

INSTITUTIONAL BIOSAFETY COMMITTEE MEETING
November 15, 2018
11 AM, Plant Biotechnology Bldg., Room 156/157

MEMBERS PRESENT: Chair, David White; Marc Caldwell, Tamara Chavez-Lindell, Melissa Kennedy, Lori Cole, Doris D'Souza, George Dizikes, Reza Hajimorad, Brittany Isabell, Jun Lin, Jae Park

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

MEMBERS ABSENT: Vice Chair, Elizabeth Fozo; Paul Dalhaimer, Reggie Millwood, Deidra Mountain, Ling Zhao

OTHERS PRESENT: Jamie Albert, Dr. Kaibo Lyu, Dr. Yanpeng Zhang

Opening:

The Chair called the meeting to order at 11:08 AM. The minutes of September 27, 2018, were reviewed and approved pending the correction of the attendance list.

IBC Applications:

#IBC-09-344-2 (Ling Zhao) Human Derived Materials, Nanoparticles, & Recombinant DNA, III-D-3, 3-year rewrite

Dr. Zhao's registration covers: (1) identification and characterization of environmental chemicals that contribute to obesity (i.e., obesogenic) and (2) identification and characterization of dietary factors, encapsulated in nanoparticles or not, that have potential to prevent and/or treat obesity. Two types of cellular models of adipogenesis will be used: white adipocyte and brown adipocyte. The effects of environmental chemicals or dietary factors in promoting or inhibiting conversion of precursor cells into mature white adipocytes and/or mature brown adipocytes will be assessed. Lentiviral vector systems will be used to either overexpress or knock down (shRNA) endogenous genes of interest, primarily those related to glucocorticoid signaling and transcriptional regulation. Briefly, replication incompetent lentiviral vector constructs will be packaged in HEK293 cells, purified and used for various *in vitro* assays on primary human stromal cells. Similarly, adenoviral vectors will be used to introduce dominant negative forms of signaling molecules (e.g. I κ B) to demonstrate the consequences of blocking a specific signaling pathway. Finally, pGL3-luciferase reporter constructs will be used to study the transcriptional response to various dietary and environmental stimuli. The safety practices and containment were set at BSL-2. The committee approved the registration pending a clarification of the nanoparticles form, amounts, and bioactive components; the inclusion of the volumes of *E. coli* DH5-alpha used or generated; and minor typographical errors.

#IBC-17-450-2 (Cong Trinh) Recombinant DNA & Infectious Agents, III-D-1-a, amendment

Dr. Trinh's registration proposes the development of a virulent pathogen resistance (ViPaRe) technology to inactivate pathogens using CRISPR genome editing. Briefly, the ViPaRe system

expressing guide RNAs and heterologous Cas nuclease (especially when a target pathogen does not possess it) will be designed to specifically disrupt vital machinery of risk group 2 pathogens of interest. His amendment included the modification of human cell lines using third generation lentiviral vectors as well as cell infections with hepatitis B. The committee voted to defer the review pending the submission of requested corrections including the addition of Dr. Ripp's lab personnel; the inclusion of targeted genes; a description of lentiviral vectors used; the inclusion of viral particle volumes and titers; the inclusion of a statement of where work will be performed; and a statement indicating that post-vaccination (hepatitis B) antibody titers will be confirmed by Occupational Health.

#IBC-18-533-1 (Constance Bailey) Recombinant DNA, III-E, New Registration

Dr. Bailey is investigating the biosynthetic potential of polyketide synthases (PKS) in pharmaceutical and chemical commodity production. Briefly, PKS genes amplified from genomic DNA (derived from low-risk microbes) will be cloned into various shuttle vectors and expressed in various low-risk heterologous hosts (e.g. *E. coli* BL-21, *S. cerevisiae*, etc.). Recombinant hosts will then be used for protein overexpression and/or various other *in vitro* production assays. The committee approved the registration as written. Containment was set at BSL-1.

Old Business:

Administrative Report

i. Contingencies

Following up on September 27, 2018, IBC meeting, Dr. Alison Buchan's registration (#15-431-1) was updated to include current autoclave validation dates and a bleach contact time of up to 10+ minutes.

ii. Administrative Approvals

Dr. Steven Ripp's amendment (#06-274-2) to include human glioblastoma cell lines was approved by the IBC Chair. Dr. Guoxun Chen's amendment (#06-292-2) to include hGLUT4 cDNA insert genes was approved by the Biosafety Officer. Dr. Qixin Zhong's amendment (#14-416-2) to include *Giardia lamblia*, *Entamoeba histolytica*, and *Histomonas meleagridis* was approved by the IBC Chair. The following Mossman relocation updates were approved by the Biosafety Office:

- Dr. Gladys Alexandre (#08-334-1);
- Dr. Francisco Barrera Olivares (#13-409-2);
- Dr. Nitin Jain (#13-411-1); and
- Dr. Maitreyi Das (#13-412-1).

iii. Administrative Terminations

None.

iv. Administrative Exemptions:

None.

v. Accidents, Injuries/Exposures:

None.

vi. *Laboratory Report (Hamilton)*

Linda Hamilton updated the committee on the new biosafety refresher training options, including in-person training during (or just subsequent to) laboratory audits. This approach will allow the content to be tailored to lab-specific needs.

vii. *iMedRIS Update, Manual Reviews, & System Orientation (Woofter)*

None.

Charter Revision Update

Brian notified the committee that the draft revisions have been sent to UT General Counsel for legal/liability review. He still has not heard back from the office, but once approval is obtained by general counsel, the bylaws and SOPs will be disseminated and posted to the website.

WLS and JHB Lab Moves/Mossman Bldg. Update

Brian reported to the committee that all the labs that are going to occupy Mossman have been moved. The office is working with relocated to faculty to update registrations, personnel, and other lab information. Dr. Cole notified the committee that the lab animal facility move has not been finalized. OLAC is waiting on the alarm mechanism notifications to be moved from email and text to an actual phone call to facility managers and emergency contacts. They are also waiting on the final document for air changes and directional airflow in the facility.

New Business:

Advantra Waste Disposal Contract

Brian provided the committee with a cost analysis for onsite treatment/disposal of bagged biowaste vs. using the medical waste contractor. While the contractor costs are projected to be lower overall, the committee voiced some concern about logistical and organizational capacity of the contractor. It was recommended to do a small-scale pilot to determine feasibility. Brian indicated he would discuss central funding for the pilot with administration.

Mossman Lab Practices

Brian notified the committee that he has been working the facility services, mechanical engineers, and contractors on the air handling system to get the directional air flow corrected in the lab spaces.

The meeting was adjourned at 12:23 pm. The next meeting has been tentatively scheduled for December 19, 2018 from 3 - 5 pm in the Plant Biotechnology Bldg., Room 410.