University of Toledo

Institutional Biosafety Committee

**Date:** March 16, 2026

**Meeting time**: 12.00 pm- 2.00 pm

**Meeting type**: Hybrid (Microsoft Teams and HEB 233)

**Attendees/Roster:**

| Member | Attended | Voting | Scientific | Affiliated |
|---|---|---|---|---|
| DeLaSerna, Ivana | Yes | Yes | Yes | Yes |
| Dinardo, Robert S | No | Yes | Yes | No |
| Dudley, Richard | Yes | Yes | Yes | No |
| Gray, John | Yes | Yes | Yes | Yes |
| Kalinoski, Andrea L. | Yes | Yes | Yes | Yes |
| Leisner, Scott M. | No | Yes | Yes | Yes |
| Peseckis, Steven M. | Yes | Yes | Yes | Yes |
| Pillai, Mahesh R | Yes | Yes | Yes | Yes |
| Rohrs, Skylar Lee | Yes | Yes | Yes | Yes |
| Root, Lisa Jane | Yes | Yes | Yes | Yes |
| Shemshedini, Lirim | No | Yes | Yes | Yes |
| Shupp, Andrew Charles (Alt) | Yes | No | Yes | Yes |
| Taylor, Roger Travis | Yes | Yes | Yes | Yes |
| Wooten, Ronald Mark | Yes | Yes | Yes | Yes |
| Guests : None | | | | |
| IBC staff: Dissanayake, Ravindika | | | | |

**Quorum:** Present

*There were (9) voting members present, and (7) members are required to conduct business.*

**Call to Order**: The IBC Chair called the meeting to order at 2.03 pm

**Review and approval of previous minutes:**

**Date of the meeting minutes to be approved**. February 19, 2026

- **Discussion**: None
- **Motion**: The committee approved the unredacted February meeting minutes as written.
- **Votes**: For/Against/Abstain: 9/0/0

[*Dr. Peseckis joined the meeting at 2.07 PM, total voting members 10, quorum was maintained*]

**Protocol Review**

| **IBC# -** 500196 New Submission | **P.I.:** Dr. John Wise | **Training:** IBC Laboratory Safety Training<br>IBC Biosafety Training | **Biosafety Level Assignment:** BSL-2 |
|---|---|---|---|

**Title**: Assessing Toxicity of Silver Nanoclusters

Project Overview:

This study team is planning to assess the potential toxicity of silver nanoclusters to human lung cells. The silver nanoclusters are a novel formulation designed to eliminate bacteria in cystic fibrosis lung infections by delivering silver cluster compounds that release Ag+ ions.

NIH Guideline Section

Not applicable. Recombinant and Synthetic DNA are not involved

Risk Assessment and Discussion

Types of biological and chemical hazards associated with this protocol are as follows,

- Immortalized human cells
- Silver nanoclusters

Potential sources of risk are through aerosols, needle sticks, and biohazard waste disposal. The committee discussed the proposed precautions outlined in the protocol such as PPE requirements, handling of aerosol generating equipment, safe handling and disposal of sharps and determined that the proposed precautions are appropriate and sufficient.

Occupational Health Representative review (if applicable):

- Please review the nanomaterial policy and ensure you are following all points within it.
- Lab will need BSL2 certification
- Should be Risk Group 2

IBC vote:

A member made a motion for Modifications required for approval, then Designated Member Review (Chair and Primary Reviewer). Another member seconded. The required modifications were:

1. Add risks from Appendix H when using human cells.
2. Change to RG2

3. They say that there are no health risks known for working with these cell cultures or with silver nano-clusters - but they are anticipating that the silver nanoclusters will have some clastogenic effect? So maybe they need to be more cautious.

Total Votes: 10, For: 10, Against: 0, Abstain: 0

| **IBC** #500195-New Submission | **P.I.:** Dr. Yunus Ansari | **Training:** IBC Biosafety Training and IBC Laboratory Safety Training | **Biosafety Level Assignment:** BSL-2 |
|---|---|---|---|

**Title**: Mitochondrial dysfunction in musculoskeletal health

Project Overview:

The goal of this research is to define the molecular and cellular mechanisms that drive musculoskeletal degeneration, with a central focus on mitochondrial dysfunction. The study team aims to elucidate how mitochondrial DNA damage and leakage promote chronic inflammation, cellular senescence, and tissue degeneration in osteoarthritis and intervertebral disc degeneration. By integrating mechanistic biology with advanced imaging and in vivo models, they seek to identify novel therapeutic targets and develop translational strategies that preserve tissue homeostasis and improve patient outcomes. Researchers will use cell lines, primary chondrocytes, and cartilage explant cultures to study oxidative stress, apoptosis, mitochondrial dysfunction by using standard laboratory techniques and rDNA as published previously (PMID: 34767958, 33097606, 28801211, 30302948, 33161099, 27271770).

NIH Guideline Section

Section II-A., Section III-D-1-a

Risk Assessment and Discussion

Types of biological/chemical hazards associated with this protocol are as follows,

- Human cell lines ( Human chondrocytic cells (TC28), Human chondrosarcoma (HTB94), mouse neuroblastoma (N2a), human neuroblastoma (SHSY5Y), Human embryonic kidney cells (HEK293))
- Human, mouse, rat, and rabbit tissues for chondrocyte and disc cell isolation and culture.
- E. Coli (DH5alpha, JM109)

Potential sources of risk are through aerosols, needle sticks, and biohazard waste disposal. The committee discussed the proposed precautions outlined in the protocol such as PPE requirements, handling of aerosol generating equipment, safe handling and disposal of sharps and determined that the proposed precautions are appropriate and sufficient.

Occupational Health Representative review (if applicable):

- Styrofoam boxes are not sealable containers.
- Labs will need BSL2 certification

IBC vote:

A member made a motion for 'Modifications required for approval, then Designated Member Review (Chair, Primary Reviewer and Secondary Reviewer). Another member seconded. The required modifications were:

1. Use the given exposure SOP as a template/guide and create an SOP specific to your lab.
2. Update the list of locations in Section B.5 and C.9.
3. Please clarify why DLAR is BSL-2? What agent is BSL-2 regarding your mouse experiments? And you answered "No" to question C.1. regarding hazardous agents on the IACUC protocol form.
4. In Genus/Species/Subtype please list type of cell line for each in Section D.5.
5. Please refer to the Section II of BMBL guideline and explain how it relates to the E.coli related work of this research. List all possible human health risks associated with E.coli
6. Please include the relevant sections of the BMBL in Section E.3.1
7. Please indicate whether the spill kit has been received
8. In Section F.1, need to add any tissue that will be collected from the mouse or human IRB: Mouse knee joints, discs, etc. (include any tissue sent to histology for FFPE or OCT), Human knee joints, discs, etc.

Total Votes: 10, For: 10, Against: 0, Abstain: 0

| **IBC #**107107-Renewal | **P.I.:** Dr. Malathi Krishnamurthy | **Training:** IBC Biosafety Training and IBC Laboratory Safety Training | **Biosafety Level Assignment:** BSL-2 |
|---|---|---|---|

**Title**: Role of small RNAs in antiviral innate immunity

Project Overview:

The PI and the study team study the role of small RNAs (cellular and viral origin) generated by host enzyme Ribonuclease L (RNase L). They will study the ability of the generated small RNAs in inducing IFNs and apoptotic pathways. This study involves using infectious viruses and small RNAs generated in vitro of partial genomic fragments (not produce infective viruses), and partial fragments of in vitro transcribed Hepatitis C virus RNA, that do not produce infective virus, and RNase L digested products produced thereof, for biochemical studies.

NIH Guideline Section

Appendix B-II-D,

Risk Assessment and Discussion

Types of biological hazards associated with this protocol are as follows,

- RNA viruses : Sendai (Cantell strain) and EMCV (strain k and d)
- Respiratory Syncytial virus (strain A2),
- Vesicular Stomatis Virus (VSV, Indiana 1 strain),
- Langat virus,
- Dengue virus type 2, strain New Guinea C, Dengue virus type 4 strain H241.
- Hepatitis C virus (genotype 1a, H77, in vitro transcribed fragments , not producing infective virus)
- Coxsackievirus B3
- Lentivirus
- Adenovirus
- HSV-1 (KOS and F strains)
- Human cell lines
- Mouse cell lines, MEFs
- African Green Monkey kidney cell line

Potential sources of risk to personnel may include exposure to BSL-2 level viruses, cell lines, and needle sticks. The committee discussed the proposed precautions outlined in the protocol such as PPE requirements, handling of aerosol generating equipment, safe handling and disposal of sharps and determined that the proposed precautions are appropriate and sufficient.

Occupational Health Representative review (if applicable):

- Please verify if you have received the spill kit

IBC vote:

A member made a motion for 'Modifications required for approval, then Designated Member Review (Chair only). Another member seconded. The required modifications were:

1. What is the purpose of the Ebolavirus genes listed below in Sec. D1 and why are they not included here?
2. Please delete the part of the second sentence that says they do not pose a risk to human health. This part of the sentence conflicts with the Lentiviral Vectors risk summary that says there is a small risk for insertional

mutagenesis and or generation of RCL. Please correct the second sentence in the Insertional Mutagenesis section.
3. Please consult NIH Guidelines 2024.
4. Please refer to BMBL 6th edition

Total Votes: 10, For: 10, Against: 0, Abstain: 0

| **IBC #**500084-Renewal | **P.I.:** Dr. Kuo-Hui Su | **Training:** IBC Biosafety Training and IBC Laboratory Safety Training | **Biosafety Level Assignment:** BSL-2 |
|---|---|---|---|

**Title**: The pleiotropic role of non-transcriptional effect of HSF1 in tumoral lipid metabolism and autophagy

Project Overview:

This project is to decipher the role of the proteotoxic stress response (PSR) in tumorigenesis. The PI plans to explore the transcription-independent role of heat shock factor 1(HSF1) in tumoral lipid metabolism, autophagy, and chronic inflammation in tumorigenesis, including the K-Ras mutant pancreatic cancer and lung cancer, and to find an improved cancer therapeutic strategy. Three main objectives of this project are;

1. Determine how HSF1 regulates cholesterol metabolism and lipid homeostasis during stress adaptation.
2. Determine how HSF1-dependent stress signaling regulates autophagy and cellular responses to ion-induced stress.
3. Determine how lipid-metabolizing enzymes regulate lipid signaling and stress responses across metabolic and inflammatory conditions

NIH Guideline Section

Appendix B-II-D.

Risk Assessment and Discussion

Types of biological/chemical hazards associated with this protocol are as follows,

- Human cell lines
- Tissue array slides
- Mice tissues, serum and biological fluids
- NEB 5-alpha Competent E. coli
- Lentivirus

The potential risks include medical emergencies, spills, needle stick injuries, environmental release of rDNA, chemical, biohazard, or toxin release, and animal bites.

| |
|---|
| The committee discussed the proposed precautions outlined in the protocol such as PPE requirements, handling of aerosol generating equipment, safe handling and disposal of sharps and determined that the proposed precautions are appropriate and sufficient. |
| Occupational Health Representative review (if applicable):<br><br>• None |
| IBC vote:<br><br>A member made a motion for Modifications required for approval, then Designated Member Review (Chair only). Another member seconded. The required modifications were:<br>• Please highlight the updated information throughout the protocol.<br>• You cite below three updated plasmids, yet in Section D.3 there are only two updated proteins shown. Why is GPX4 mentioned below but not there?<br>• In Section H.3.2.1.3.: state the typical # of ABSL-2 mice per experiment.<br>• In Section H.3.2.1.4.: state the maximum number of animals in your colony (ABSL-1 and ABSL-2) present in DLAR.<br><br>Total Votes: 10, For: 10, Against: 0, Abstain: 0 |

**Review of Prior Business/Biosafety officers report:**

- Mr. Rohrs [redacted]

**New Business/Additional Topics:**

- The committee agreed to add a new question to the IBC xForm to allow PIs to include a project overview they are comfortable sharing in the meeting minutes that will be posted online.

**Review of incidents:** none

**Inspections/Ongoing oversight:** none

**IBC training for members:** none

**Public comments:** none

**Adjournment:** The IBC Chair moved to adjourn the meeting at 3.11 PM. The next meeting is scheduled for April 16, 2026, at 12.00 PM via MS Teams and in-person (HEB 233).