Institutional Biological Safety Committee Meeting

Wednesday, June 25, 2025
2:30 pm – 4:00 pm
Hybrid meeting

Attendees
Erin Bredeweg (IBC Vice Chair)
Owen Leiser (rDNA Subject Matter Expert)
Shuang Deng (Lab Rep)
Amy Person (Local Non-Affiliated Member)
Danielle Saunders (Animal Expert)
William Chrisler (Lab Rep)
Robert Jeters (BSO Delegate)
Jen Mobberley (Lab Rep)
David Hoyt (Lab Rep)
Vimal Balasubramanian (Plant Expert)
Elizabeth Rosso (Legal Expert)
Mylissia Smith (BSO)

Other Attendees
Lara Hastings
Carina Cassel
David Billetdeaux

Welcome

Call to Order: The Vice Chair called the meeting to order at 2:26pm.

Roll call was taken. Voting quorum was present.

IBC Approvals and Notifications

Minutes – The Vice Chair moved to approve the May 28, 2025 minutes as written. No discussion was had. The May 28, 2025 minutes were approved.

rDNA Registrations – There were ten rDNA Registrations to review:

New Registration LA-RDNA-#5033, Akt FRET Sensor Lentiviral Particle Production and Stable Cell Line Generation. The goal of the project is to create a stable C2C12 cell line expressing a FRET sensor or Akt activity. This research falls under NIH Guidelines Section III-D and is proposed to be conducted at BSL2. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL2 rDNA work. A motion was made to defer consideration of this registration until next month's IBC Meeting. The rDNA will be sent back to the author for clarification of staff. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

New registration LA-RDNA-#5034, Respiratory Syncytial Virus Expressing Enhanced Green Fluorescent Protein for Biosafety Level 2 Applications. The goal of the project is to understand host response to human viruses in immortalized and primary cells and to evaluate targeted inhibitors that may have antiviral properties. This research falls under NIH Guidelines Section III-D and is proposed to be conducted at BSL2. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL2 rDNA work. A motion was made to approve the registration as III-D pending the following conditions to be met: A worker is missing from the activity. Votes: 10 For, 0 Against, 1 Abstain. Conflict of interest by abstaining party.

New Registration LA-RDNA-#5037, Use of genetically engineered rhizosphere bacteria for plant-microbe interaction studies. The goal of the project is to study plant-microbe interactions in the rhizosphere, pertaining to improved plant phenotypes including growth, stress resilience, nutrient or mineral uptake. This research falls under NIH Guidelines Sections III-E and III-F and is proposed to be conducted at BSL1. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL1 rDNA work. A motion was made to defer consideration of this registration until next month's IBC Meeting so that the author can complete the registration. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

New Registration LA-RDNA-#5038: ENO1 Nanobodies. The goal of this project is to produce nanobodies against Alpha-Enolase (ENO1). This research falls under NIH Guidelines Section III-F and is proposed to be conducted at BSL1. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL1 rDNA work. A motion was made to approve the registration as III-F. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

New Registration LA-RDNA-#5039: Synergistic Toxin Antibody Modeling and Molecular intervention (STAMP). The purpose of this project is to express monoclonal antibodies using cell-free expression systems and/or E. Coli expression systems. This research falls under NIH Guidelines Section III-F and is proposed to be conducted at BSL1. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL1 rDNA work. A motion was made to approve the registration as III-F-3. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

New Registration LA-RDNA-#5040: SARS-CoV 2 for biosafety level 2 work. The overall goals of the project are to understand the host response to human coronaviruses in human lung cells. This research falls under NIH Guidelines Section III-D and is proposed to be conducted at BSL2. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL2 rDNA work. Note that this registration was originally assigned rDNA#5028 however it is a renewal, therefore given a new number. A motion was made to approve the registration as III-D. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

New Registration LA-RDNA-#5041: Assessing Emerging Threats by Host Response – NL63 GFP. This project will use cultures of primary human lung cells to determine the host response to human respiratory virus infection using omics analysis. This research falls under NIH Guidelines Section III-D and is proposed to be conducted at BSL2. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL2 rDNA work. A motion was made to approve the registration as III-D. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

Renewal of rDNA registration LA-RDNA-#5042: Host response to viral infection and tracking viral protein expression TC-83 only. The goal of the project is to study viral protein production and host response to virus infected cells. This research falls under NIH Guidelines Section III-D and is proposed to be conducted at BSL2. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL2 rDNA work. A motion was made to approve the registration as III-D. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

New registration LA-RDNA-#5045: Expression and purification of ncAA proteins from E. coli. The purpose of this project is to express recombinant proteins with non-canonical amino acids in E coli. This research falls under NIH Guidelines Section III-E and III-F and is proposed to be conducted at BSL1. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL2 rDNA work. After discussion a motion was made to approve the registration as III-F pending the following conditions to be met: Finalize work location. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

Renewal of registration LA-RDNA-#5049, Generation of MSP-AMP scaffolds. The objective of this project is to engineer a library of synthetic "scaffolds proteins" that bypass detergent solubilization procedures to directly extract membrane protein-lipid complexes into affinity purifiable nanodiscs. This research falls under NIH Guidelines Section III-E and is proposed to be conducted at BSL1. All staff listed on the registration have been appropriately trained, and all spaces to be used are approved for BSL1 rDNA work. A motion was made to defer consideration of this registration until next month's IBC Meeting due to it being incomplete. Votes: 11 For, 0 Against, 0 Abstain. No conflicts of interest.

Lab Assist Activity Summaries

There were three (3) Lab Assist activity summaries to report.

LA# 11778/BSF 1235,1236,1237: 4/24/25 – Version 1: Assessing Molecular Activity in Virus-Infected Cells (Richland BSL2). This activity encompasses defining host enzymatic processes or pathways that may be up or down regulated following viral infection. Assays will either: 1) generate nuclear or whole cell extracts from virus infected host cells (and mock-infected controls) to assess the activity of a variety of enzymatic processes including methyltransferases or 2) use a wide variety of inhibitor compounds to block specific host protein functions during viral infection to determine if viral replication levels are reduced.

LA# 11881/BSF 1235,1236,1237: 4/24/25 – Version 1: Extracting Sub-cellular Fractions from Virus-infected Host Cells for 'Omics Analysis (Richland BSL2). This activity encompasses the extraction of biological components from virus-infected host cells (and un-infected controls) for 'omics analysis. The omics could be transcriptomics, lipidomics, proteomics, metabolomics, or other. The methods for harvesting RNA (using Trizol) and proteins, lipids & metabolites (using the MPLEx procedure).

LA# 1676/331 315,319, 354: 5/12/25 – Version 2: Global Omics extraction. The processes described herein are performed to extract lipids, proteins/peptides, and/or metabolites from several sample types, including pure cultures of RG1/RG2 organisms, inactivated RG2/RG3 biomass, biological toxin-containing samples, mammalian cell cultures, clinical samples, complex mixtures (spiked analyte in matrices such as but not limited to: saliva, urine, blood, serum, food matrices, soil matrices), and environmental samples. Environmental samples may consist of soil or water. Clinical samples may include tissues and exhaled breath. Chemical manipulations will be identical for all types of samples and will be performed either in a biosafety cabinet or chemical fume hood.

Lab Walk-throughs – None

2400 Calls – Tabled to July IBC Meeting

Roundtable

Counsel provided a brief legal update.

The Meeting adjourned at 3:53 p.m.

**** The next IBC meeting is scheduled for July 23, 2025 at 2:30pm ****