Vanderbilt University Medical Center
Institutional Biosafety Committee (MC IBC) Minutes
November 18, 2025
Virtual Meeting

Attendance

Voting Members (Quorum = 7 voting members)

- ☒ Mark Boothby
- ☒ Alexandra Elliott (BSO)
- ☒ Iuliia Gilchuk
- ☒ Izumi Kaji
- ☒ Rachelle Johnson
- ☐ Danyvid Olivares-Villagomez
- ☒ Ana Nobis
- ☒ Jonathan Schmitz, Chair
- ☒ Kate Shuster
- ☒ Cara Sutcliffe
- ☒ Julie Viruez
- ☒ April Weissmiller
- ☐ Paula Spitzler

Non-Voting Members & Guests

- ☒ Rich DiTullio
- ☒ Chris Svitek
- ☒ Scott Bury
- ☐ Maria Garner
- ☒ Bettye Ridley
- ☒ Venita White
- ☒ Kevin Warren

Call to Order/Introductions/Announcements

The November meeting was held virtually by an internet-based meeting platform. The meeting was called to order at 12:01pm.

Minutes Review/Approval

The Chair opened the floor for comments or proposed revisions of the minutes from the October 28th meeting. The Committee voted to approve the minutes as presented.

Protocol Reviews

Goldenring, James – Surgery
TOPAZ Ref. # 100304 – Epithelial Biology Research (RENEWAL)

Lab Description (as stated by PI): The maintenance of polarity is critical to the normal functioning of epithelia and loss of polarity leads to breaking of the epithelial barrier and can also be a first step towards neoplasia. Our laboratories studies the intracellular trafficking steps in polarized cells that set up and maintain polarity and the mechanisms of early gastric carcinogenesis. We have identified key proteins in these processes and we study how manipulation of these proteins can impact on the physiology and cell biology of polarized cells.

Committee review: The lab propagates many genes of interest in non-pathogenic *E. coli* and expresses them in *S. cerevisiae* using expression plasmids and in human, murine and canine cell lines using 3rd generation lentiviral vectors. In addition to culturing human cells, the lab obtains patient samples of blood and tissue to culture cells to produce human organoids.

In animal experiments, human organoids will be administered to mice.

BSL-1 practices and containment are recommended for standard rDNA work in non-pathogenic *E. coli* and *S. cerevisiae*. BSL-2 practices and containment are recommended for work with human-derived materials and lentiviral vectors. Personnel working with lentiviral vectors and human-derived materials should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy. ABSL-1 practices and containment are recommended for the experimental animals.

The Committee voted to approve the registration at the biosafety levels recommended.

NIHG activity category: III-D-3, III-E-1, III-F-8/ Appendix C-II, C-III

Johnson, Rachelle – Hematology-Oncology

TOPAZ Ref. # 100315 – Mechanisms of Breast Cancer Metastasis and Dormancy in Bone (RENEWAL)

Lab Description (as stated by PI): My lab investigates the molecular and cellular mechanisms of breast cancer metastasis to and dormancy in the bone marrow and is interested in ways to therapeutically target bone-disseminated tumor cells while also protecting skeletal health. To do this we use multiple mouse models (genetic, xenograft, and syngeneic) and tumor cell lines of human and mouse origin. The tumor cell lines are inoculated in vivo and tissues collected for ex vivo imaging, homogenization and histology, and the tumor cell lines are used in vitro for molecular biology assays (e.g., Western blotting and qPCR) and functional cancer biology assays (e.g., cell migration, proliferation, apoptosis). The tumor cell lines are genetically manipulated using recombinant DNA expression and reporter plasmids and third-generation lentiviral vectors to overexpress and/or knockdown or knockout genes that may be important in breast cancer metastasis and progression in the bone.

Committee review: The lab propagates many genes of interest in non-pathogenic *E. coli* and expresses them in human and murine cell lines using retroviral and 3rd generation lentiviral vectors. In addition to culturing human cells, the lab obtains patient samples of serum, bone and tumor tissue for analysis.

In animal experiments, modified murine cells or unmodified human cells will be administered to animals.

BSL-1 practices and containment are recommended for rDNA work in non-pathogenic *E. coli* and murine cells. BSL-2 practices and containment are recommended work with retroviral vectors, lentiviral vectors and human-derived cells. Personnel working with lentiviral vectors and human-derived materials should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy. ABSL-1 policies and containment are recommended for the experimental animals.

The Committee voted to approve the registration at the biosafety levels recommended. Dr. Johnson declared a conflict of interest and was not present for the pre-vote discussion or vote.

NIHG activity category: III-D-3-a, III-E-1, III-F-8/ Appendix C-II

Kon, Valentina – Pediatric Nephrology
***TOPAZ Ref. # 100317 – Chronic Kidney Disease Associated Dysfunction of Lipoproteins* (RE*NEWAL*)**

Lab Description (as stated by PI): Our current research involves studies of lipoproteins isolated from blood of subjects with impaired kidney function and individuals with normal kidney function. We assess the lipoprotein handling and the inflammatory responses these lipoproteins have on cultured cell lines. We use an established strain of transgenic mice which express human diphtheria toxin receptor hCD25 expression on podocytes under the nephrin promoter. Rather than using diphtheria toxin, we inject the mice with LMB2 toxin (a fusion protein consisting of the Fv portion of a monoclonal antibody attached to a 38KDa fragment of Pseudomonas exotoxin A) which causes podocyte injury and proteinuria.

Committee review: The lab cultures human-derived cells and obtains samples of patient blood to isolate and propagate lipoprotein particles.

In animal experiments, human-derived cells will be administered to transgenic mice.

BSL-2 practices and containment are recommended for experiments with human-derived materials. Personnel working with human-derived materials should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy. ABSL-1 policies and containment are recommended for the experimental animals. It was noted that some personnel had not completed biosafety training but were signed up for this week's class.

The Committee voted to approve the registration at the biosafety levels recommended with the condition that the biosafety training must be completed.

NIHG activity category: III-E-3, III-F-8/Appendix C-VIII

Lee, Ryan – Neurological Surgery
***TOPAZ Ref. # 100330 – Cerebrospinal Fluid Disorders Research Lab* (*NEW*)**

Lab Description (as stated by PI): This registration covers research conducted in the Cerebrospinal Fluid Disorders Lab under approved IRB #030372, involving the handling and analysis of human cerebrospinal fluid (CSF) samples containing patient identifiers (e.g., MRN, DOB, name, age). Samples are obtained under approved protocols and processed at Vanderbilt under BSL-2 containment. Identifiers are stored securely in a password-protected VUMC OneDrive file accessible only to authorized personnel, which also tracks procedure type, sample quantity, and freezer location (box, row, column). Laboratory procedures include centrifugation, aliquoting, and cryovial storage for subsequent proteomic analysis at the VUMC High-Throughput Biomarker Core. All handling is performed in a Class II biosafety cabinet using standard BSL-2 PPE. No infectious agents, recombinant DNA, or live cultures are used.

This registration ensures compliance with institutional biosafety and IBC oversight for research involving identifiable human-derived materials.

Committee review: The lab obtains samples of cerebrospinal fluid for analysis.

BSL-2 practices and containment are recommended for experiments with human-derived materials. Personnel working with human-derived materials should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy.

The Committee voted to approve the registration at the biosafety levels recommended.

NIHG activity category: N/A, HDM risk only

Administrative Reviews / IBC Notification: The Chair opened the floor for comments on the administrative reviews. These reviews included:

Principal Investigator	VBMR#	Modification Summary
Crowe, James	100309 V7	Personnel update, addition of Risk Group 2 virus; similar agents already approved
Knollmann, Bjorn	100173 V4	Personnel update
Lannigan, Deborah	100319 V2	Addition of a genetically modified and a drug-resistant human cell line
Park, Jason	100289 V2	Update on lab space-new space visited 11/11/2025
Patel, Mayur	100257 V9	Personnel update
Serezani, C. H.	0303 R11	Personnel update; update UIAPP form; update ABSL-2 form.
Tosoian, Jeffrey	100314 V3	Personnel update

The Committee approved the administrative updates as presented. Dr. Gilchuk declared a conflict of interest and was not present for the pre-vote discussion or vote.

Adjournment

The meeting was adjourned at 12:27 pm.