

INSTITUTIONAL BIOSAFETY COMMITTEE MEETING
December 19, 2018
3 PM, Plant Biotechnology Bldg., Room 410

MEMBERS PRESENT: Chair, David White; Vice Chair, Elizabeth Fozo; Marc Caldwell, Lori Cole, George Dizikes, Doris D'Souza, Reza Hajimorad, Brittany Isabell, Reggie Millwood, Jae Park, Ling Zhao

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

MEMBERS ABSENT: Tamara Chavez-Lindell, Paul Dalhaimer, Melissa Kennedy, Jun Lin, Deidra Mountain

OTHERS PRESENT: None

Opening:

The IBC Chair called the meeting to order at 3:03 PM. The minutes of November 26, 2018 were reviewed and approved as written. There were three abstentions.

Full Member Review IBC Registrations:

#IBC-07-308-1 (Becker, Jeffrey) Infectious Agents & Recombinant DNA Registration, III-D-1-a; 4-b, 3-year rewrite

This registration captured Dr. Becker's use of genetically-modified strains of *Candida albicans* in a mouse model. Briefly, select genes that may play a role in virulence have been placed under the control of a tet-repressible promoter (using standard molecular techniques) to allow for selective control of gene expression during infection. These studies aim to identify genes that play a key role in virulence, which in turn may make suitable targets for antifungal drug development. Prescribed animal containment procedures adhere to BL-2/ABSL2. The committee voted to approve the registration pending the addition of centrifugation under question 7.3; the addition of IACUC protocol 1083-1018 under question 7.6; and the addition of the Walter Life Science vivarium in questions 9.1 and 9.3.

#IBC-12-393-1 (Neal Stewart) Recombinant DNA, III-E-2-a, 3-year rewrite

Reggie Millwood summarized Dr. Stewart's registration covering gene flow quantification and bioconfinement in transgenic plant models (e.g. Arabidopsis, rice, tobacco, canola, and switchgrass). Transgenic plants will be created using traditional Agrobacterium-mediated gene transfer and microprojectile bombardment. Insert genes include commonly used resistance (antibiotic, herbicide or insect) and fluorescent (e.g. red fluorescent protein) markers as well as various inducible restriction endonucleases or recombinases involved in conditional pollen ablation or transgene removal (bioconfinement). Plants will be grown in environmental growth chambers and under greenhouse conditions with pollen screens/bags. Containment was set as BSL-1/BL-1-P. Environmental release/movement permits have been (or will be) obtained from USDA APHIS BRS for all field procedures. The committee approved the registration as written with one abstention.

#IBC-12-393-1 (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 virus (HBV). The committee voted to approve the registration pending verification of HBV neutralizing antibody titers and a statement clarifying the location of HBV procedures.

Designated Member Review IBC Registrations:

#IBC-09-395-2 (Maria Cekanova) Human Derived Materials & Nanoparticles, 3-year rewrite

Dr. Cekanova's registration includes the use of various human cell lines (e.g. lung, breast, colorectal carcinoma cells) to evaluate novel imaging and therapeutic agents for detection and treatment of tumors *in vitro*. The committee approved the registration pending additional information about animal use and the correction IACUC information listed on the registration.

Old Business:

Administrative Report

i. Contingencies

Following up on November 16, 2018, IBC meeting, Dr. Ling Zhao's registration (#09-344-2) was updated to include requested volumes in the technical summary, an updated title, and minor typographical errors corrections.

ii. Administrative Approvals

Dr. Jeffrey Becker's amendment to his registration (#17-505-2) was approved administratively by the Biosafety Officer to include updated laboratory and biosafety cabinet locations (Mossman 631, 632, 641). Dr. Madhu Dhar's new registration (#18-532-2) was administratively approved by the Biosafety Officer on 12/5/2018. Dr. Dhar will be using adipose-derived MSCs (Stephenson; IRB-approved) and polymeric matrices for bioprinting potential bone healing/regenerative grafts. Bioprinted matrices will be used in *in vitro* assays and IACUC-approved *in vivo* bone regeneration studies (rats).

iii. Administrative Terminations

None.

iv. Administrative Exemptions:

None.

v. Accidents, Injuries/Exposures:

None.

- vi. *Laboratory Report (Hamilton)*
None.
- vii. *iMedRIS Update, Manual Reviews, & System Orientation (Woofter)*
None.

Charter Revision Update

Brian notified the committee that UT General Counsel is still reviewing the acceptability of the revised bylaws and SOPs. The tentative completion date is 12/31/18.

Mossman Bldg. Update

Dr. Fozo provided the committee with the results of an agent (aerosol) distribution study conducted within her section (including the student desk area) of the shared Mossman lab. While the results demonstrated that the test agents (*E. coli* and *Enterococcus faecalis*) are unlikely to spread beyond the immediate workstation during routine procedures, the committee recommended a conservative policy for food/drink in the student desk area.

New Business:

iMedRiS Changes

Jessica notified the committee that the UTHSC OIT group managing iMedRiS is currently testing a new interface for the system. A copy of the proposed layout was provided to the committee, and Jessica will notify the committee prior to the changes taking effect.

CVM Safety Walkthrough

Brian notified the committee that he had participated in a facility-wide safety assessment at the College of Veterinary Medicine. Overall, the safety culture and practices had improved since the previous assessment (December, 2016).

Restricted Entry/Security Concerns

Brian notified the committee that he is working the other compliance offices to address restricted entry and security concerns at the UTK area campuses, particularly blanket clearances issued to preventative maintenance and law enforcement employees. The Office of Research & Engagement is aware of the situation and working with various stakeholders on resolving the issue.

The meeting was adjourned at 4:30 PM. The next meeting has been tentatively scheduled for February 20, 2019 from 3 - 5 pm in the Plant Biotechnology Bldg., Room 410.