

MINUTES OF THE INSTITUTIONAL BIOSAFETY COMMITTEE MEETING

October 16, 2013

3:00 PM, 410 Plant Biotechnology Building

MEMBERS PRESENT: Chunlei Su, Chair; Jun Lin, Vice-Chair; Seung Baek, David Bemis, Tamara Chavez-Lindell, Patti Coan, Al Iannacone, Dan Kestler, Reggie Millwood, Bonnie Ownley, Jae Park, Ling Zhao

Ex-Officio –Brian Ranger, Jonathan Phipps, Brenda Lawson

MEMBERS ABSENT: Doris D’Souza, Paul Dalhaimer, Melissa Kennedy

OTHERS PRESENT: Denise Chac, Jessica Woofter

Opening:

The meeting was called to order by the Chair, Chunlei Su at 3:01 PM.

Minutes of September 18, 2013 were reviewed and approved pending correction of one typographical error. There was 1 abstention.

IBC Applications:

#278-12 (Tim Sparer) Recombinant DNA Registration, III-D-2-a; 3-a; 4-b, Amendment

Dr. Tim Sparer’s registration covers various studies involving human and murine cytomegaloviruses (CMVs) and host immunity, particularly the role of viral chemokines in modulating the host immune response to CMV infection. The amendment requests the addition of lentiviral vectors to deliver mutant CXCR2 chemokine receptor genes or commercially purchased short hairpin RNAs to knock down gene expression in target pathways. The new constructs will be used to study the mechanisms of cellular transformation and metastasis *in vitro*. The containment level was established at BSL-2+ to include: performing all procedures in a certified biosafety cabinet; restricting the use of sharps; and rigorous spill clean-up, exposure response, and reporting protocols. The committee approved the amendment pending minor administrative clarification of bleach solutions.

#309-10 (Xuemin Xu) Recombinant DNA Registration, III-E, 3-year rewrite

Dr. Xu’s Alzheimer’s disease research investigates the mechanisms of beta-amyloid protein (A β), a key player in the induction of Alzheimer’s disease. Briefly, a variety of mammalian cell lines will be transfected (liposome-mediated) with plasmids expressing various amyloid-related proteins. These cell models will be used to determine effects of pharmaceutical compounds, apoptotic activity, and/or various precursor peptides involved in the formation of A β in order to better understand how to reduce the production of the A β peptide. The containment level was established at BSL-2 for use of human cell lines. The committee voted to approve the registration pending administrative correction of the HeLa cell line tissue derivation.

#412 (Maitreyi Das) Recombinant DNA Registration, III-E, New Registration

Dr. Das’ registration covers the study of eukaryotic cell mechanisms of cell shape and form establishment, specifically for *Schizosaccharomyces pombe*. Briefly, genes involved in cell polarity (e.g. Gef1) under native or thiamine-repressible promoters are cloned into standard vectors carrying kanamycin selectable markers (e.g. pFA6, pREP1). Other techniques include standard microscopy, genomics, and proteomics.

The committee approved the registration pending correction of personnel listed, additional details in the nontechnical summary, and correction of minor typographical errors. The containment level was set as BSL-1.

#413 (Jennifer Schweitzer) Infectious Agents Registration, New Registration

Dr. Schweitzer's research covers the study of primate influence over seed germination and ecology. To assess this, feces from six non-human primate (NHP) species (chimpanzee, white-handed gibbon, baboon, gorilla, blue monkey, and Geoffroy's marmoset) will be collected and provided to Dr. Schweitzer's research group by the Knoxville Zoo. Fecal samples will then be mixed uniformly with potting soil, which is then incubated under routine greenhouse/growth chamber growth conditions to allow seeds consumed in the NHP diet to germinate. Unconsumed seeds (i.e. not shed in NHP feces) would be planted as a control. Plants and associated biomass would then be measured to compare overall fitness. Biosafety provisions including wearing PPE while handling and mixing feces/soil and performing watering procedures, collection and autoclave treatment of feces-contaminated soil and water leachate, and BSL-2/biohazard signage were included in the registration. The committee voiced several concerns and voted to table the registration pending the following:

1. Clarification on whether feces would be mixed directly with soil or seeds would be extracted prior to planting in soil;
2. Setting an upper limit of plant size so that all contents can be easily autoclaved or providing a list of seed/plant types that will be included in the study;
3. Outlining safety procedures for measuring belowground biomass if it is measured prior to autoclaving;
4. Specifying that collection of feces would be limited to animals in good health standing with the zoo attending veterinarian and not exhibiting signs of illness (e.g. lethargy, fever, diarrhea, etc.);
5. Completing biosafety training to include a consultation with the Occupational Health Nurse, Dr. Amy Knowles, as this protocol involves animal materials; and
6. Providing a specific location for listed growth chamber(s).

Old Business:

Administrative Report

Brian Ranger provided the committee with the administrative report. Following up on the September 18, 2013 IBC meeting, Dr. Eric Boder's registration (#330-13) was corrected to include examples of membrane proteins in the nontechnical summary. Dr. Paul Dalhaimer's registration (#354-13) was corrected administratively to include the genus name for *Schizosaccharomyces* in the nontechnical summary. Dr. Francisco Barrera's registration (#409) was corrected administratively with the removal of non-rDNA objectives from the nontechnical summary, and the Principal Investigator was informed that his human cell work approval is contingent on the acquisition and certification of a biosafety cabinet. There was one Human Derived Materials Registration that was approved administratively: Dr. Mohamed Mahfouz (#406).

AVCRE Search Update

Brian Ranger notified the committee that a new Assistant Vice Chancellor for Responsible Conduct of Research and Research Integrity has been named. Dr. Robert Nobles, currently at Texas A&M, will be joining the Office of Research and Engagement in January, 2014.

2013 Bloodborne Pathogen Exposure Control Plan

Brian Ranger notified the committee that the 2013 BBP Exposure Control Plan has been distributed to applicable principal investigators and staff. PIs or supervisors are expected to either keep a hard copy onsite or inform affected personnel of the electronic copy maintained on the Biosafety website.

Other

Brian Ranger informed the committee that the IBC recommendation for a greenhouse steam cart is still pending. He will work with Dr. Bonnie Ownley and Lori Osburn, Greenhouse Manager, to address this action item.

New Business:

BSL-2/BBP Annual Refresher Training

Brian Ranger notified the committee that the refresher training for Biosafety Level 2 and Bloodborne Pathogens was launched October 7, 2013. The completion date was set at the end of November. He also noted that some complaints were made in regard to scheduling the refresher coincidentally with the UTIA EH&S Office online laboratory safety training modules.

BSL-1/BSL-2 Inspections

Brian Ranger notified the committee that Jonathan Phipps began inspections of BSL-1 and BSL-2 labs on October 15, 2013. Inspections will be conducted across the various campuses over the next ~2 months.

Biosafety Procedures Non-Compliance Review/Corrective Actions

Brian Ranger notified the committee of ongoing complaints from Walters Life Science Lab Animal Facility concerning Dr. Rouse's lab personnel not complying with expected safety and containment measures while working with biohazardous agents. The Institutional Animal Care & Use Committee will be sharing Dr. Rouse's laboratory experiment schedule with the IBC so that members may observe lab personnel and ensure safety and compliance procedures are being performed correctly. Additionally, the IBC will prepare a letter outlining expected remedial actions and possible punitive measures to include restricting animal facility entrance to repeat offenders.

Designated Waste Bins for Autoclaved Biowaste

Brian Ranger notified the committee of complaints concerning the waste bins for autoclaved biowaste, specifically overfilling and leaks/spills. Brian met with Facilities Services (Building Services), and discussed using a heavier gauge waste bag and a secondary liner to prevent leakage into the barrels. Responsibility for cleaning the dirty waste bins (i.e. from leaky liners) was also discussed, though not resolved. The Biosafety Office will continue to work with Facilities Services and the research community to address this problem.

UT GSM-Sponsored Human Gene Transfers

Brian Ranger notified the committee that he had received a phone call from Debbie Smith, UTHSC Associate Vice-Chancellor for Research, requesting UTK IBC review of human gene transfer protocols sponsored by the UT Research Foundation. The details of who is conducting the trials, UTK affiliation, and whether the project falls under UTK IBC purview are still pending. Brian said he would update the committee as soon as the details were communicated.

The next meeting has been tentatively scheduled for November 20, 2013.

The meeting was adjourned at 4:28 PM.