Boston University
Institutional Biosafety Committee (IBC)
February 11, 2025 Meeting Minutes
Location: Zoom and/or by phone
Start time: 12:00 PM End time: 12:32 PM

Members Present:	R. Davey, E. Muhlberger, I. Afasizheva, W. Lu, T. Winters, E. Loechler, R. Morales, N. Dey, M. Mazur, R. Timmerman (joined 12:11 pm), V. Britton, S. Ghosh, R. Ingalls
Guests Present:	P. Richmond, C. Fernald, A. Ahmad, B. Neugeboren, J. Wood
Staff Present:	C. McGoff, L. Campbell

I. Review of January 21, 2025 IBC Meeting Minutes
No concerns were voiced.
Motion: Approved
For: 11, Against: 0, Abstain: 1, Absent: 1

II. Chair's Report: Nothing to report.

III. New Business:
A. IBC Office Update: Members were informed that the IBC Office is reviewing amendments submitted by researchers seeking to change their biosafety levels on IBC protocols documenting work with SARS-CoV-2 from BSL3 to BSL2 in adherence to recent changes in NIH and CDC guidelines.
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
2680	Michael Herriges	Pulmonary cell therapy for pulmonary fibrosis and bronchopulmonary dysplasia	2	2	BUMC
Primary Reviewer: Rob Davey		Secondary Reviewer: M Mazur			
Applicable NIH Guidelines: April 2024: Sections III-D-1-a, III-D-2-a, III-D-4-a, III-E-1; Appendices B-II, G-II-B-1 and M-II-B					
Meeting Comments: The protocol uses mouse models and cultured human or mouse cells to model pulmonary diseases so that they can study potential cell therapies. Researchers will test whether lab-grown lung cells can survive and repair damaged lungs in diseases like pulmonary fibrosis. Whereas in mouse models, they will assess if cell transplants slow or reverse the disease. They will also investigate whether human lung cells can successfully integrate into diseased lungs. Findings may improve understanding and treatment of lung conditions. They will be use core facilities to examine cells and animal tissues using appropriate precautions. Lentivirus or AAV vectors will be used to alter gene expressions in cells or tissues. Discussion around the vectors is detailed and shows a good understanding of risks and how these systems have a high safety margin. Human and mouse primary and stem cells will be used in BSL2. Liquid waste is treated with bleach at a 10% final concentration for 30 minutes. Solids will be placed in biohazard boxes for solids. Sharps to go into sharps containers. PPE used are lab coats, disposable gloves and safety glasses, which are appropriate for the work. Administration precautions for their use of tamoxifen for gene induction in animals are described well, although the disposal is unclear and needs better description. The following will be communicated to the PI: • Please add PI to the Personnel list and complete all the associated question including position title and descriptive roles • Please make sure to address each of the Overall experience, When and Where the experience was obtained and Experience related to this project questions for both the [redacted] and [redacted] • Provide a brief statement on how the unused tamoxifen is disposed off in the animal facilities					

- Please include room [redacted] as the storage area for biohazardous materials.

BUA Site Assessment: PI needs to be added in the personnel list. All BSCs are certified till March 2025. Vacuum lines are protected. Spill kit is available. Sharp containers are available in the lab. The replication incompetent lentiviral vectors are created in the CReM facility and are used in the lab. Biowaste box must be double lined with red biobags as stated in the protocol. In section VIII.10 of the protocol, please mention [redacted] as the storage area for biohazardous materials.

Motion: Conditional Approval (Primary and Secondary reviewers will review)	For: 13	Recuse: 0	Against: 0	Abstain: 0	Absent: 0

2. rDNA/Bhz –New Application

BUA	(PI)	Title	BSL	ABSL	Campus
2679	Ladora Thompson	Resistance and Resilience to stress in aging	2	1	CRC

Primary Reviewer: Pinghua Liu	Secondary Reviewer: M Mazur

Applicable NIH Guidelines: Sections III-D-2-a, III-E-1; Appendix B-II-D.

Meeting Comments: This protocol proposes to study age-associated loss of function of vital cellular activities. PI's group is particularly interested in the study of mitochondrial responses in skeletal muscles in relation to aging. They will study key targets of mitochondrial recovery pathways. This particular study is to validate their earlier in vivo work findings. They will manipulate expression of proteins of interest either in commercially purchased cell lines or in myoblasts isolated from specific trait of mouse. Gene manipulations will be done by using commercially purchased replication deficient adenoviral vectors. Laboratory practices described use proper procedures for safety and disposal of hazardous waste. However, the submission lacks procedural detail, especially on the viral vectors or the specific genes that they will be working on. The following will be communicated to the PI:

- Please provide a brief statement of viral vectors to be used in the protocol and what genes will be expressed through these vectors. Some of the description provided in the rDNA section may be brought in here.
- In CRC pipet tips are considered sharps, as such they should be disposed of in sharp containers.
- The question in rDNA:Eukaryotic experiments section "is any recombinant virus being created" is for recombinant pathogenic virus. Creation of viral vectors are inappropriate for this question. Please say 'No' to this question and move the text to the 'Vector Packaging System"
- Uncheck ABSL1 in the highest animal biosafety level question and choose N/A as no animal work is proposed in this IBC application.

BUA Site Assessment: All trainings are current. BSC and Fume hoods are duly certified. No transportation of biohazardous material will be done. There is no animal work, so ABSL1 should be changed to not applicable.

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

3. rDNA/Bhz – Three-Year Renewal

BUA	(PI)	Title	BSL	ABSL	Campus
2094	John Ngo	New Molecular Tools for Imaging Biochemical Events in Live Cells	2	N/A	CRC

Primary Reviewer: Inna Afasizheva	Secondary Reviewer: Ed Loechler

Applicable NIH Guidelines: Sections III-D-1-a, III-D-2-a, and III-E-1

Meeting Comments: This protocol supports a technical research project aimed at developing molecular probes and genetically encoded tools to visualize biomolecules and signaling events in living cells. The study utilizes the following methodologies: 1) Fluorescence Microscopy – For real-time visualization of biomolecules; 2) Flow Cytometry – To

analyze fluorescence-based markers in single cells; 3)Western Blotting – To assess protein expression levels; 4) In Situ Hybridization – For detecting specific nucleic acid sequences in cells; and 5) RT-PCR – To evaluate gene expression. Mitochondrial membrane potential will be assessed using the commercially available MitoTracker reagent. Recombinant DNAs encoding reporter proteins will be generated using standard cloning procedures. Reporter Genes will be fused to the genes of mammalian proteins of interest. DNAs will be transformed into *E. coli* and reporter plasmids isolated and then transfected into commercially purchased human cell lines. As per research project description, lentiviral vectors will be used in the project but are not described in the Research Project Description. The BSL-2 containments for the protocol seems appropriate. A biosafety cabinet is available and the descriptions of PPE, disinfection and decontaminations were appropriate, with the exception of a minor conflict about bleach treatment time. Disinfection (10% freshly prepared bleach) and surface decontamination (10% bleach or 70% ethanol) is appropriate. The following will be communicated to the PI:

- Please add locations [redacted] rooms [redacted], [redacted] and [redacted] and remove Room [redacted].
- Please include a description of lentiviral packaging system and a protocol for lentivirus use, covering proper handling and storage conditions, transduction procedures and safety measures, disposal and decontamination procedures to be followed.
- Please check Sonication and ultrasonic cleaners.
- Bleach treatment time for liquid waste should be at 10% final concentration and for a minimum of 30 minutes. Please be consistent throughout the application. Please modify the statement appropriately in section VII.7A. of the application.

BUA Site Assessment: Add procedures: Sonication/ultrasonic cleaners and Pipetting infectious liquid. Remove PPE: Surgical mask as this not needed. Two biosafety cabinets referred in the protocol are duly certified. Two Fume hoods are also certified. Vacuum lines are protected and Spill kit and sharp containers are available in the lab.The lab needs to add lab rooms # [redacted], [redacted] and [redacted] and remove lab # [redacted]. There is no mention of lentiviral work in the research description. The lab will use 2nd and sometimes 3rd generation lentiviral vectors but it is not mentioned in the protocol. The contact time for fresh 10% bleach (final conc.) is at least 30 min and not 15 min as stated in the protocol. The biowaste box should always be double lined. No biohazardous material transportation outside of the laboratory is anticipated in this protocol.

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

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.