INSTITUTIONAL BIOSAFETY COMMITTEE MEETING
May 20, 2020
3:00 PM, Zoom Meeting

MEMBERS PRESENT: Chair – David White, Vice-Chair - Elizabeth Fozo, Lori Cole, Doris D'Souza, Paul Dalhaimer, George Dizikes, Reza Hajimorad, Melissa Kennedy, Jun Lin, Reggie Millwood, Deidra Mountain, Jae Park, Ling Zhao

Ex-Officio – Ahmad Mitoubsi, Scott Moser, Brian Ranger, Jessica Woofter

MEMBERS ABSENT: Marc Caldwell, Brittany Isabell

OTHERS PRESENT: None

Opening:

The IBC Chair called the meeting to order at 3:02 PM. The minutes of April 15, 2020, were reviewed and approved as written. There was one abstention.

Full Member Review IBC Registrations:

#IBC-05-245-2 (Todd Reynolds) Recombinant DNA, Infectious Agents & Human Derived Materials Registration, III-D-1-a; 2-a; 4-b, 3-year rewrite
Dr. Reynolds' research focuses on the discovery of small-molecule compounds that can be used for the development of new antifungal agents, particularly those that target phospholipid biosynthesis (e.g. phosphotidylserine synthase inhibitors) in Candida species (*C. albicans, C. glabrata,* and *C. auris*). Briefly, recombinant DNA techniques will be used to disrupt the phosphotidylserine genes or alter their expression, as well as other relevant genes involved in phospholipid synthesis and regulation. Recombinant mutants will be tested under in vitro growth conditions, challenged with mammalian cells and immune cells like macrophages, and used in mouse infection models. An Animal Hazard Control Form (AHCF) is in place and posted for in vivo infections. The containment level was established at BSL-1 for rDNA work with C. albicans and *C. glabrata*, and BSL-2 for *C. auris*. Animal challenges with recombinant mutants were approved at ABSL-2. The committee approved the registration pending the correction of the typographical error in the nontechnical summary; clarification in the technical summary of where the pooled human serum is used; correction of Question 10.2 to include the Mossman Lab Animal Facility instead of the Walters Life Science Lab Animal Facility; and correction of the health surveillance statement in Question 16.1 to inform lab members of the increased health risks associated with the use of *Candida auris*.

#IBC-08-323-2 (Shawn Campagna) Infectious Agent Registration, 3-year rewrite, revisit
Dr. Shawn Campagna's research covers the use of several Risk Group 2 organisms including *Chromobacterium violaceum, Yersinia enterocolitica, Vibrio vulnificus, Vibrio parahaemolyticus, Vibrio cholerae, Salmonella enterica serovar Typhimurium, Proteus*

mirabilis, Neisseria lactamica, Klebsiella pneumoniae, Helicobacter pylori, Haemophilus influenzae, Edwardsiella tarda, Aeromonas hydrophila, Streptococcus pyogenes, Staphylococcus aureus, Listeria monocytogenes, and Enterococcus faecalis. Organisms will be used for (S)-4,5-dihydroxy-2,3-pentanedione (DPD) and glucose assays to understand quorum sensing, cell signaling, and consequences on metabolism. Briefly, cultures of no more than 50 mL will be grown overnight in appropriate media. Harvesting in some cases will be performed at different periods, centrifuged and lysed using standard solvents for chemical analysis by LC- MS. Procedures involving these infectious agents will be carried out using BSL-2 facilities, equipment, and practices. The committee approved the registration as written pending confirmation of the biosafety cabinet certification.

#IBC-14-421-1 (Matt Cooper) Recombinant DNA Registration, III-D-4-a, 3-year rewrite
Dr. Cooper's research focuses on neural mechanisms that control resistance to social stress disorders using adeno-associated viral (AAV) or canine adenoviral (CAV) vectors overexpressing designer muscarinic-like receptors in specific neural circuits. Briefly, viral particles expressing designer receptors will be introduced into select brain regions of Syrian hamsters and pharmacologically activated to determine the effects on resistance to social stress. Viral vector constructs will be purchased at challenge titer from the core facilities (i.e. no in vitro construction or propagation procedures will be conducted in Dr. Cooper's laboratory). The committee approved the registration as written with containment set at (A)BSL-1. The committee approved the registration pending the addition of Virovek to the rDNA source list and an update to the spill response to include the use and contact time for ethyl alcohol.

#IBC-14-422-2 (Jiangang Chen) Infectious Agents, 3-year rewrite
Dr. Chen's registration covered his research on gut microbiota and their symbiotic relationship with their hosts contributing to intestinal health and the onset of disease. The proposed study will investigate the effects of triclocarbon (TCC) on the proliferation of *Clostridium difficile* in vitro. Techniques will include growth curve determination, minimal inhibitory concentration (MIC) assays, and determination of the growth and toxin production of *C. difficile* in TCC-exposed fecal samples. The containment level was set at BSL-2. The committee approved the registration pending the identification of the types of personal care products described in the nontechnical summary; indicating the use of centrifugation in Question 6.3; the correction of the IACUC number 2368 in Question 6.5; confirm that rooms listed in Question 7.1 correspond with the building entries in Section 8; confirmation that the biosafety cabinet is not needed for the lab work performed in Hesler; and the confirmation that the pathogens will be stored in the -80°C freezer in the UT Veterinary Teaching Hospital.

#IBC-14-423-2 (Stacy Stephenson) Recombinant DNA, Infectious Agents, & Human Derived Materials, III-D-2/4-b, 3-year rewrite
Dr. Tom Masi was present to discuss Dr. Stephenson's research on mesenchymal stem cells as a source for tissue engineering. The study aims to incorporate pLUX into a lentiviral vector, optimize the transduction of mesenchymal stem cells, evaluate stem cell growth rates, and verify long term constitutive expression of bioluminescence of mesenchymal stem cells transduced with pLUX. The containment level was set at BSL-2. The committee voted to approve the registration pending the removal of the inactive IACUC protocol 2462 from Question 6.6; checking "yes" for the usage of lentiviruses as a host-vector system in Question 6.11; indicating that sharps will be used in Question 10.6, and indicating "yes" for Question 14.1 that the

associated IACUC will be generating animal carcasses for disposal through the UT Vet Hospital digester.

#IBC-20-543-2 (Scott Lenaghan) Infectious Agents, New registration
Dr. Lenaghan's registration covers the study of Cyclospora and identifying new control measures for the inactivation of Cyclospora in agricultural water inputs and on the surface of produce. The objectives of this 2-year project are: 1) systematically evaluate inactivation of Cyclospora oocysts by gamma radiation, ultraviolet radiation (UV), ozonation, and chlorine dioxide gas (ClO2); 2) develop a high-throughput, automated method for determining inactivation of Cyclospora oocysts; and 3) employ the automated method to screen a library of chemical compounds for inactivation of Cyclospora. The committee approved the registration pending the correction of Question 6.5 to "yes" sharps will be used; clarification in the technical summary of *Eimeria spp.* usage; clarification of what automated system is used; the definition of "CPS"; the correction of "1 x 104 oocysts/treatment" to "1 x 10^4 oocysts/treatment"; and the addition of a statement in Question 14.1 to address precautions for immuno-compromised individuals entering the lab area.

#IBC-20-544-2 (David Anderson) Infectious Agents, New Registration
Dr. Anderson was present to discuss his registration covering the use of *Staphylococcus aureus* strains in his DO-PRORP funded grant studying functional bone regeneration in a cortical defect in goats with and without infection. The committee approved the registration pending the removal of the additional strains of *Staphylococcus aureus* not currently in use. Additionally the committee would like clarification in the technical summary regarding the generation of the *S. aureus* strains; application of the organism to the contaminated device; clinical monitoring of animals post-treatment application, special disposal requirements for animals after euthanasia; how will collected tissues be handled and disposed of after data collection; and the inclusion of the animal and tissue disposition. Lastly, the committee asked for a building correction in Question 8.2 for the biosafety cabinet location.

IBC-20-545-2 (David Anderson) Infectious Agents, New Registration
Dr. Anderson was present to discuss his study of hydrophilic bone tissue regeneration scaffold which can serve a dual role as a local antibiotic delivery device to eliminate bacteria from contaminated orthopedic sites in a goat model. The committee approved the registration pending the removal of the additional strains of *Staphylococcus aureus* not currently in use. Additionally the committee would like clarification in the technical summary regarding the generation of the *S. aureus* strains; application of the organism to the contaminated device; clinical monitoring of animals post-treatment application, special disposal requirements for animals after euthanasia; how will collected tissues be handled and disposed of after data collection; and the inclusion of the animal and tissue disposition. Lastly, the committee asked for a building correction in Question 8.2 for the biosafety cabinet location.

Designated Member Review IBC Registrations:

None.

Old Business:

Administrative Report

i. *Contingencies*
Following up on April 15, 2020, IBC Meeting, Dr. Hwa-Chain Wang's registration (#08-115-2) was corrected to include a clarification of retroviral pGFP-VRS-shRNA construct listed in the table in Section 6.2; clarification of viral vector usage in section 6.11; clarification of the term "Class I agent"; clarification for respirator usage; and the correction of Section 11.2 to indicate that the medical contractor Advantra will be used for biohazardous waste. Dr. Shawn Campagna's registration (#08-323-2) was updated to include the expansion of the project title to encompass work AI-2 and the Anthropology project; review of personnel listed; addition of strain details for items listed in the Section 6.1 table; correction of Section 7.1 to indicate no that human-derived materials are not screened for bloodborne pathogens; clarification in the Technical Summary of microbial communities listed; addition of sample collection and how samples are processed in the laboratory; addition of details regarding drugs in donors from the anthropology study; clarification in Section 9.1 about laboratory locations; updates to the biosafety cabinet certification date; updates to the spill response plan; and the addition of a statement in Section 15.1 that employees handling human-derived materials will be offered the hepatitis B vaccine per TOSHA and UT Biosafety requirements. Dr. Sarah Lebeis' registration (#14-414-1) was corrected to include the clarification about the usage of field soils, naturally occurring microbes, reconstructed microbe communities, and genetically engineered or mutated microbes were used; specific details of the Arabidopsis mutants; clarification if plants and materials are autoclaved and then placed in Advantra bins in Mossman; and an update to the autoclave validation date. Dr. Tessa Calhoun's registration (#14-415-2) was corrected to include an update to the biosafety cabinet certification date and the correction of Section 10.2 to indicate that the medical contractor, Advantra, is used for biological hazardous waste treatment. Dr. Neal Stewart's registration (#20-542-2) was corrected administratively for minor typographical errors and the correction of Advantra as the medical contractor being used for biohazardous waste collection. Dr. Stephen Kania's registration (#20-542-2) included a provisional statement that was applied administratively to the outcome letter that as new pathogens are identified, the registration must be formally amended with new pathogens 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

New Business:

Reduced Laboratory Activities for Holidays, Field Work, or Emergencies
Dr. Fozo and Brian presented the committee with a draft amendment to the IBC Charter that will address issues with laboratories and ensure good laboratory practices are maintained in the event labs are required to reduce activities, whether due to holidays, travel, field-work, or in the case of public health or other emergencies. Brian asked the committee to submit comments by Friday, May 29, 2020.

Approval Process Escalation SOP
Brian notified the committee about issues that have arisen in the approval process. He suggested creating a clear escalation process for who can approve registrations in the event departmental heads are unresponsive or out of town. The committee suggested routing the registration to the Associate Dean of Research for approval. Jessica will draft a workflow diagram and SOP for the committee to review at the next meeting.

The meeting was adjourned at 5:06 PM. The next meeting scheduled for June 17, 2020, via Zoom.