

INSTITUTIONAL BIOSAFETY COMMITTEE MEETING
August 21, 2019
3 PM, Plant Biotechnology Bldg., Room 410

MEMBERS PRESENT: IBC Chair, David White; Vice Chair, Elizabeth Fozo; Marc Caldwell, Lori Cole, George Dizikes, Doris D'Souza, Brittany Isabell, Jun Lin, Reggie Millwood

Ex-Officio – Brian Ranger, Jessica Woofter

MEMBERS ABSENT: Paul Dalhaimer, Reza Hajimorad, Melissa Kennedy, Deidra Mountain, Jae Park, Ling Zhao

OTHERS PRESENT: Troy Lane, Robert Nobles, Sandra Prior

Opening:

The IBC Chair called the meeting to order at 3:03 PM. The minutes of July 17, 2019 were reviewed and approved. There were three abstentions.

Full Member Review IBC Registrations:

#IBC-10-352-2 (Elizabeth Fozo) Infectious Agents & Recombinant DNA Registration, III-D-1-a, 3-year rewrite

Dr. Fozo's research investigates the role that genes encoding small regulatory RNAs (sRNAs), small proteins, and membrane fatty acids play in the Risk Group 2 pathogens *Escherichia coli* O157:H7 and *Enterococcus faecalis*; specifically, their role in survival/growth under extreme environmental conditions and in inducing disease. Briefly, mutants will be generated using standard recombinant DNA/molecular techniques (e.g. temperature-sensitive recombination systems; constructs to generate fatty acid gene deletions in *E. faecalis* delivered via conjugation) to disrupt the target genes with selectable marker genes. Similarly, fluorescent reporter genes (e.g. mCherry) will be used to replace the target gene so that gene expression can be monitored. Mutants will then be examined for any growth defects compared to the wild type organism. Genes of interest may also be overexpressed in *E. coli* MG1655 under native or inducible promoters. The containment level was established at BSL-2. The committee approved the registration pending an update to the autoclave location in 12.3 and an update to the biosafety cabinet certification date.

#IBC-06-302-1 (Paul Dalhaimer) Recombinant DNA Registration, III-E, 3-year rewrite

Dr. Dalhaimer's research covers the molecular mechanisms of lipid droplet (LD) formation. LDs are especially prevalent in mammals that are obese or diabetic. Genes encoding neutral lipid synthesis enzymes as well as genes involved in the formation of endoplasmic reticulum are being studied using *Schizosaccharomyces pombe* as a host. Established molecular biology techniques, including cloning, transformation, and homologous recombination will be used to generate recombinant *S. pombe*. The containment level was established at BSL-1. The committee approved the registration pending an update to the biosafety cabinet certification date.

#IBC-10-408-2 (Jiangang Chen) Human Derived Materials & Recombinant DNA Registration, III-F, 3-year rewrite

Dr. Chen's research covers the use of human kidney, breast, and prostate cell lines (ATCC) to test estrogenic and androgenic properties of environmental compounds. The committee approved the registration pending an update to the autoclave validation date and the addition of Dr. Jay Whelan as the Department Head.

#IBC-19-537-2 (Raul Almeida) Recombinant DNA Registration, III-D-2-a, 3-year rewrite

Dr. Almeida's registration covers the study of *Mycoplasma bovis* mastitis vaccine treatments for dairy herds. Studies will be performed both in vitro and in vivo. The in vitro research involves monitoring growth of mutant clones in milk and resistance to the lytic action of the blood defense system. The in vivo research involves the study of cows infected with the wild type parent strain (*M. bovis* PG45) and two less virulent mutants. Personnel involved in this project will be using disposable PPE which include disposable paper coveralls, disposable latex gloves, disposable goggles, disposable masks and disposable footwear covers in study areas. After used, disposable PPE will be collected in a dedicated bin lined with double autoclave bags, sterilized by autoclave and disposed. Personnel will require to have a full-body shower and change of clothes prior to tending to other non-study animals or dairying areas. Cows will be milked with separated individual milking machine equipment. After each milking, the milking machine will be cleaned and disinfected following site SOP. The floor corresponding to the milking area will be treated with chlorine after milking, to eliminate *M. bovis* mutant clones in milk that could be leaked during the milking process. Milk, as well as effluents from these cows, will be collected and packaged for disposal through the UTIA bio-waste contractor. At the end of the experiment, cows inoculated with the mutant clones will be euthanized at the CVM and carcasses will be destroyed through the CVM alkaline digester. The committee approved the registration pending the addition of wild-type strains with a short description for the features of the strain like the source and isolates; and clarification of the euthanization procedures for the cows exposed to *M. bovis*.

Designated Member Review IBC Registrations: None

Old Business:

Administrative Report

i. Contingencies

Following up on the July 17, 2019 IBC Meeting, Dr. Feng Chen's registration (#05-238-2) was updated to include a clarifying statement about terepenes in lay terms and an update to the biosafety cabinet certification dates. Dr. Daniel Robert's registration (#06-302-1) was updated to include the clarification of "cDNA" and the addition of the biosafety cabinet certification dates. Dr. Elena Shpak's registration (#07-313-1) was updated to include a rewrite of the nontechnical summary; removal of WLS D310 from the listed laboratory spaces; updates to the biological spill response; and the addition of lab coats and safety glasses. Dr. Steven Wilhelm's registration (#13-404-1) was updated to include the addition of booties to the PPE listed and BSL-2 was checked for the laboratory biosafety containment level. Dr. Jeremiah Johnson's registration (#16-441-2) was updated to include

a clarification of shiga toxin-producing E. coli are foodborne pathogens in the Technical Summary; updates to the biosafety cabinet certification dates; and the addition of references to lab coat laundering. Dr. Raul Almeida's registration (#19-537-2) was updated to include a rewrite of the nontechnical summary; clarification of separation of individual milking equipment; clarification of carcass treatment; addition of biosafety cabinet information; addition of storage information; correction of disinfectant shelf life to 24 hours; and the addition of statement indicating Advantra will not be handling the animal carcass for disposal. His registration has been sent back to the committee for further review.

- ii. *Administrative Approvals*
None.
- 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

Old Business:

Biosafety/EHS Integration

The IBC Chair and Vice Chair sent a letter of concern about the office integration plans to the Environmental Health & Safety Director, Sandra Prior, the Chief of Police, Troy Lane, and the Interim Vice Chancellor for Research, Dr. Robert Nobles. The committee discussed their concerns about lack of transparency concerning the integration. Dr. Nobles explained to the committee the rationale for integrating the Biosafety Office with EHS. He also assured the committee that a campus-wide announcement would be distributed before the end of the month. The committee also expressed concerns about the implementation of multiple research and safety compliance software platforms. Dr. Nobles addressed the committees concerns and authorized the search for a single software platform that meet the university's compliance needs.

New Business: None.

The meeting was adjourned at 5:01 PM. The next meeting scheduled for September 18, 2019 from 3-5 pm in Plant Biotechnology Room 410.