Cell Therapy in Adults with Advanced Hepatocellular Carcinoma (HCC)*

- NIH Guideline Sections III-C
- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is an industry sponsored phase I/II trial of an autologous CAR T-cell product engineered to target and eliminate GPC3-expressing tumor cells for the treatment of advanced hepatocellular carcinoma (HCC).
- The lab will administer human cells transduced with third generation lentiviral vectors to study participants.
- The required trainings are still pending.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Harris. Another member seconded the motion.
- The Committee voted unanimously to approve the draft BUA for Dr. Harris, pending completion of the required trainings.

n. Hirayama, Alex, new, *Phase 1, Multicenter, Open-Label Study Of CC-97540 (BMS-986353), CD19-Targeted Nex-T Chimeric Antigen Receptor (CAR) T Cells, in Participants with Severe, Refractory Autoimmune Diseases: Systemic Lupus Erythematosus, Idiopathic Inflammatory Myopathy or Systemic Sclerosis*

- NIH Guidelines Section III-C

- Two members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This is an industry-sponsored, multicenter, phase 1 trial of an autologous CAR T-cell therapy for autoimmune diseases that targets CD19 and depletes autoreactive B cells.
- The lab will administer human cells transduced with lentiviral vectors to study participants.
- All required trainings are complete.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Hirayama. Another member seconded the motion.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Hirayama.</u>

o. Hyde, Jennifer, renewal, *Pathogenesis studies of alphaviruses and +ssRNA viruses*
- NIH Guidelines Sections III-D, III-E, and III-F. Includes BSL-3 and Select Agents.
- Five members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- The Hyde lab studies virus-host interactions in vitro and in vivo with a focus on host and viral determinants that drive evolution and emergence of RNA viruses.
- The lab works with Ross River virus, Sindbis virus, Venezuelan equine encephalitis virus (VEEV) strain TC-83 (excluded from select agent regulations), both in vitro and in mice at A/BSL-2. Human and NHP materials and rDNA for gene delivery are used in vitro.
- At BSL-3, the lab studies Semliki Forest virus and SARS-CoV-2 in vitro and Chikungunya virus, VEEV, and Western equine encephalitis virus (WEEV) in vitro and in mice, including select-agent VEEV strains.
- The lab inspection is scheduled for after the IBC meeting.
- All required trainings are complete.
- Medical management plans are in place for work with Chikungunya virus, Semliki Forest virus, SARS-CoV-2, and Venezuelan and Western equine encephalitic viruses.
- This project has an IACUC protocol in review.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. Hyde. Another member seconded the motion.
- <u>The Committee voted unanimously to approve the draft BUA for Dr. Hyde, pending successful completion of the lab inspection and edits to the BUA application.</u>

p. McClelland, R. Scott, new, *A randomized, double-blind, placebo-controlled Phase 1 trial to evaluate the safety, tolerability, immunogenicity, and efficacy of Sanaria® PfSPZ-LARC2 Vaccine, a late-arresting, replication-competent, genetically attenuated Plasmodium falciparum vaccine by controlled human malaria infection in malaria-naïve healthy adults (DMID 23-0010)*
- NIH Guidelines Sections, III-D, III-C
- Four members of the IBC and one ad-hoc reviewer served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
- This clinical study is a single-site, two-part Phase 1 double-blinded randomized placebo-controlled clinical trial to evaluate the tolerability, safety, immunogenicity, and vaccine efficacy of a late-arresting, genetically attenuated P. falciparum sporozoite vaccine (PfSPZ-LARC2) against controlled human malaria infection (CHMI).

- The pharmacy will prepare the study products for administration to human subjects. Then samples from participants will be processed in research labs later.
- There was a discussion regarding housing of infected patients during the study and the cadence of molecular testing. Study participants will undergo PCR testing at enrollment, pre-vaccination, and periodically after administration of the vaccine and challenge. Participants will submit a symptom log to the study team and will be treated with first line anti-malarial drugs if an infection is documented by diagnostic PCR.
- The study infusion site, preparing pharmacy, and processing labs were recently inspected with no deficiencies.
- All required trainings are complete.
- A medical management plan is in place for Risk Group 2 Plasmodium species.
- The draft BUA letter was shown.
- A member made a motion to approve the draft BUA letter for Dr. McClelland. Another member seconded the motion.
- <u>The Committee voted unanimously with one recusal to approve the draft BUA for Dr. McClelland.</u>

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

11. **MEETING ADJOURNED AT APPROXIMATELY 11:38 a.m.**