Vanderbilt University Medical Center
Institutional Biosafety Committee (MC IBC) Minutes
May 26, 2026
Virtual Meeting

Attendance

Voting Members (Quorum = 7 voting members)

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

Non-Voting Members & Guests

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

Call to Order/Introductions/Announcements

The May meeting was held virtually by an internet-based meeting platform. The meeting was called to order at 12:04pm.

Minutes Review/Approval

The Chair opened the floor for comments or proposed revisions of the minutes from the April 2026 meeting. The Committee voted to approve the minutes as presented.

Protocol Reviews

Choksi, Yash – Medicine
TOPAZ Ref. # 100374 – Eosinophils, selenoproteins, and oxidative stress in esophageal disease (RENEWAL)

Lab Description (as stated by PI): We are interested in how immune cells and oxidative stress modify esophageal homeostasis, inflammation, and cancer through the lens of selenoproteins. We use genetic vectors to modify selenoprotein expression so that we can study the effects of oxidative stress in immune cells or epithelial cells. We then do inflammation or cancer modeling to stress our cells in the presence of absence of different selenoproteins. This is done in mice, mice derived organoids, or in human cells.

Committee review: The lab propagates plasmids expressing genes of interest in non-pathogenic *E. coli* and expresses those genes in human, murine and hamster cell lines using 3rd generation lentiviral vectors. The vectors are made in the lab. In addition to human cells and lab obtains patient samples of esophageal tissue for analysis.

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

The reviewer noticed several minor discrepancies in the IBC registration between the description of work and the listed materials. The PI provided clarifying information which will need to be added to the registration

The Committee voted to approve the registration at the biosafety levels recommended with the condition that the registration is amended as directed by the reviewer.

NIHG activity category: III-D-3, III-E-1

Dean, E. Danielle – Medicine

TOPAZ Ref. # 100357 – Regulation of Nutrient Homeostasis (RENEWAL)

Lab Description (as stated by PI): We study interorgan communication between the liver and pancreas to understand how nutrient homeostasis is regulated. We use a combination of in vivo mouse models occasionally with human pancreatic islets transplanted and ex vivo or in vitro models to understand how these tissues respond to hormones and sense, transport, and metabolize amino acids.

Committee review: Genes of interest are propagated in non-pathogenic *E. coli* and expressed in murine, hamster and human cell culture using adenoviral vectors. The lab purchases the viral vectors from a company. In addition to human cells, the lab obtains samples of human blood for analysis.

BSL-1 practices and containment are recommended for rDNA work in non-pathogenic *E. coli*. BSL-2 practices and containment are recommended for work with human-derived materials and adenoviral vectors. 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: III-D-3, III-E-1, III-F-8/ Appendix C-II

Gallagher, Martin – Neurology
***TOPAZ Ref. # 100362 – Rodent Models of Epilepsy Products* (RENEWAL)**

Lab Description (as stated by PI): We use genetic vectors to selectively modulate the excitability of neurons to determine the networks involved in epileptic seizures. The vectors express Cre recombinase to produce Cre-inducible expression of proteins that excite or inhibit neurons in specific rodent brain regions that are thought to participate in seizure formation. We then perform electroencephalography and patch clamp electrophysiology studies to elucidate the effects of the modulation on seizures and synaptic physiology.

Committee review: The lab purchases commercially available adeno-associated viral vectors which be be administered to mice as part of murine epilepsy models.

BSL-1 practices and containment are recommended for handling AAVs. ABSL-1 practices and containment are recommended for the experimental animals.

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

NIHG activity category: III-D-4-a, III-F-8/Appendix C-VIII

Hamid, Rizwan – Pediatric Genetics
TOPAZ Ref. # 100367 – Genetic Studies in Pulmonary Arterial Hypertension (PAH) (RENEWAL)

Lab Description (as stated by PI): Our research program is directed towards understanding the genetic factors that regulate lung cell and stem cell functions in pulmonary arterial hypertension. We use genetic approaches such as whole genomic sequencing, RNA sequencing, Chip sequencing and quantitative trait locus mapping in our laboratory. Commercially available lung cell lines are studied in functional assays such as tube forming assays, real-time PCR, siRNA studies, western blot analyses, luciferase assay and CRISPR technique.

Committee review: The lab propagates many genes of interest in non-pathogenic *E. coli* and expresses them in human-derived cells using expression plasmids. siRNA constructs are also administered to human cells for transient gene suppression.

BSL-2 practices and containment are recommended for work with human-derived materials, including genetic modification with siRNA and expression plasmids. 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: III-E-1, III-F-8/Appendix C-I

Lacy, D. Borden – Pathology, Microbiology & Immunology
TOPAZ Ref. # 100365 - Study of Host Factors in the Presence of Bacterial Proteins and Toxins (RENEWAL)

Lab Description (as stated by PI): Our research program is focused on the mechanism by which bacterial protein toxins gain access to the interior of host cells. We are particularly interested in the immunological response(s) from the host and structural changes that are associated with receptor binding, oligomerization, pore formation and translocation across the membrane. We use a variety of biochemical, biophysical, and cell biology methods including X-ray crystallography, electron microscopy, cell culture assays and in vivo (murine model) for these studies.

Committee review: The lab propagates many genes of interest in non-pathogenic *E. coli* and expresses them in murine, hamster and human-derived cells using expression plasmids, adenoviral vectors, and 3rd generation lentiviral vectors. The vectors are made in the lab. Several toxins genes from Risk Group 2 pathogens are expressed in *B. megaterium* and the toxins purified.

In addition to culturing human cells, the lab obtains samples of patient serum and human stool for analysis. NHP-derived cell culture is also used.

The lab cultures several species of Risk Group 2 bacteria and genetically modifies two of them.

In animal experiments, Risk Group 2 bacteria, modified Risk Group 2 bacteria, purified bacterial toxins, or a murine fecal slurry will be administered to mice. Tissue and fluid samples will be taken back to the lab for analysis.

BSL-1 practices and containment are recommended for rDNA work in non-pathogenic *E. coli* B. megaterium including cloning of toxin molecules. BSL-2 practices and containment are recommended for work with Risk Group 2 agents, adenoviral vectors, lentiviral vectors, bacterial toxins, non-human primate materials and human-derived materials. Personnel working with human-derived materials and lentiviral vectors should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy. ABSL-2 practices and containment are recommended for all experimental animals.

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

NIHG activity category: III-B-1, III-D-1-a, III-D-2-a, III-D-3-a,b, III-E-1, III-F-8/Appendix C-II

Wanjalla, Celestine – Infectious Disease
TOPAZ Ref. # 100288 V3 – The Role of the Virus-Specific Immune Cells in Cardiovascular Disease Pathogenesis (MODIFICATION)

Lab Description (as stated by PI): Persons with HIV (PWH/PLWH) on antiretroviral therapy have an increasing risk of mortality from cardiovascular disease that is likely multifactorial. Chronic inflammation due to co-infection with cytomegalovirus (CMV) alters the memory T cell repertoire and antibody responses and is likely important in the pathogenesis of cardiovascular disease. Our laboratory focuses on the role of CMV-specific immune cells in the progression of atherosclerotic disease in PWH/PLWH; to investigate newly discovered pathobiological mechanisms important to the onset of atherosclerotic cardiovascular disease and identify factors that account for differences in health among populations. Members of the lab will work with human samples from persons with HIV and controls. We will use a lab-adapted recombinant strain of CMV (strain 169 AD) and VSV-pseudotyped HIV. The CMV virus stocks will be cloned and harvested from fibroblast cell lines when we need to replenish used stocks. This work will be performed in Medical Center North A2116 BSL2+ space (CFAR). We will use a mouse model to understand the role of chemokine receptors in trafficking immune cells to the inflamed aorta. We plan to perform all the surgeries in the DAC facility, and will take human peripheral blood mononuclear cells and the aorta to the surgery room for surgical procedures.

NOTE for this amendment: We are going to treat transgenic mice (NSG) with antiretrovirals in addition to the adoptive transfer of immune cells from people living with HIV. Due to the detection of infectious virus in the plasma of some mice, we will also transfer the mice into the ABSL2 mouse facility after the adoptive transfer of PBMC.

Committee review: This amendment was submitted after the discovery that humanized mice that received human cells from patients with HIV suppressed to undetectable levels tested positive for HIV DNA. Accordingly, it is now recommended that these animals be housed and worked with at ABSL-2 containment

ABSL-2 practices and containment are recommended for the experimental mice.

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

NIHG activity category: N/A, infectious disease 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
Bonami, Rachel	100308 V4	Personnel update
Byndloss, Mariana	100349 V2	Personnel update
Coburn, Lori	100300 V2	Personnel update, addition of human clinical samples, previously approved for similar materials
Creech, Buddy	100135 V2	Personnel update; Addition of toxin of biological origin, previously approved for similar materials
Crowe, James	100309 V12	Addition of chimeric virus and Risk Group 2 and their administration to animals (M2100039), previously approved for similar materials
Flynn, Robb	100112 V2	Personnel update, addition of rDNA administered to mice (M2300084), previously approved for similar activities
Lee, Ryan P.	100342 V2	Personnel update
Markham, Nicholas	100347 V2	Personnel update and addition of genetically modified RG2 bacteria strain for administration on animal protocol M2300103; previously approved for similar materials and activities
Patel, Mayur	100257 V10	Personnel update
Rajagopala, Seesandra	100220 V2	Personnel update; addition of Risk Group 2 infectious agents; addition of new space (inspected 5/22/2026). Previously approved for similar activities and materials.
Schrag, Matthew	100023 V3	Personnel update; update RDNA inserts, cell lines and vectors. Previously approved for similar materials.
Schwartz, Jason	100138, V2	Personnel update; move to new space (inspected 5/22/2026)
Skaar, Eric	100363 V2	Personnel update; update IACUC protocols (delete M2300018)
Watson, Robert	100232 V6	Personnel update
Wilson, Keith	0062 R5	Personnel update; additional of RG2 infectious agents. Previously approved for similar activities and materials.
Yan, Fang	100352 V2	Personnel update

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

Adjournment

The meeting was adjourned at 12:40 pm.