University of Toledo

Institutional Biosafety Committee

Date: August 21, 2025

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	No	Yes	Yes	Yes
Dinardo, Robert S	No	Yes	Yes	No
Dudley, Richard	Yes	Yes	Yes	No
Gray, John	No	Yes	Yes	Yes
Kalinoski, Andrea L.	No	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	Yes	Yes	Yes	Yes
Shupp, Andrew Charles (Alt)	Yes	Yes	Yes	Yes
Taylor, Roger Travis	Yes	Yes	Yes	Yes
Wooten, Ronald Mark	Yes	Yes	Yes	Yes
Guests: N/A				
IBC staff: Dissanayake, Ravindika, Ph.D.				

Quorum:

Present

The IBC has (13) voting members, and (7) members are required to conduct business.

Call to Order: The IBC Chair called the meeting to order at 12.02 pm

Conflicts of Interest: The IBC Chair reminded all members present to identify any conflicts of interest as each registration is reviewed.

Review and approval of previous minutes:

- **Date of the meeting minutes to be approved**. June 16, 2025
- **Discussion**: The committee reviewed the unredacted June meeting minutes and requested some minor modifications. The committee advised the relevant PIs to be consulted to redact the sensitive project information prior to posting the minutes on the website.
- **Motion**: Approved by the Chair after the modifications are made.
- **Votes**: For/Against/Abstain: 7/0/0

[Dr. Steve Peseckis joined the meeting at 12.27 PM, total voting members 8, quorum was maintained]

- **Date of the meeting minutes to be approved**. July 10, 2025
- **Discussion**: None.
- **Motion**: The committee approved the unredacted July meeting minutes as written.
- **Votes**: For/Against/Abstain: 8/0/0

Review of Prior Business/Biosafety officers report:

- Mr. Rohrs updated the committee [redacted]

Protocol Review

IBC #500176-New Submission	**P.I.:** Dr. Isaac Schiefer.	**Training:** IBC Laboratory Safety Training	**Biosafety Level Assignment:** BSL-1
Title: UT-CD3: Zebrafish Genome Editing			
Project Overview: The PI is planning to study the functional role of the Oprm1 gene which encodes the μ-opioid receptor (MOR) in zebrafish. It is expressed in the brain regions associated with pain and reward. This project would help establish a foundation for understanding MOR biology in vivo with significant clinical implications. The study team is planning to knock out the Oprm1 gene in zebrafish and analyze the resulting phenotypic and molecular changes. The primary objectives include confirming the knockout at both the DNA and protein levels, assessing any alterations in cellular or organismal behavior, and identifying the gene's involvement in biological pathways.			

NIH Guideline Section

Section IIIA, Section IIIB, Section IIID, Section V and Section VI

Risk Assessment and Discussion

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

- Genes of interest: oprm1, D1 and D5
- Vectors: pDestTol2pA2

Potential sources of risk are through aerosols, needle sticks, and chemical hazards. The committee discussed the proposed precautions outlined in the protocol such as PPE requirements, waste disposal procedures, 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):

N/A

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. Transfer the information in the blue comment boxes to the protocol text.
2. Update table D.5 and mark "Yes" for Vector associated
3. Clarify what happens to the water that the injected fish are grown in
4. Indicate how the risks from aerosols will be managed

Total Votes: 8, For: 8, Against: 0, Abstain: 0

[Dr. Dudley left the meeting at 12.47 PM, total voting members 7, quorum was maintained]

IBC #500029-Renewal	**P.I.:** Dr. Xiaohong Li	**Training:** IBC Biosafety Training and IBC Laboratory Safety Training	**Biosafety Level Assignment:** BSL-2
Title: Generation and Maintenance of Prostate Cancer PDX Models			

Project Overview:

Prostate cancer patients have osteoblastic bone metastasis (extra abnormal bone formation). MDA PCA 118b is a patient derived xenograft established by MD Anderson from a patient's bone metastasis. MDA PCa118b tumors can recapitulate the patient's situation by inducing massive abnormal bone formation after innoculation into the bone. This provides a critical in vivo model for understanding the biology of prostate bone metastasis and finding and testing new treatment options. There are no cell lines that can be derived from MDA PCa118b tumors to date, requiring the passage of the tumor on immunodeficient mice.

The research team plans to use the tumors that they collect from passaging them on SCID mice to dissociate into single cell or small cell clumps and inject into either the tibias or circulatory systems of male SCID mice. This will model the bone lesions that develop in patients (in the case of tibia injections) and the ability of prostate cancer to metastasize to other organs (in the case of cardiac injections). Then the team will utilize these animal models to study the effects of the bone microenvironment has on the growth of the metastases and the efficacies of possible new treatments.
Researchers are also planning to use patient prostatectomy samples from the University of Toledo Urology Biospecimen Bank to attempt to establish new PDX models for prostate cancer. This also requires the passage of the patient tissue on immunodeficient mice - several successive times - in order to allow patient stromal cells to be replaced with mouse stromal cells. The creation of PDX models is key to the prostate cancer field as it preserves the tumor microenvironment, which is thought to play a large role in castration resistance in advanced prostate cancer.

NIH Guideline Section

Not applicable. Recombinant and Synthetic DNA are not involved

Risk Assessment and Discussion

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

1. Patient derived xenograft
2. Patient prostatectomy tissue samples

Potential sources of risk are injuries from sharp and surgical tools and risks associated with working with human tissue. The committee discussed the proposed precautions outlined in the protocol such as PPE requirements, waste disposal procedures, appropriate use and handling of tissue samples, safe handling and disposal of sharps and determined that the proposed precautions are appropriate and sufficient.

Occupational Health Representative review (if applicable):

N/A

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. Update training for study personnel
2. Include prostatectomy samples in Section B.2

3. Description in the Intra-tibial injection SOP needs to be changed regarded recapping and reuse of needles
4. Add the risks associated with working with human tissue and exposure to possible pathogens.
5. Add Histology Core BHSB 007 to the list of locations
6. Add the xenograft MDA PCa 118b, the resulting PDX Xenograft tumor tissue from the MDA PCa 118b and Biobank prostatectomy tissue and any other tissue that is removed from the animals to the cell/tissue table in Section F.1.
7. Describe the contingency plan. Has the spill kit been received since the last approval?
8. Include the transport of the PDX tumor derived single cell suspensions used in the injections in H.3.2.1 and H.3.2.1.5

Total Votes: 7, For:7, Against: 0, Abstain: 0

IBC #– 500037 Renewal	**P.I.:** Dr. Xiaohong Li	**Training:** IBC Biosafety Training and IBC Laboratory Safety Training	**Biosafety Level Assignment:** BSL-2

Title: Cancer Cell Culture and Genetically Engineered Constructs for studying the Bone Microenvironment effects on cancer progression and metastases

Project Overview:

Knockdown/knockout, or overexpressing a certain gene, are general approaches to study a gene for its role in cancer metastasis, tumor dormancy, and drug resistance. These constructs will be expressed in various cancer cells, including prostate, breast, and non-small cell lung cancers, and in osteoblasts and osteoclasts to study a gene's function or as markers to label the cells of interest, such as GFP, RFP, and luciferase.

NIH Guideline Section

Section II-A-1

Risk Assessment and Discussion

Biological hazards that are associated with this protocol are as follows,

1. Commercially available *E. coli* for biomedical research
2. Lentiviral vectors.
3. Mouse tissues

Potential sources of risk are through exposure to lentivirus during transfection, and exposure to human cancer cells and any bloodborne pathogens, needle stick injuries and exposure to hazardous chemicals. The committee discussed the proposed precautions outlined in the protocol such as PPE requirements, waste disposal procedures, safe handling and disposal of sharps and determined that the proposed precautions are appropriate and sufficient.

Occupational Health Representative review (if applicable): N/A
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. Provide more information on the new updates to the protocol 2. Study personnel must complete the required training 3. List the prostate cancer cells in Section B.2 4. Indicate which cancer cell lines are newly added to the list 5. Add the source/vendor's name for the plasmids and lentivirus Total Votes: 7, For:7, Against: 0, Abstain: 0

New Business/Additional Topics: none

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 1.06 PM. The next meeting scheduled is for September 18th at 12.00 PM via MS Teams and in-person (HEB 233).