



INSTITUTIONAL BIOSAFETY COMMITTEE

UNIVERSITY *of* WASHINGTON

Meeting Minutes

Date: Wednesday, February 15, 2023

Time: 10:00 AM – 12:00 PM

Location: Zoom

- Members Present:**
1. Thea Brabb, Comparative Medicine (*Animal Containment Expert*)
 2. Lesley Colby, Comparative Medicine (*Animal Containment Expert*)
 3. Lesley Decker, Environmental Health & Safety (*Biosafety Officer*)
 4. Richard Grant, Washington National Primate Research Center
 5. Erin Heiniger, Department of Bioengineering (*Laboratory Specialist*)
 6. Stephen Libby, Laboratory Medicine (*Animal Containment Expert*)
 7. Susan Parazzoli (*Community Member*)
 8. Jason Smith, Microbiology (*IBC Chair*)
 9. Paul Swenson, Seattle-King Co. Dept. of Public Health (*Community Member*)
 10. Elyse Verstelle, Department of Immunology (*Laboratory Specialist*)

Commonly Used Abbreviations

IBC: Institutional Biosafety Committee

BSO: biological safety officer

BUA: Biological Use Authorization

BSL: biosafety level

BSL-2w/3: BSL-2 with BSL-3 practices

PI: principal investigator

IACUC: Institutional Animal Care and Use Committee

NIH: National Institutes of Health

NHP: non-human primate

DURC: Dual Use Research of Concern

SOP: standard operating procedure

AAV: adeno-associated viral vector

1. **CALL TO ORDER:** The Institutional Biosafety Committee (IBC) Chair called the meeting to order at 10:03 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 January 18, 2023, meeting.
 - A member made a motion to approve the January 18, 2023, minutes. Another member seconded the motion.
 - The committee voted unanimously to approve the January 18, 2023, meeting minutes, with one member abstaining and one member not voting.
4. **OLD BUSINESS:**
 - At the January 18, 2023, meeting, Dr. Akamatsu's BUA was approved pending successful completion of the lab inspection. This BUA has been sent.
 - At the January 18, 2023, meeting, Dr. Carroll's BUA was approved pending a successful lab inspection. This BUA has been sent.
 - At the January 18, 2023, meeting, Dr. Hansen's BUA was approved pending successful completion of the lab response. This BUA is still pending.
 - At the January 18, 2023, meeting, Dr. Horwitz's BUA was approved pending successful completion of the lab response. This BUA has been sent.
 - At the January 18, 2023, meeting, Dr. Jayadev's BUA was approved pending successful completion of a lab inspection. This BUA has been sent.
 - At the January 18, 2023, meeting, Dr. Johnson Erickson's BUA was approved pending successful completion of a lab inspection response. This BUA has been sent.
 - At the January 18, 2023, meeting, Dr. Reniere's BUA was approved pending clarification of the tumor suppressor gene insert. This BUA is still pending.
 - At the January 18, 2023, Seelig's BUA was approved pending successful completion of a lab inspection response. This BUA has been sent.
 - At the January 18, 2023, meeting, Dr. Sellers' BUA was approved pending successful completion of a lab inspection response. This BUA is still pending.
 - At the January 18, 2023, meeting, Dr. Soge's BUA was approved pending completion of a successful lab. This BUA is still pending.
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. Geng added new rooms for work with previously approved agents to the BUA *The Molecular Basis of Social Behavior (NIH Guidelines N/A)*.
 - Dr. Moritz registered work adding new non-oncogenic genes to previously approved AAV to the BUA *Combined Stem Cell Transplantation and Targeted Microstimulation to Direct the Formation of Functional Connections and Neural Repair in Rats (NIH Guidelines III-D)*.

- Dr. Shendure renewed the BUA *Foegen Flow Lab* for as a core facility working with previously approved cell lines for in vitro BSL-1 and BSL-2 research (NIH Guidelines N/A).
- Dr. Eichler renewed the in vitro work on the BUA *Northwest Genomics Center* using SARS-CoV-2 nucleic acid, non-viral recombinant or synthetic DNA/RNA, and human blood, tissue, body fluids, and cell lines (NIH Guidelines III-F).
- Dr. Averkiou added new rooms for work with previously approved agents to the BUA *A novel paradigm of sensitization of the tumor microenvironment with image-guided ultrasound cavitation and mechanotherapeutics for targeted HCC treatment* (NIH Guidelines N/A).
- Dr. Kiem re-added agents previously reviewed by the IBC in June 2022 to the BUA *Strategies to Improve Hematopoietic Stem Cell Transduction* (NIH Guidelines III-D).
- Dr. Weil renewed the BUA *Isolation of gut microbes from human stool/vomitus, testing bacteria for pathogen interactions* working with various BSL-1 and BSL-2 bacteria species in vitro (NIH Guidelines N/A).
- Dr. Zweifel added previously approved agents for in vitro use in a core facility to the BUA *Genetic Dissection of the Emotional Basis of Learning* (NIH Guidelines III-D).
- Dr. Valdmanis registered work that adds new human cell lines to the BUA *Mitigating host responses for effective gene therapy* (NIH Guidelines N/A).
- Dr. Levy added in vitro work with human blood, tissues, body fluids, and cell lines to the BUA *Levy Research Group: ChEEP ChEEP, EcoMiD, EcoZUR, PAASIM* (NIH Guidelines N/A).
- Dr. Veesler added in vitro work with heat inactivated MERS-CoV fixed or inactivated samples to the BUA *Expression of recombinant proteins using mammalian cell lines* (NIH Guidelines N/A).
- Dr. Fuller added the use of enhanced gene delivery methods with recDNA administered to NHPs, a lab room was added for work with previously approved agents, and new gene inserts were added to the BUA *Influenza DNA Vaccine* (NIH Guidelines 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.

6. INDIVIDUAL PROJECT REVIEWS

- a. Bryant, Astra, new, *Thermosensation of parasitic nematodes*
 - NIH Guidelines Sections III-D, III-E, and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Bryant lab aims to develop a mechanistic understanding of the thermal physiology of parasitic nematodes.
 - Research in this lab includes working with transgenic *Strongyloides* human-parasitic nematodes in vitro and in gerbils and rats.
 - The lab inspection is scheduled for after the IBC meeting.
 - All required trainings are complete.
 - A medical management plan will be developed, and medical counseling will be required prior to starting work.

- 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. Bryant.
 - The Committee voted unanimously to approve the draft BUA for Dr. Bryant pending development of a medical management plan and successful completion of the lab inspection, with one member not voting.
- b. Corey, Eva, renewal, *Pre-Clinical Models, Mechanisms, and Markers of Prostate Cancer and Prostate Cancer Metastasis.***
- *NIH Guidelines* Sections III-D and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Corey lab aims to discover the mechanisms of advanced prostate cancer and evaluate new treatments for this disease.
 - This lab works with human cell lines transfected with non-viral recombinant or synthetic DNA/RNA in mice.
 - 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. Corey.
 - The Committee voted unanimously to approve the draft BUA for Dr. Corey.
- c. Folch, Albert, renewal, *Microfluidic analysis of cancer and normal tissues***
- *NIH Guidelines* Sections III-D and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Folch lab aims to develop microfluidic devices to study both normal and cancer tissues.
 - This lab works with human and murine cells transduced with lentiviral vectors in vitro and in mice.
 - 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. Folch.
 - The Committee voted unanimously to approve the draft BUA for Dr. Folch pending successful completion of a lab inspection, with one member not voting.
- d. Gerner, Michael, change, *Organization of Immunity***
- *NIH Guidelines* Sections III-D and III-E apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Gerner lab is adding the use of recombinant or synthetic DNA/RNA with enhanced gene delivery methods both in vitro and in mice at BSL/ABSL-1.
 - A lab inspection was not required as this work takes place inside a vivarium.
 - 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. Gerner.

- The Committee voted unanimously to approve the draft BUA for Dr. Gerner, with one member not voting.
- e. Groat Carmona, Anna Maria, renewal, *Characterizing the complex protein network that modulates Plasmodium parasite membrane morphogenesis during liver-stage development.*
- NIH Guidelines Sections III-D, III-E, and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Groat Carmona lab aims to identify and characterize the complex protein network on the Plasmodium parasite plasma membrane responsible for invasion and the successful infection of liver cells during its development.
 - This research includes working with Plasmodium yoelii in mosquitoes. They also work with Dengue virus and non-viral recombinant or synthetic DNA/RNA with and without enhanced gene delivery methods 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. Groat Carmona.
 - The Committee voted unanimously to approve the draft BUA for Dr. Groat Carmona pending clarification of use of Dengue virus and if the plasmodium is recombinant, with one member not voting.
- f. Jerome, Keith, renewal, *Targeted nanocarriers to accelerate depletion of the HIV reservoir*
- NIH Guidelines Sections III-D and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Jerome lab aims to develop a therapeutic approach to HIV infections using a macaque SHIV model.
 - This research includes working with Simian Human Immunodeficiency Virus (SHIV) in vitro at BSL-2w/3 practices and non-viral recombinant or synthetic DNA/RNA at BSL-1.
 - 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. Jerome.
 - The Committee voted unanimously to approve the draft BUA for Dr. Jerome, with one member not voting.
- g. Jordan, Tristan, new, *Identification and Regulation of Eukaryotic Antiviral Systems*
- NIH Guidelines Sections III-D, III-E, and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Jordan lab aims characterize the immune response to viral infection in a variety of organisms and understand how viruses circumvent these responses.
 - This lab performs in vitro work with lentiviral vectors containing oncogenic inserts at BSL-2w/3 practices. Additionally, they work with several Risk Group 2 wild type and recombinant viruses and amoeba and non-viral recombinant or synthetic DNA/RNA with enhanced gene delivery methods. All work is done in vitro.
 - The committee discussed sharing resources for sharps substitution and elimination for work involving Dengue virus.

- The lab inspection is scheduled for after the IBC meeting.
 - All required trainings are complete.
 - There are occupational health requirements in place for Dengue, Influenza and Vaccinia viruses.
 - The draft BUA letter was shown.
 - The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Jordan.
 - The Committee voted unanimously to approve the draft BUA for Dr. Jordan pending successful completion of the lab inspection.
- h. Lagunoff, Michael, renewal, *Molecular Virology*
- *NIH Guidelines* Sections III-D, III-E, and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Lagunoff lab aims to determine how viruses cause disease.
 - Research in this lab includes working with gammaretroviral vectors, lentiviral vectors with oncogenic inserts, adenoviral vectors, and recombinant and wild type Risk Group 2 human viruses in vitro.
 - The lab inspection is scheduled for after the IBC meeting.
 - All required trainings are complete.
 - There are occupational health requirements in place for Dengue and Vaccinia viruses.
 - The draft BUA letter was shown.
 - The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Lagunoff.
 - The Committee voted unanimously to approve the draft BUA for Dr. Lagunoff pending clarification of a Vaccinia strain.
- i. Miyaoka, Robert, renewal, *Small Animal PET/CT Imaging Core*
- *NIH Guidelines* Section III-D applies.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Miyaoka lab provides core services of small animal PET, CT and combined PET/CT imaging for internal UW and external labs. The aim for this study is to image lung cancer mice infected with an adenoviral vector which initiates tumor formation.
 - This research includes working with adenoviral vectors in mice at ABSL-1.
 - The lab was inspected, and no deficiencies were noted.
 - 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. Miyaoka.
 - The Committee voted unanimously to approve the draft BUA for Dr. Miyaoka.
- j. Sniadecki, Nathan, renewal, *Swine Model of Heart Disease and Novel Therapies*
- *NIH Guidelines* Sections III-D and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Sniadecki lab aims to develop new therapies for the treatment of heart failure.
 - This research includes working with AAV and human induced pluripotent stem (iPS) cells in pig and in vitro.
 - A lab inspection was not required as the lab was recently inspected.
 - 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. Sniadecki.
 - The Committee voted unanimously to approve the draft BUA for Dr. Sniadecki.
- k. Stella, Nephi, new, *AAV for mice brain imaging*
- *NIH Guidelines* Sections III-D, III-E, and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Stella lab aims to dissect how GPCR systems function in the contexts of stress, depression, addiction, and pain.
 - This research includes adeno-associated viral vectors in mice and in vitro. Additionally, they use enhanced gene delivery methods of non-viral recombinant or synthetic DNA/RNA in vitro.
 - A discussion occurred regarding the required biosafety level for the animal work. The lab stated their animal work takes place in ABSL-2 facilities but does not require ABSL-2. The BSO will ask the lab to edit the application to reflect the appropriate ABSL level.
 - The lab was inspected, and no deficiencies were noted.
 - 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. Stella.
 - The Committee voted unanimously to approve the draft BUA for Dr. Stella pending the biosafety level update to the BUA application.
- l. Stetson, Daniel, renewal, *Mechanisms and Consequences of Innate Immune Detection of Nucleic Acids*
- *NIH Guidelines* Sections III-D, III-E, and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Stetson lab aims to study how cells detect viral infection using sensors of nucleic acids, how these systems protect against infection and cancer, and how they can cause autoimmune disease if misregulated.
 - This research includes work with Risk Group 2 virus and bacteria in mice and gammaretroviral vectors with oncogenic inserts and multiple Risk Group 2 viruses as well as lentiviral vectors in vitro.
 - The lab was inspected, and all deficiencies have been corrected.
 - All required trainings are complete.
 - There are occupational health requirements for work with Herpes simplex virus 2 (HSV-2) TK knockout strains and Vaccinia virus.
 - 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. Stetson.
 - The Committee voted unanimously to approve the draft BUA for Dr. Stetson.
- m. Vasquez, Claudia, new, *Regulation of organ form and function*
- *NIH Guidelines* Sections III-D and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.

- The Vasquez lab aims to identify new molecular mechanisms that control the cell shape and organ form using the fruit fly, *Drosophila melanogaster*.
 - The research in this lab involves using recombinant DNA to create transgenic *Drosophila* in vitro.
 - 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. Vasquez.
 - The Committee voted unanimously to approve the draft BUA for Dr. Vasquez.
- n. Yang, Xiaoming, renewal, *Interventional Oncology (Rats)*
- *NIH Guidelines* Sections III-D, III-E, and III-F apply.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Yang lab aims to develop new therapies for cancer.
 - This research includes human cells transduced with third generation lentiviral vectors and T-VEC oncolytic Herpes virus 1 in rats. They also work with non-viral recombinant or synthetic DNA/RNA with enhanced gene delivery methods, K-12 strains of *E. coli*, and human blood, tissue, body fluids, and cell lines in vitro.
 - The lab was inspected, and all deficiencies have been corrected.
 - All required trainings are complete.
 - IACUC protocol has not been submitted.
 - The draft BUA letter was shown.
 - The IBC Primary Reviewer made a motion to approve the draft BUA for Dr. Yang.
 - The Committee voted unanimously to approve the draft BUA for Dr. Yang.
- o. Yazdan-Shahmorad, Azadeh, renewal, *Understanding the underlying mechanisms of neural stimulation*
- *NIH Guidelines* Section III-D applies.
 - The assigned IBC Primary Reviewer presented the Primary Review.
 - The Yazdan-Shahmorad lab aims to develop techniques for controlling neural activity in rats.
 - This lab uses adeno-associated viral vectors in rat and in vitro.
 - The lab inspection is scheduled for after the IBC meeting.
 - 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. Yazdan-Shahmorad.
 - The Committee voted unanimously to approve the draft BUA for Dr. Yazdan-Shahmorad.

7. SUBCOMMITTEE REPORTS:

- p. Fuller, Deborah, renewal, *Mouse Models for Prophylaxis and Therapy*
- Three members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
 - The Fuller lab aims to develop vaccines and treatments for viral and fungal pathogens.

- This lab works with Dengue virus, various Influenza viruses (A and B), Zika virus, SARS-CoV-2, non-viral recombinant or synthetic DNA/RNA with and without enhanced gene delivery methods, in mice and in vitro. They also work with Coccidioides strains in mice only and Simian Immunodeficiency Virus (SIV) in vitro only.
 - A lab inspection has been performed and is still pending a response.
 - All required trainings are complete.
 - Occupational health recommendations for Coccidioides posadasii are in review. A medical management plan is in place for SARS-CoV-2.
 - 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. Fuller. Another member seconded the motion.
 - The Committee voted unanimously to approve the draft BUA for Dr. Fuller pending occupational health review of a Coccidioides posadasii.
- q. Gale, Michael, change, *The Host Response to BSL-3 Pathogens*
- Three members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
 - The Gale lab is adding wildtype and recombinant strains of SARS-CoV-2 for use in vitro and in mice.
 - A lab inspection was not required as all work takes place inside a vivarium.
 - All required trainings are complete.
 - A medical management plan is in place for SARS-CoV-2.
 - The draft BUA letter was shown.
 - A member made a motion to approve the draft BUA letter for Dr. Gale. Another member seconded the motion.
 - The Committee voted unanimously to approve the draft BUA for Dr. Gale, with one member recusing themselves from the vote.
- r. Sherman, David, renewal, *MTB Disease and Drug Response*
- Three members of the IBC served as the Subcommittee Reviewers. One of the Subcommittee Reviewers presented the Subcommittee Report.
 - The Sherman lab aims to understand the metabolic and genetic pathways that allow Mycobacterium tuberculosis to survive and replicate in host tissues.
 - This lab works with multiple Mycobacterium strains in vitro and in mice.
 - Committee discussions occurred concerning the potential to create antibiotic resistant M. tuberculosis or M. bovis mutants. The lab has not currently identified any antibiotic resistant mutants. If antibiotic resistant mutants are created, they will need to be reviewed by the IBC.
 - A lab inspection has been performed and is still pending a response.
 - All required trainings are complete.
 - A medical management plan is in place for M. tuberculosis.
 - 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. Sherman. Another member seconded the motion.
 - The Committee voted unanimously to approve the draft BUA for Dr. Sherman.

10. FOR YOUR INFORMATION:

- **NIH Incident Report**

- The following incident reports have been submitted to the NIH:
 - An incident involving a needlestick from a needle potentially contaminated with human cells transduced with third generation lentiviral vectors (non-HIV pseudo typed, replication deficient) with oncogenic inserts.
- The NIH has responded that no further information or action was required for recent incidents involving:
 - An incident involving a sharps injury from a stylet that had been used to collect cerebrospinal fluid from an NHP previously exposed to SIV.
 - An incident involving a scratch from an NHP previously exposed to SHIV while distributing food treats.

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

12. MEETING ADJOURNED AT APPROXIMATELY 11:56 P.M.