



INSTITUTIONAL BIOSAFETY COMMITTEE

UNIVERSITY *of* WASHINGTON

Meeting Minutes

Date: Wednesday, August 20, 2014

Time: 10:00 AM – 12:00 PM

Location: Health Sciences Building T-269

Members Present:

1. Michael Agy, Washington National Primate Research Center
2. Thea Brabb, Comparative Medicine
3. Lesley Colby, Comparative Medicine
4. Elizabeth Corwin, Community Member (Vice Chair)
5. Jean Haulman, UW Travel Clinic
6. Stephen Libby, Laboratory Medicine (Chair)
7. Jeanot Muster, Pharmacology
8. Matthew R. Parsek, Microbiology
9. Eric Stefansson, Environmental Health & Safety
10. Valerie Yerkes, Community Member

Members Absent:

11. H.D. "Toby" Bradshaw, Biology
12. Scott Meschke, Environmental & Occupational Health Sciences
13. Mei Y. Speer, Bioengineering
14. Paul Swenson, Community Member, Seattle-King Co. Dept of Public Health

Guests Present:

1. Linda Arnesen, Biosafety Officer, EH&S Research & Occupational Safety
2. Andrea Badger, IBC/Research Coordinator, EH&S Research & Occupational Safety
3. Jacqui Bales, Biosafety Officer, EH&S Research & Occupational Safety
4. Katia Harb, Assistant Director, EH&S Research & Occupational Safety
5. Laury Istvan, Assistant Director, Office of Animal Welfare
6. Lesley Leggett, Biosafety Officer, EH&S Research & Occupational Safety
7. Glenn McLean, Biosafety Officer, EH&S Research & Occupational Safety

1. **CALL TO ORDER:** Steve Libby called the meeting to order at 10:06. A quorum was present.
2. **REMINDER:** Steve Libby 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. **BIOSAFETY OFFICER (BSO) REPORTS:** The BSO reports are for project reviews involving infectious agents and for projects falling under Section III-E and III-F of the *NIH Guidelines*.
 - Each biosafety officer presented their own section of the Biosafety Officer Report, which spans the dates from May 24, 2014 to July 25, 2014.
 - A discussion occurred regarding the Di Stilio project and whether the fern spores will be properly contained. The plant expert reviewed the project before his vacation and the containment procedures are appropriate.
 - A question was asked about the Katze project. The occupational health nurses are doing a review and will make their recommendations to the lab.
 - Steve Libby sought a motion to approve this month's Biosafety Officer Report.
 - Eric Stefansson made a motion to approve this month's Biosafety Officer Report. Matt Parsek seconded the motion.
 - The Committee voted unanimously to approve this month's Biosafety Officer Report.
4. **APPROVAL OF MINUTES:**
 - Steve Libby sought a motion to approve the minutes from the June 18, 2014 and July 16, 2014 minutes meeting.
 - Lesley Colby made a motion to approve the June 18, 2014 and July 16, 2014 minutes. Valerie Yerkes seconded the motion.
 - The committee voted unanimously, with four abstentions, to approve the June 18th, 2014 meeting minutes and the July 16, 2014 meeting minutes.
5. **INDIVIDUAL PROJECT REVIEWS** (*IBC member Primary Reviewer Reports and Biological Use Authorization (BUA) letters available as separate documents*)
 1. Bamford, Nigel, renewal, *Development of Functional Corticostriatal Afferents*
 - Valerie Yerkes served as the Primary Reviewer and Linda Arnesen served as the Biosafety Officer Reviewer. Valerie Yerkes presented the Primary Reviewer Report.
 - The lab's overall goal is to search for a cure for movement disorders and drug addiction, by studying how these diseases alter brain circuits within the striatum.
 - Agents used in this protocol include AAV and CAV, as well as several chemicals and two biological toxins, picrotoxin and diphtheria toxin.
 - A discussion of toxins of biological origin occurred. A consult regarding Dr. Bamford's toxin use was performed, and a special checklist was used.
 - Although toxins will not appear on the BUA letter, EH&S biosafety is now screening for toxin use. Questions about toxin use are already included on both the EH&S/IBC Biological Use Authorization application and the OAW/IACUC Project Review form. A consult process and a checklist specifically for toxins of biological origin has been developed. EH&S will follow up with identified toxin users every three years.
 - The draft BUA letter was shown.

- Valerie Yerkes made a motion to approve the draft BUA for Dr. Bamford. A second is not needed since she is the Primary Reviewer.
 - The Committee voted unanimously to approve the draft BUA for Dr. Bamford.
2. Campbell, Lee Ann, change, *Chlamydia pneumoniae* antigens of biological significance
- Eric Stefansson served as the Primary Reviewer and Jacqui Bales served as the Biosafety Officer Reviewer. Eric Stefansson presented the Primary Reviewer Report.
 - This is a project change in which the investigator requests to add the use of *Chlamydia muridarum*, which can be used as a murine model for *C. trachomatis* infections in mice.
 - The investigator is already approved for several other strains of Chlamydia.
 - It is not clear if this agent can cause human infections, but it is a mouse pathogen and has been approved by the IBC at biosafety level 2 in the past.
 - A discussion of the hazard to the mice or animal handlers occurred. The work will be conducted in ABSL-2 rooms, which offer much protection against the main routes of transmission to other mice and animal handlers. The veterinarians on the committee are comfortable approving the work at ABSL-2.
 - The draft BUA letter was shown.
 - Eric Stefansson made a motion to approve the draft BUA for Dr. Campbell. A second is not needed since he is the Primary Reviewer.
 - The Committee voted unanimously to approve the draft BUA for Dr. Campbell.
3. Fowler, Douglas, new, *Large-Scale Phenotyping of Tumor Suppressor Variants in Human Cells*
- Elizabeth Corwin served as the Primary Reviewer and Lesley Leggett served as the Biosafety Officer Reviewer. Elizabeth Corwin presented the Primary Reviewer Report.
 - The Fowler lab studies how mutations impact protein function. In this project, the lab will experimentally determine the phenotypic effects of single mutation tumor suppressor variants on human cancer cells.
 - The agents used on this project include lentiviral vectors, plasmid DNA, and human cells.
 - The draft BUA letter was shown.
 - The cell sorting rooms needs to be added to the BUA letter.
 - Elizabeth Corwin made a motion to approve the draft BUA for Dr. Fowler. A second is not needed since she is the Primary Reviewer.
 - The Committee voted unanimously to approve the draft BUA for Dr. Fowler, contingent upon adding the cell sorting rooms to the BUA letter.
4. Gire, David, new, *Neural circuit mechanisms of odor localization*
- Eric Stefansson served as the Primary Reviewer and Lesley Leggett served as the Biosafety Officer Reviewer. Eric Stefansson presented the Primary Reviewer Report.
 - The investigator has not yet arrived at the University. He needs the IBC approval so that he can transfer his grant from his previous institution to UW.
 - Some lab space has been assigned to Dr. Gire, but this is subject to change and the lab inspection will be completed after Dr. Gire arrives. The training has also not been completed, because Dr. Gire does not have a UW net id. The IACUC protocol is also still pending.

- The letter is stamped with a draft watermark and contains the statement “This BUA letter is a preliminary approval for funding purposes. Final approval will be granted pending IACUC protocol review, PI and lab staff training, and completion of satisfactory lab inspection.”
 - The draft BUA letter was shown.
 - Eric Stefansson made a motion to approve the draft BUA for Dr. Gire. A second is not needed since he is the Primary Reviewer.
 - Michael Agy entered the meeting at 10:40.
 - The Committee voted unanimously, with one abstention, to approve the draft BUA for Dr. Gire, with the understanding that a lab inspection and completion of training are still necessary before the work commences.
 - *Post-Meeting Update: Dr. Gire did not receive a copy of the draft approval letter. Instead, EH&S drafted a memo for Dr. Gire to provide to funding agencies. The memo says that the BUA application was reviewed and approved by the IBC but full approval can only be issued upon successful completion of a laboratory inspection and all required training.*
5. Goverman, Joan, renewal, *Animal Models of Autoimmunity*
- One member declared a conflict of interest.
 - Elizabeth Corwin served as the Primary Reviewer and Glenn McLean served as the Biosafety Officer Reviewer. Elizabeth Corwin presented the Primary Reviewer Report.
 - The Goverman lab works to utilize and develop mouse models of multiple sclerosis.
 - The lab work involves breeding multiple strains of transgenic mice, and uses vaccinia virus and adenoviral vectors.
 - The training and lab inspection has been completed.
 - The draft BUA letter was shown.
 - Thea Brabb exited the meeting at 10:48 due to a conflict of interest.
 - Elizabeth Corwin made a motion to approve the draft BUA for Dr. Goverman. A second is not needed since she is the Primary Reviewer.
 - The Committee voted unanimously, with one abstention, to approve the draft BUA for Dr. Goverman.
 - Thea Brabb re-entered the meeting at 10:49.
6. Koelle, David, change, *Koelle Laboratory at UW; HSV Immunotherapeutic Vaccines and Live HSV Challenge*
- Matt Parsek served as the Primary Reviewer and Glenn McLean served as the Biosafety Officer Reviewer. Matt Parsek presented the Primary Reviewer Report.
 - The investigator wishes to add the in-vitro use of gammaretroviral vectors.
 - The draft BUA letter was shown.
 - Matt Parsek made a motion to approve the draft BUA for Dr. Koelle. A second is not needed since he is the Primary Reviewer.
 - The Committee voted unanimously to approve the draft BUA for Dr. Koelle.
7. Kwon, Ronald, renewal, *Neuromuscular Regulation of Bone in Zebrafish*
- Jeanot Muster served as the Primary Reviewer and Jacqui Bales served as the Biosafety Officer Reviewer. Jeanot Muster presented the Primary Reviewer Report.
 - The investigator uses transgenic zebrafish in order to study osteogenesis.

- There were some lab inspection deficiencies that still need to be corrected.
 - The draft BUA letter was shown.
 - Jeanot Muster made a motion to approve the draft BUA for Dr. Kwon. A second is not needed since he is the Primary Reviewer.
 - The Committee voted unanimously to approve the draft BUA for Dr. Kwon, pending correction of the lab inspection deficiencies.
- 8. Moon, Randall, renewal, *Wnt genes and signaling***
- One member declared a conflict of interest.
 - Steve Libby served as the Primary Reviewer and Jacqui Bales served as the Biosafety Officer Reviewer. Steve Libby presented the Primary Reviewer Report.
 - The overall goal of the laboratory is to understand how a class of proteins, Wnts, function to regulate communication between cells in embryonic development and also between cells in adults. When the communication is disturbed, it can lead to cancer.
 - The lab works with a wide array of agents, including transgenic zebrafish, human cells, and lentiviral vectors.
 - The draft BUA letter was shown.
 - A discussion occurred regarding using the same room for both BSL2-with-3 practices and BSL-2. There is an SOP in place regarding what must be done to switch the room's containment levels.
 - A discussion occurred regarding the lentiviral vectors.
 - Jeanot Muster exited the meeting at 11:00 due to a conflict of interest.
 - Steve Libby made a motion to approve the draft BUA for Dr. Moon. A second is not needed since he is the Primary Reviewer.
 - The Committee voted unanimously, with one abstention, to approve the draft BUA for Dr. Moon.
 - Jeanot Muster re-entered the meeting at 11:02.
- 9. Murry, Charles, renewal, *Non-human Primate iPSC Derived Cardiomyocyte Grafts Evaluation in Myocardial Infarction***
- Michael Agy served as the Primary Reviewer and Linda Arnesen served as the Biosafety Officer Reviewer. Michael Agy presented the Primary Reviewer Report.
 - The overall goal of the research is to develop a therapy for cardiovascular disease and heart failure using tissue derived from stem cells.
 - The lab inspection has been completed.
 - The draft BUA letter was shown.
 - The PI and some lab members need to retake the biosafety training.
 - The PI also needs to submit documentation regarding the third generation lentiviral vector use.
 - Michael Agy made a motion to approve the draft BUA for Dr. Murry. A second is not needed since he is the Primary Reviewer.
 - The Committee voted unanimously to approve the draft BUA for Dr. Murry, contingent upon necessary training and clarification of lentiviral vector generation.
- 10. Reh, Thomas, renewal, *Retinal Repair in Monkeys***

- Mei Speer served as the Primary Reviewer and Lesley Leggett served as the Biosafety Officer Reviewer. On behalf of Mei Speer, Steve Libby presented the Primary Reviewer Report.
- The lab studies retinal cells, using both in vitro and in macaque models.
- Agents used on this project include AAV and lentiviral vectors, as well as non-human primate tissue and human cells.
- The draft BUA letter was shown.
- Steve Libby made a motion to approve the draft BUA for Dr. Reh. A second is not needed since he endorsed the Primary Review.
- The Committee voted unanimously to approve the draft BUA for Dr. Reh.

11. Shendure, Jay, change, *Shendure: General Research*

- Jean Haulman served as the Primary Reviewer and Linda Arnesen served as the Biosafety Officer Reviewer. Jean Haulman presented the Primary Reviewer Report.
- This is a project change in which the investigator requests to add lentiviral vectors.
- The lentivectors will be generated in HEK293T cells.
- A discussion occurred regarding the lentiviral vector generation and how it is listed on the BUA letter. The EH&S Research & Occupational Safety will discuss the best way to clearly list this on the BUA letter.
- The draft BUA letter was shown.
- Jean Haulman made a motion to approve the draft BUA for Dr. Shendure. A second is not needed since she is the Primary Reviewer.
- The Committee voted unanimously to approve the draft BUA for Dr. Shendure.

12. Smith, Jason, change, *Antiviral Mechanisms of Defensins*

- Thea Brabb served as the Primary Reviewer and Glenn McLean served as the Biosafety Officer Reviewer. Thea Brabb presented the Primary Reviewer Report.
- There will be two changes reviewed for Dr. Smith at this meeting. This one requests the addition of recombinant mouse papilloma pseudovirus as well as lentiviral vectors. Both of these agents will be used in-vitro.
- A discussion of the lentiviral vectors and whether or not they meet third generation requirements occurred. The investigator does not appear to have a desire to lower containment, and there was no documentation submitted to EH&S.
- The draft BUA letter was shown.
- To clarify that no viral genome is present, the wording “lacks encapsulated viral genome” should be added to the BUA letter after “mouse papilloma pseudovirus.”
- The human papilloma pseudovirus is currently listed as III-D on the BUA letter. It may be more appropriate to list it as III-E on the BUA letter. EH&S will evaluate.
- Thea Brabb made a motion to approve the draft BUA for Dr. Smith. A second is not needed since she is the Primary Reviewer.
- The Committee voted unanimously to approve the draft BUA for Dr. Smith, contingent upon adding the ‘lacks encapsulated’ wording to the BUA letter.

13. Smith, Jason, change, *Identification and evaluation of influenza antivirals*

- Lesley Colby served as the Primary Reviewer and Glenn McLean served as the Biosafety Officer Reviewer. Lesley Colby presented the Primary Reviewer Report.
- The investigator requests to add the in-vitro use of contemporary and circulating strains of influenza virus.

- A discussion of liposome transfection occurred. This falls under section III-E of the NIH guidelines, because it is an enhanced gene delivery technique. This is listed on the BUA letter as “recombinant or synthetic DNA/RNA, non-viral.”
- The lab members have already been offered the influenza vaccine, but it may be time for them to get another. Occupational health will follow up.
- Several strains are specifically called out as being excluded from Dr. Smith’s approval, 1918 H1N1, H2N2, and H5N1. A reviewer commented that H7N9 should be added to the list of excluded viruses. H7N9 is an avian influenza strain and is of concern because most patients who have been infected with this strain become severely ill.
- The draft BUA letter was shown.
- Lesley Colby made a motion to approve the draft BUA for Dr. Smith. A second is not needed since she is the Primary Reviewer.
- The Committee voted unanimously to approve the draft BUA for Dr. Smith.

14. Ware, Carol, renewal, *Human ES Cell Core*

- Steve Libby served as the Primary Reviewer and Glenn McLean served as the Biosafety Officer Reviewer. Steve Libby presented the Primary Reviewer Report.
- This is a core facility to foster cell culture of pluripotent stem cells and their derivatives.
- A discussion of oncogene use in the Ware facility occurred. Oncogenes are allowed in the facility, but not with an integrating viral system. This is because the Ware facility is BSL-2 and Dr. Ware does not wish to do any BSL 2-with-3 practices work.
- A discussion regarding the eyewash in the ABSL-2 room occurred. The UW rule is that an eyewash must be no more than 50 feet, 1 doorway away. A space in the Ware lab does not meet this requirement. EH&S will work to find a solution for her.
 - *Post Meeting Update: EH&S and Mike Robertson (Site Facilities Manager) are arranging to have an eyewash installed.*
- The draft BUA letter was shown.
- Steve Libby made a motion to approve the draft BUA for Dr. Ware. A second is not needed since he is the Primary Reviewer.
- The Committee voted unanimously to approve the draft BUA for Dr. Ware.

SUBCOMMITTEE REPORTS:

1. Human Cells Subcommittee

- This is a proposal regarding minimum animal biosafety level (ABSL) containment for mice, rats, guinea pigs, fish, and rabbits administered human cells of human origin.
- The aspects of the proposal that apply to fish were approved at last month’s meeting. The committee decided that ABSL-1 containment was appropriate for both primary human cells and immortalized human cell lines regarding fish housing.
- Humanized mice, as well as species other than the above, will be considered on a case-by-case basis.
- The committee recommends to house mice, rats, guinea pigs, and rabbits at ABSL-2 following the administration of primary human cell lines, and at ABSL-1 following the administration of immortalized human cell lines.

- This is a recommendation for policy and containment. Implementation will be guided by EH&S after further internal review.
- Comparative Medicine policy would require testing of all human cell lines before work at ABSL-1. The test would cover mouse pathogens, such as LCMV (lymphocytic choriomeningitis).
- The investigators can choose to work at a higher level of containment if they choose. One reason investigators may choose higher containment is because the testing may be prohibitively expensive to small labs.
- The wording 'fish' should be changed to zebrafish and restricted to zebrafish. Other species of fish will be reviewed on a case-by-case basis.
- Matt Parsek made a motion to approve the proposal entitled "DRAFT Biocontainment Housing Guideline for Select Animal Species Administered Human Source Materials," dated July 29, 2014. Thea Brabb seconded the motion.
- The Committee voted unanimously to approve the proposal entitled "DRAFT Biocontainment Housing Guideline for Select Animal Species Administered Human Source Materials," dated July 29, 2014.

MEETING ADJOURNED AT APPROXIMATELY 12:06.