Boston University
Institutional Biosafety Committee (IBC)
December 10, 2024 Meeting Minutes
Location: Zoom and/or by phone
Start time: 12:00 PM End time: 12:59 PM

Members Present:	R. Ingalls, R. Davey, I. Afasizheva, P. Liu (joined 12:13 pm), V. Gouon-Evans, T. Winters, E. Loechler (joined 12:58 pm), R. Morales, N. Dey, M. Mazur, J. Keeney, V. Britton, S. Ghosh, X. Brown
Guests Present:	P. Richmond, A. Ahmad, C. Fernald, A. Ellis, J. Wood
Staff Present:	C. McGoff, L. Campbell

I. Review of November 19, 2024 IBC Meeting Minutes (R. Ingalls)
No concerns were voiced.
Motion: Approved
For: 10; Against: 0; Abstain: 2; Absent: 2

II. Chair's Report: Nothing to report.

III. New Business:
A. IBC Office Updates: Nothing to report.
B. Review of Research Occupational Health Program (ROHP) Report and Environmental Health and Safety (EHS) Report: Nothing to report.

IV. Protocol Review
1. rDNA/Bhz – New Application

BUA	(PI)	Title	BSL	ABSL	Campus
2668	[redacted]	Stem cell Reconstitution of the Lung; induced pluripotent stem (iPS) cell modeling of lung development and disease; Derivation of Transplantable Lung Epithelial Progenitors from iPS Cells	2	2	BUMC

Primary Reviewer: Valerie Gouon-Evans	Secondary Reviewer: M. Mazur
Applicable NIH Guidelines: Sections III-D-1,III-D-4-a; Appendix B-II, G-II-B-1; and M	

Meeting Comments: The goal of this project is to investigate the mechanisms underlying lung injury and repair. The lab uses induced pluripotent stem cells and experimental mouse lung injury to model human lung development and examine the role of specific genes in this process. To modify gene expression in this system, they use viral vectors and CRISPR technology. They also generate lung stem cells from iPSC to explore their ability to reconstitute an injured lung after stem cell transplantation. Human lung tissue sections, obtained through approved IRB protocol, will be used to confirm expression patterns of proteins relevant to the lung diseases. In these studies FFPE or frozen tissue sections will be received from their collaborators. NIH approved human ESC lines will also be used. Recombinant DNA form is well described for both prokaryotic and eukaryotic experiments. All hazardous materials are pipetted in the fume hood of the Center for Regenerative Medicine and all human and mouse cells are handled in biosafety cabinets. Disposable sharps are used as single-use only. Sharp handling and disposal is well-described and appropriate. Comments within the submission indicate that ROHP clearance has been updated for some staff members, and that required training courses have been completed, but these updates, including completing the experience table for all members need to be reflected in the IBC Personnel section.

The following will be communicated to the PI:
- Section VIII.4 : please complete the Animal work PPE section as appropriate for the proposed animal work.

- It is stated that "For intra-institutional transport, all biological substances are transferred in 15 mL Falcon tubes in secondary ice bucket container". Ice bucket is not considered as shatterproof and leakproof container. Please state that actual shatterproof and leak proof container (such as igloo box) will be used.
- It is stated in Section G that Irradiator will be used for mice: Yes "Mice, in preparation for bone marrow transplantation". But there is no description of bone marrow transplantation in this proposal. Please uncheck or explain the procedure.

BUA Site Assessment: All trainings are current and [redacted] has current shipping training. Animal work PPE is missing. All BSCs in the lab and fume hood are duly certified. The lab plans to conduct mouse infection with influenza virus in collaboration with Dr. [redacted]. All mice infection with Influenza strain should be conducted in a Biosafety cabinet.

Motion: Conditional Approval (Admin Review)	For: 13	Recuse: 0	Against: 0	Abstain: 0	Absent: 1

2. rDNA/Bhz – Annual Renewal

BUA	(PI)	Title	BSL	ABSL	Campus
2469	[redacted]	Pathogenesis studies of BSL-4 viruses using rodent and humanized mouse models	4	4	BUMC

Primary Reviewer: Rob Davey	Secondary Reviewer: M. Mazur

Applicable NIH Guidelines: Section III-D-4-a

Meeting Comments: This protocol describes infectious disease work with rodents engrafted with human tissues as infection models. Infection studies include work with filoviruses, henipaviruses, or arenaviruses. The work description has not changed since last review and work is performed in compliance with ABSL4 practices. For personnel, Dr. [redacted] has been replaced by Dr. [redacted] as the lead veterinarian at ABSL4. The committee recommends the PI to discuss with Dr. [redacted] if there are any changes in guidance for the studies. General work at NEIDL is well-described, with reference to protective practices and gear, as well as standard SOPs for laboratory procedures. Microchem is the building-standard disinfectant, which is adequate for all viruses currently used in the lab. Basic information about each virus is presented, which include a brief background and approximate lethality in target species. Virus and animal handling is described and safeguards are in place to present exposures or injury. A description of sharps use and disposal is provided, and multiple routes for inoculation are also described. Disinfection and decontamination procedures are mentioned and are appropriate. The following will be communicated to the PI:

- Since Dr. [redacted] is no longer in charge of overseeing the animal work in this protocol please replace her with Dr. [redacted], who is now in charge of those work.
- The typo in the Laboratory procedure section "Case fatality rates range between 1040%" should be changed to "Case fatality rates range between 10 and 40%."
- Typo for BSC serial number 94341 needs to be updated (should be 95341).
- The IACUC protocol number [redacted] mentioned in Hazardous Biological Agent section should be changed to [redacted]
- In the rDNA animal work section, IACUC approval number is listed as "Pending". Is there another IACUC protocol under review? If not, [redacted] can be added.

Motion: Conditional Approval (Admin Review)	For: 13	Recuse: 0	Against: 0	Abstain: 0	Absent: 1

3. Bhz – Annual Renewal

BUA	(PI)	Title	BSL	ABSL	Campus
1823	[redacted]	Storage, Propagation, and Distribution of BSL3 Select Agent Emerging Pathogens	3	N/A	BUMC

Primary Reviewer: Robin Ingalls	Secondary Reviewer: Sajal Ghosh

Applicable NIH Guidelines: N/A

Meeting Comments: This is a storage only protocol for select agents that require BSL3 containment including *F. tularensis, Y. pestis*, MPOX, SARS-CoV, Rift Valley virus, VEEV and EEEV. Samples requested by PIs with approved IBC application will be received by the NEIDL Responsible Officer (RO) and appropriate EHS personnel following coordination with the sending institution following completion of appropriate Federal Select Agent Program (FSAP) form (Form 2) for shipment and transport of select agents. Receipt and storage of the samples are strictly monitored by NEIDL Inventory program. The current submission is an annual renewal with no changes except for the update of biosafety cabinet certification dates. Personnel involved in maintaining the storage program are adequately trained and trainings records and ROHP clearances for all members are current. Use of proper PPE and proper waste disposal plans are clearly delineated. However, no dwell time is provided for the bleach disinfection. Since no propagation is done as part of this protocol, the committee suggested removing the word 'propagation' from the title. The following will be communicated to the PI: • Since the protocol does not involve any culture work for virus propagation, the committee recommends removing the word "Propagation" from the protocol title. • Please indicated contact time with 10% for surface decontamination.

Motion: Conditional Approval (Admin Review)	For: 13	Recuse: 0	Against: 0	Abstain: 0	Absent: 1

4. rDNA/Bhz – Three-Year Renewal

BUA	(PI)	Title	BSL	ABSL	Campus
1697	[redacted]	Translational control in virus-infected cells	2	N/A	BUMC

Primary Reviewer: Rob Davey	Secondary Reviewer: Inna Afasizheva

Applicable NIH Guidelines: Section III-D-1-a, III-D-2-a; III-D-3-a, III-E-1; Appendix B-II-D and Appendix G-II-B

Meeting Comments: The proposed work is comprehensive, encompassing research on multiple viruses performing recombinant work, diagnostics, and host interaction studies. The virus work involves generating infectious viruses from cDNA clones through plasmid transfections in cell lines, as well as working on Vesicular stomatitis virus (VSV), La Crosse virus, Vaccinia virus (including laboratory-adapted strains), and Influenza virus (PR8). Their diagnostic work focuses on clinically isolated materials and includes analyses using advanced diagnostic tools. They also analyze host factors in diseases caused by VSV, Respiratory Syncytial virus (RSV), La Crosse virus, Vaccinia virus, Newcastle Disease Virus, Sendai Virus, and number of Bunya viruses. In these studies they utilize RNAi screening to suppress host gene expression, examining its effects on viral replication. In general, the viruses used are classified as BSL-2 agents. Standard laboratory practices, including the use of a BSC and standard PPE, are sufficient for containment. Additional precautions for Vaccinia virus (MVA and WR strains) include vaccination of personnel. The DURC/PEPP section highlights work on incorporating Vaccinia protein A51R into VSV to promote infection of insect cells. The DURC/PEPP subcommittee will evaluate if the proposed work meets the criteria for DURC or PEPP concerns. However, the committee recommended adding a statement that if pathogens with higher replication and pathogenic capacities are identified, the work will be stopped and IBC notified. The committee was informed that PI will no longer work with poliovirus in this protocol. Overall, the proposed work is well described and appear to be performed under appropriate biocontainment conditions. The following will be communicated to the PI:

- Please add Rooms [redacted] to this protocol as the BSCs are located there.
- Signage indicating ongoing vaccinia virus work and restricting access to the laboratory during experiments is recommended.
- The committee recommended adding a statement that if pathogens with higher replication and pathogenic capacities are identified, the work will be stopped and IBC notified.
- Poliovirus needs to be removed from the Hazardous Biological agent list from this protocol. If the PI plans to pursue any poliovirus work, the work needs to be planned according to the CDC/WHO recommended facility and containment guidelines and may need BSL3 containment. Please consult with NEIDL EHS for appropriate steps for initiating any future poliovirus work.

BUA Site Assessment: PI has completed Shipping Biologicals training. All BSCs are duly certified. O-rings/safety cups are available for centrifuges. Eye washes/fire extinguishers are certified. AED/First Aid kit available. Biohazard stickers are present and door signs are posted. Lab has emergency spill kits. Rooms [redacted] should be added to this protocol as the BSCs are located there. Polio should be removed from this protocol as it is not used or stored by the PI. Future work with polio would require registration with the NAC as a Polio Essential Facility (PEF). Please contact Ron Morales for more information if needed.					
Motion: Conditional Approval (Admin Review)	For: 13	Recuse: 0	Against: 0	Abstain: 0	Absent: 1

V. List of Protocols reviewed by DMR (not discussed in the meeting)

A list of protocols that were reviewed by DMR was displayed in the meeting.