

## INSTITUTIONAL BIOSAFETY COMMITTEE MEETING

April 20, 2016

2:00 PM, 410 Plant Biotechnology Building

MEMBERS PRESENT: Jun Lin, Chair; David Bemis, Tamara Chavez-Lindell, Doris D'Souza, Elizabeth Fozo, Reza Hajimorad, Al Iannacone, Melissa Kennedy, Reggie Millwood, Jae Park

Ex-Officio – Linda Hamilton, Brian Ranger, Jessica Woofter

MEMBERS ABSENT: Seung Baek, Patti Coan, Paul Dalhaimer, Brittany Isabell, Deidra Mountain, Ling Zhao

OTHERS PRESENT: None

### Opening:

The meeting was called to order by the Chair, Jun Lin at 3:26 PM. Minutes of February 17, 2016 were reviewed and approved as written.

### IBC Applications:

#### **#291-16 (Mariano Labrador) Recombinant DNA Registration, III-D-4-a, 3-year rewrite**

Dr. Labrador's registration covers his research on gene expression, DNA repair, and cell cycle regulation by chromatin insulator proteins in *Drosophila melanogaster*. Briefly, transgenic flies are created by microinjecting constructs consisting of a *Drosophila* gene of interest (e.g. suppressor of hairy wing) in a commonly used vector (*Drosophila* pUST). Similar constructs are also prepared for *in vitro* studies in *Drosophila* S2 cells. Containment was set at BSL-1. The committee approved the registration pending correction of typographical errors.

#### **#302-16 (Daniel Roberts) Infectious Agents & Recombinant DNA Registration, III-E, 3-year rewrite**

Dr. Roberts' registration covers molecular cloning of plant membrane transporters, regulatory protein kinases and calcium binding proteins from soybean, Arabidopsis and Medicago for structure-function analysis in *E.coli*, *Xenopus laevis* oocytes in culture, or *Pichia pastoris*. Briefly, oocytes from *X. laevis* will be used to allow the production of soybean, Medicago or Arabidopsis transporters to ascertain structural and functional relationships between the protein sequence and transport function *in vitro*. Additionally, the recombinant molecules will be used to investigate gene expression, characterize Arabidopsis mutants, and generate transgenic Arabidopsis plants (fluorescent reporter systems, e.g. GFP). For the latter, standard *Agrobacterium*-mediated transformation techniques will be used. Finally, *Nicotiana* or Arabidopsis plants will be transiently transfected (*Agrobacterium*) with turnip mosaic virus UK-1 conjugated to a fluorescent protein marker so that infected tissues can be visualized by fluorescence microscopy. The committee approved this registration pending addition of a purpose statement in the nontechnical summary, addition of *Agrobacterium rhizogenes* for transformations of Medicago, and clarification of personnel status. Containment was set at BSL-1.

#### **#434 (Colleen Jonsson) Human Derived Materials, Infectious Agents, & Recombinant DNA, III-D-2, New registration**

Dr. Jonsson's registration covers Old World and New World hantaviruses and how they interact with the host cell during entry, replication, and assembly. Comparative studies will primarily involve

isolation, propagation and amplification ( $10^5$ - $10^6$  pfu/ml) of Old/New World hantaviruses on rat/mouse primary cells, nonhuman primate cells (Vero E6), and human epithelial and endothelial cells. Total RNA will then be isolated for downstream molecular biology assays (i.e. sequencing). Dr. Jonsson's registration also covers expression of recombinant hantavirus proteins (nucleocapsid and glycoproteins) in *E. coli* hosts for protein purification and assay (IFA, ELISA) purposes. The committee approved the registration contingent upon completion of the BSL-3 repairs, facility rebalancing and retesting, and completion of BSL-3 training by all listed personnel. Use of non-recombinant infectious agents was granted 4/12/16 via electronic vote/discussion. During this scheduled meeting, the committee reviewed and approved the rDNA component pending clarification that all personnel working with recombinant constructs are listed on the registration.

## **Old Business:**

### Administrative Report

Brian Ranger provided the Committee with the administrative report. Following up on February 17, 2016, IBC meeting. Dr. Richard Gerhold's registration (#397-16) was corrected to include the addition of wildlife collection procedures in the nontechnical summary. Dr. Elizabeth Lennon's registration (#436) completed required biosafety cabinet certifications on 3/23/2016. Dr. Susan Pfiffner's registration (#438) was corrected to include a clarification of volume of treated water samples and cleaning procedures. Dr. Guoxun Chen's registration (#292-15) was administratively approved to include additions of plasmids pSpCas9(BB)-2A-Puro (PX459) V2 and pSpCas9(BB)-2A-GFP (PX458). These will be used to specifically delete genes involved in fatty acid metabolism using CRISPR-Cas9 techniques. Dr. Cynthia Peterson's registration (#261-15) has been administratively terminated as she is no longer with UT. All materials have been destroyed or appropriately transferred.

### BSL-3 Updates & Discussion of Emergency Management Plan

Brian notified the committee that the BSL-3 emergency management plan had been sent to the committee members for review and comments. He asked that comments be returned by no later than Monday, April 25, 2016. He also notified the committee the partitioning door will be installed by the end of the week.

### iMedRIS Update

Jessica Woofter gave the committee a brief overview of the iMedRIS online submission process and form.

## **New Business:**

### IBC/Biosafety Program Self-Audit (Next Steps)

Brian requested volunteers for the subcommittee to update and incorporate changes into the charter.

### Call for Comments for BMBL, 6<sup>th</sup> Edition

Brian notified the committee that there has been request for suggestions or comments regarding the current edition (5<sup>th</sup> ed.) of the BMBL in consideration of an updated version. Dr. Fozo suggested that they should have more clearly defined statements regarding hantavirus use procedures. Brian asked that comments be emailed to him by the end of May.

### Lab Inspection Program Update

Brian announced to the committee that the self-audit and update forms have been launched. Linda described to the committee the in-person lab audit procedures. The audits are announced and pre-scheduled. To date, audits have included updating door signs and BSL-2 manuals. Laboratory findings

have included sharps/waste handling concerns, use of inappropriate (cloth) lab furniture, and general housekeeping issues. Eyewash testing and functionality are still a problem in many labs. Eyewashes that do not function properly are being reported to Facilities Services as necessary. Brian indicated that major laboratory findings/concerns, as well as accidents, injuries and exposures, will be added to the monthly administrative report for committee review and discussion.

#### Gene Editing Questionnaire

Brian presented to the committee a questionnaire from Arizona State for gene editing as resource/tool. The committee suggested emailing the questionnaire through the listserv and providing a link on the website.

#### Recognition of Compliance Members Party on April 28<sup>th</sup>

The Office Research will be hosting an appreciation party for compliance committee members on April 28, 2016 at 3:30 pm in the Tyson Alumni Building. Please RSVP to Donna Ford or Dr. Nobles by April 22, 2016.

The meeting was adjourned at 4:30 PM. The next meeting has been tentatively scheduled for May 18, 2016 starting at 2 pm.