

**INSTITUTIONAL BIOSAFETY COMMITTEE MEETING**  
**September 18, 2019**  
**3 PM, Plant Biotechnology Bldg., Room 410**

MEMBERS PRESENT: IBC Chair, David White; Vice Chair, Elizabeth Fozo; Lori Cole, Paul Dalhaimer, George Dizikes, Doris D'Souza, Reza Hajimorad, Brittany Isabell, Jae Park

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

MEMBERS ABSENT: Marc Caldwell, Melissa Kennedy, Jun Lin, Reggie Millwood, Deidra Mountain, Ling Zhao

OTHERS PRESENT:

**Opening:**

The IBC Chair called the meeting to order at 3:01 PM. The minutes of August 21, 2019, were reviewed and approved. There was one abstention.

**Full Member Review IBC Registrations:**

**#IBC-10-350-1 (Abhijeet Borole) Recombinant DNA Registration, III-E, 3-year rewrite**

Dr. Borole replaced Dr. Paul Frymier as the Principal Investigator for this registration. The registration focuses on optimizing light-induced hydrogen production in prokaryotic systems. Briefly, photosystem I from *Synechocystis sp.* PCC6803 and various hydrogenase genes from *Ralstonia eutropha* are being hybridized (by traditional molecular techniques) so that light-induced hydrogen production can happen at a faster rate. Ultimately, the hybridized complex will be expressed in *R. eutropha*. The containment level was established at BSL-1. The committee approved the registration pending correction of minor typographical errors and the addition of documentation describing the small-scale bioreactor and relative data.

**#IBC-13-412-1 (Maitreyi Das) Recombinant DNA Registration, III-E-1, 3-year rewrite**

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 an update to the biosafety cabinet certification date and the addition of Dr. Alexandre as the Department Head in the personnel list.

**#IBC-16-444-2 (Thomas Denes) Infectious Agents & Recombinant DNA Registration, III-D-1-a; 2-a, 3-year rewrite**

Dr. Denes' research focuses on the effects of phage resistance, bacterial envelope composition, and changing environmental conditions on the fitness and physiology of bacterial foodborne

pathogens such as *Salmonella spp.* (non-typhoidal) and *Listeria monocytogenes*. Briefly, gene deletions will be created by overlap extension PCR delivered via temperature-sensitive suicide vectors. Deletion phenotypes will be confirmed through complementation with the wild-type gene (standard molecular techniques). Target genes include those encoding membrane-associated proteins which may play a role in phage resistance and/or antibiotic resistance. Other techniques include subculturing, phage/bacteria enumeration, DNA/RNA extractions, and lectin binding assays. Containment was set at BSL-2. The committee approved the registration pending the following changes: Check the source for *Manheimia haemolytica*, *Pasteurella multocida*, and *Haemophilus somnus*; check last two boxes for Question 7.9 and include an explanation about safety procedures regarding wastewater collection and handling in the technical summary; correct minor typographical errors in technical summary; update biosafety cabinet certification date; and update the biological spill response.

#### **#IBC-19-538-1 (Erik Zinser) Recombinant DNA Registration, III-E-1, New registration**

Dr. Zinser's research focuses on the selective value of added restriction-modification systems to the non-toxic, non-pathogenic marine cyanobacterium *Synechococcus* WH7803. Modification systems will express restriction from other cyanobacteria in *Synechococcus*. These will be grown at different cell densities using a chemostat system in the presence and absence of bacteriophage. Containment was set at BSL-1. The committee approved the registration pending clarification of whether additional personnel would be added in the future to this project.

**Designated Member Review IBC Registrations:** None

#### **Old Business:**

##### Administrative Report

##### *i. Contingencies*

Following up on the August 21, 2019 IBC Meeting, Dr. Elizabeth Fozo's registration (#10-352-2) was updated to include an update to autoclave locations and biosafety cabinet certification dates. Dr. Paul Dalhaimer's registration (#06-302-1) was update to include the most current biosafety cabinet certification date. Dr. Jiangang Chen's registration (#10-408-2) was update to include an updated autoclave validation date and the addition of Dr. Jay Whelan listed as the Department Head. Dr. Raul Almeida's registration (#19-537-2) was updated to include a short description of wild-type strains listed and clarification of the euthanization procedures for the cows exposed to *Mycoplasma bovis*. His registration was approved and biosafety containment was set at BSL-2.

##### *ii. Administrative Approvals*

Dr. Todd Reynold's registration (#05-24-2) was amended to include *Bacillus subtilis*, *Bacillus pumilus*, *Bacillus megaterium*, *Bacillus aerius*, *Bacillus velezensis*, and *Bacillus amyloliquefaciens*. The amendment is pending approval by the IBC Chair. Dr. Jeffrey Becker's registration (#07-308-1) was administratively transferred to Dr. Todd Reynolds. The amendment is pending approval by the IBC Chair. Dr. Jennifer DeBruyn's registration.

##### *iii. Administrative Terminations*

Dr. Jeffrey Becker terminated registration (#17-505-2) on 9/16/2019 and all materials will remain stored in a secured freezer located in Mossman 631, 632, and 641. Dr. Jeffrey Becker terminated registration (#18-528-2) on 9/16/2019 and all covered materials were destroyed and discarded.

iv. *Administrative Exemptions:*

None.

v. *Accidents, Injuries/Exposures:*

There was one accident reported involving a staff member from the Forensic Anthropology Center where a body bag zipper failed. The individual experienced an ocular exposure resulting from the failure. They have followed up with risk management and future exposure control was identified by using eye protection like a face shield.

vi. *Laboratory Report (Hamilton)*

None.

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

None

**Old Business:**

None.

**New Business:**

**Biohazardous Waste Disposal Procedures Update**

Brian gave the committee an update regarding the new waste disposal program. There was only one issue at the Plant Biotechnology Building but otherwise there have been no additional concerns.

The meeting was adjourned at 4:16 PM. The next meeting scheduled for October 16, 2019 from 3-5 pm in Plant Biotechnology Room 410.