

INSTITUTIONAL BIOSAFETY COMMITTEE MEETING

August 10th, 2023

Zoom Meeting

MEMBERS PRESENT: *Chair:* Deidra Mountain *Vice Chair:* Elizabeth Fozo, Reza Hajimorad, Paul Dalhaimer, Lezlee Dice, Doris D'Souza, Brittany Isabell, Jun Lin, Reza Hajimorad, Jessica Velez, Andi Lear, Joseph Jackson, Jae Park, Ashley Carroll

Ex-Officio: Carolina Dolislager, Linda Hamilton, Jessica Woofter, Bailey Tutor, Daniel Thomas, Bryan Cranmore

MEMBERS ABSENT: Marc Caldwell, Ling Zhao, Feng Chen, Lori Cole, Tarek Hewezi

OTHERS PRESENT: Dominique Cirri Joyner, Sarah Ann Shelby, Kurt Ashe

Opening:

The IBC Chair called the meeting to order at 9:00 AM. The minutes for May 3, 2023, IBC Meeting were reviewed and approved as written.

Full Member Review IBC Registrations:

#IBC-08-323-2 (Shawn Campagna) Human Derived Material & Infectious Agents, 3rd-year Rewrite

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 requested clarification regarding personnel including who is working with the cadavers and biohazardous materials, addition of Steadman as research staff, removal of the duplicate SERF room, indication if any of the work is being done at Dabney-Buehler, and update to the spill response. The committee voted to approve the registration pending DMR.

#IBC-20-549-2 (Terry Hazen) Human Derived Material & Infectious Agents, 3rd-year Rewrite

Kurt Ashe and Dominique Joyner were both present to discuss this study. Originally, Dr. Hazen's research was to determine which buildings at UTK (especially dorms) may have SARS CoV-2 virus signals (Covid-19) in the wastewater from the building. This was simply a presence/absence

test to determine if further testing is needed. Positive outcomes were not handled by this team (pooled surveillance testing by floor or section of the building followed by individual testing by the student health center for CLIA certified testing and Contact-Tracing). SARS CoV-2 had been detected in wastewater by many others. This surveillance lasted until Covid-19 was no longer viewed as a significant health threat at the UTK campus. Now, this study is looking to identify where *Candida Auris* is present in the environment and determine if it is filling a niche. Samples have been collected from both wastewater and the harbor in Charleston, SC, however no *Candida Auris* was found in the first round of sampling. If *Candida* species are found, a metagenomic comparison will be performed comparing it from the wastewater sample to the environmental samples that are found. The safety protocol will remain the same as the raw sewage protocol exercised with SARS Cov-2 protocol. At the moment, Containment was set to BSL-2. The committee asked for the following corrections and clarifications: Is Sarah Mobley supposed to be listed as department approver; a definition of WBE and changing of the word “neutralized” to “inactivated” in the non-technical summary; checking of the box for off campus collection in section 6.1 for HDM; updated the wastewater location; and correction of typographical errors present in the technical summary. The committee voted to approve the registration pending the above administrative corrections.

#IBC-23-590-2 (Sarah Shelby) Human Derived Material, Infectious Agents & Recombinant DNA Registration, New Registration

Dr. Shelby was present to discuss this study regarding the investigation into the basic function of immune receptors in cells of the immune system. The study is looking at the signaling in T-cells and B-cell attempting to understand how structure and organization of the plasma membrane itself contributes to the regulation of immune receptors signaling pathways in space and time on the plasma membrane. The use of fluorescence microscopy of live immune cells is used as a primary tool to visualize immune receptor signaling. The expected outcome of the experiments are quantitative measures of protein interactions in the plasma membrane that suggest signaling function. The committee requested an updated to the biosafety cabinet date. The committee voted to approve the registration pending this administrative correction.

Old Business:

Administrative Report

i. Contingencies

Follow up on the June 7th, 2023, meeting, Dr. Stacy Stephenson’s amendments to registration (#14-423-2) were approved on 6/20/2023 through FMR after the removal of the inactive IACUC protocol numbers and the addition of IACUC personnel involved with this registration. Dr. Scott Lenaghan registration (#20-543-2) was approved on 7/17/2023 through FMR following the addition of a statement elaborating on the inactivation procedures and how oocytes have been obtained, addition of details regarding the initial work where Cyclospora is not used, an update to the spill response to specifically identify the disinfectant and contact time, and the removal of the risk management statement replaced with “All immunocompromised or pregnant employees who work with or have potential to come in contact with the registered materials should contact the Occupational Health Program Research

Nurse Coordinator at 865-755-8992 or bcranmor@utk.edu". Dr. Rajan Lamichane registration (#20-546-1) was approved on 6/22/2023 through DMR after the confirmation that all personnel involved in the study were listed, the nontechnical summary was rewritten following the given subheadings, more detail was provided regarding the process for vectors going into the cells, cell harvesting, etc as well as stating the rDNA molecules are purchased instead of generated, clarification regarding what is being disinfected in the Mossman autoclaves and bleach is not being used in the autoclave, removal of the autoclave as all solid waste goes through Advantra, and changing the statement regarding the Hep B vaccine to say "All personnel will be offered the Hepatitis B vaccine before they start using human cells."

ii. *Administrative Approvals*

The following updates were approved administratively by the Biosafety Officer: Dr. Jun Lin's registration (#05-265-2) added an amendment on 7/17/2023 updating the biosafety cabinet certification dates and the technical summary; Dr. Feng Chen's registration (#05-238-2) updated personnel and grant information as well as added Poplar and Tomato insert genes on 6/8/2023; Dr. Shigetoshi Eda's registration (#06-276-2) updated personnel, grant information, biological spill response, autoclave validation dates, and the addition of *Salmonella typhimurium* on 8/8/2023; Dr. Tim Sparer's registration (#06-277-2) updated personnel and biosafety cabinet certification date on 6/8/2023; Dr. Elana Shpak's registration (#07-313-1) updated personnel and spill response disinfectant and contact time on 6/21/2023; Dr. Jon Wall's registration (#09-342-2) updated personnel, grant information, IACUC numbers, biosafety cabinet certification dates, the spill response as well as made changes to the project aims, research design, project procedures, and outcome measures to the nontechnical and technical summaries by clarifying the removal of nanoparticles and the addition of THP-1 (monocytic leukemia) host cells on 6/28/2023; Dr. Ling Zhao's registration (#09-344-2) submitted their annual update with no new updates on 8/8/2023; Dr. Jiangang Chen's registration (#10-408-2) updated the biosafety cabinet certification date on 6/22/2023; Dr. Neal Steward's registration (#12-380-1) updated personnel and autoclave validation dates on 8/8/2023; Dr. Neal Stewards' registration (#12-382-1) updated personnel, grant information, added Soybean (*Glycine max*) gene BBi5 and KTi7, ETREC Plant Sciences Unit Location (3215 Alcoa Highway), and storage unite located at the ETREC Plant Sciences Unit on 8/8/2023; Dr. Rebecca Trout Fryxell's registration (#12-382-1) updated the biosafety cabinet certification date on 6/20/2023; Dr. Tarek Hewezi's registration (#13-398-1) updated personnel, grant information, autoclave validation dates, and added *Meloidogyne hapla* and *Meloidogyne arenaria* on 6/22/2023; Dr. Ahmed Bettaieb's registration (#15-432-2) removed Jessie Harris Building LAF from locations on 6/21/2023; Kellie Fecteau's registration (#16-439-2) updated personnel, biosafety cabinet certification, and spill response on 6/8/2023; Dr. Jeremiah Johnson's registration (#16-441-2) updated grant information, added IACUC 2917, added colorectal tissue, and updated biosafety certification dates on 6/8/2023; Dr. Deidra Mountain's registration (#18-527-2) updated to personnel, grant information, biosafety cabinet certification dates, and PPE disinfection procedures on 7/17/2023; Dr. Katherine Morgan's registration (#20-522-2) renewed human-derived materials registration on 7/6/2023; Dr. Shawn Campagna's registration (#21-565-2) updated personnel and project contacts, removed Dabney-Buehler Hall Room 606 and added SERF Roo 330, and updated the biosafety cabinet certification dates, storage locations, and liquid waste location on 6/8/2023; Dr. Amit Joshi's

registration (#21-567-2) updated personnel and grant information on 6/21/2023; Dr. Barry Bruce's registration (#21-568-1) updated personnel on 6/21/2023; Dr. Vincent Pantalone's registration (#22-57-1) updated the nontechnical and technical summary regarding the research design on 6/22/2023; Lindsey Burcham's registration (#22-580-2) updated personnel and added Mossman Rooms 120G and 625/625A on 6/8/2023; Dr. Ivis Chaple Gore's registration (#22-581-2) updated personnel, added human cell line PANC-1, and updated medical waste contractor (Advantra) for biohazardous sharp waste and pathological waste on 8/8/2023; Dr. JI Youn Yoo added new human derived materials registration covering stool, urine, hair, saliva, blood (plasma), and cell samples from humans on 8/8/2023.

iii. Administrative Terminations

None

iv. Administrative Exemptions:

None

v. Accidents, Injuries/Exposures:

There was a mouse bite that occurred. It was referred to Brian Cranmore and no complications occurred.

vi. Laboratory Report:

LSS is finishing up on main campus and moving to the ad campus soon. GSM audits will begin potentially the week of 8/21/2023 and be finish within August.

vii. iMedRIS Update, Manual Reviews, & System Orientation:

IBC Draft Form – Section 6 (rDNA) Updated

The new form was presented to the committee.

IBC Draft Form – Section 7 (Infectious Agent)

New Business:

Access to Safety Stratus Test Site

Jessica gave a quick tour of the Safety Stratus test website and the current application process. The committee was informed that they will be given access to the test site once it is available. The goal is to have Safety Stratus ready to launch by October of 2023.

The IBC Chair adjourned the meeting at 10:10am. The next meeting is scheduled for September 14th, 2023, from 9:00 am – 11:00 pm via Zoom.