Vanderbilt University Medical Center
Institutional Biosafety Committee (MC IBC) Minutes
March 24, 2026
Virtual Meeting

Attendance

Voting Members (Quorum = 7 voting members)

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

Non-Voting Members & Guests

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

Call to Order/Introductions/Announcements

The March 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 February 2026 meeting. The Committee voted to approve the minutes as presented.

Protocol Reviews

Mogilenko, Denis – Rheumatology & Immunology
TOPAZ Ref. # 100353 – Metabolic Adaptations of Immune Cells to Cancer and Inflammation (RENEWAL)

Lab Description (as stated by PI): Our lab studies how obesity, cancer, and inflammation alters immune responses in mice and humans. We use primary immune cell assays in vitro and mouse models of obesity, cancer, and inflammatory diseases to understand how metabolic processes regulate transcriptional and epigenetic programs of immune cells. Using gene silencing and gene overexpression approaches and inhibitors of metabolic enzymes, we aim to identify promising immunoregulatory targets that might be used in developing therapies for inflammatory and autoimmune diseases as well as anti-tumor immunity.

Committee review: The lab obtains expression plasmids containing genes of interest from commercial sources and expresses them in murine and human derived cell culture. Modified murine cells are administered to mice.

In addition to cultured human cells, the lab obtains patient samples of blood for analysis.

BSL-1 practices and containment are recommended for work with murine cells. BSL-2 practices and containment are recommended for work 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 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-4-a, III-E-1, III-F-1, III-F-8/ Appendix C-VIII

Moore, Dan – Pediatric Endocrinology

TOPAZ Ref. # 100348 – Immunology of Type 1 Diabetes (RENEWAL)

Lab Description (as stated by PI): Our laboratory investigates the immunology of Type 1 diabetes primarily in animal models. Our laboratory is particularly interested in the cellular interactions that drive Type 1 diabetes and that permit or disrupt immune tolerance. We will use diphtheria toxin (DT) along with mouse models, including transgenic models constructed by Jackson Labs to deplete specific lymphocyte populations and determine their effect on either Type 1 diabetes progression or responses to immune therapies. These approaches will further refine our understanding of the cellular immunology of Type 1 diabetes. In addition, we will use cells from human blood samples that we collect to study phenotypes associated with Type 1 diabetes. We use some transgenic mice bought from vendors but don't generate any new models.

Committee review: The lab's recombinant DNA work is limited to breeding transgenic mice. The lab cultures human-derived cells and obtains patient samples of human blood for analysis.

BSL-2 practices and containment are recommended for work 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 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-F-8/ Appendix C-VIII

Serezani, Carlos – Infectious Disease
TOPAZ Ref. # 100345 – Immunotherapeutic Strategies to Control Systemic and Localized Infections
(RE*NEWAL*)

Lab Description (as stated by PI): My research program tries to understand the molecular programs involved in susceptibility to systemic and localized infections in both naïve and diabetic mice. We will induce diabetes by injecting streptozotocin (STZ) to deplete beta cells and induce hyperglycemia. We plan to infect diabetic and nondiabetic mice with methicillin-resistant or susceptible Staphylococcus aureus (MRSA and MSSA, respectively). Using both MRSA and MSSA will allow us to identify host-derived therapeutic strategies to control hard to treat infections. We will do the same with Candida albicans. As a therapeutic approach, we will treat mice topically or systemically with lipids (leukotriene B4 or prostaglandin E2), or recombinant proteins, followed by determination of animal survival, bacterial or fungal load and systemic production of inflammatory mediators. Together, these experiments promise to identify molecular programs involved in enhanced susceptibility to systemic and localized infection in both settings of host resistance or vulnerability.

Committee review: The lab cultures genetically modified lines of murine cells.

The lab cultures Risk Group 2 agents: *S. aureus*, both MSSA and MRSA strains, and *C. albicans.* The agents are genetically modified to expresses markers and genes of interest using expression plasmids. These agents are administered to mice as part of disease models and samples from those animals are returned to the lab for processing.

BSL-1 practices and containment are recommended for propagation of murine cells. BSL-2 practices and containment are recommended for work with Risk Group 2 agents. ABSL-2 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-1-a, III-F-8/Appendix C-II, C-VIII

Skaar, Eric – Pathology, Microbiology and Immunology
TOPAZ Ref. # 100322 – Identification of Novel Targets for the Therapeutic Intervention Against Bacterial Pathogens with a Particular Emphasis on Metal Trafficking and Metabolism (RENEWAL)

Lab Description (as stated by PI): Based on the strict requirement of bacteria for metal, and the fact that the bacterial and eukaryotic machinery involved in metal acquisition and homeostasis are remarkably different, targeting bacterial machinery involved in metal metabolism has excellent therapeutic potential. Research in our laboratory is focused on identifying factors and processes involved in the battle for metal between bacterial pathogens and their hosts. More specifically, our research focuses on the interaction between vertebrate hosts and the bacterial pathogens Staphylococcus aureus (most common cause of skin and soft tissue infections), Bacillus anthracis (causative agent of anthrax), Acinetobacter baumannii (emerging cause of pneumonia and wound infections), and Clostridium difficile (major cause of antibiotic-associated diarrhea).

Committee review: The lab propagates many genes of interest in non-pathogenic *E. coli* and expresses them in murine, canine, non-human primate and human-derived cells using expression plasmids and adeno-associated viral vectors. In addition to culturing human cells, the lab obtains samples of patient fecal samples for analysis.

The lab cultures many species of Risk Group 2 bacterial pathogens and Risk Group 1 bacteria that are standard human microflora. They are all modified with genes of interest and markers using expression plasmids.

In animal experiments, Risk Group 2 and Risk Group 1 bacteria, wild-type and genetically modified will be administered to mice in disease models.

The lab also creates and propagates zebrafish lines to study their gut microflora.

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 Risk Group 2 agents NHP-derived cells and human-derived materials. Personnel working with human-derived materials should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy. ABSL-2 practices and containment are recommended for the experimental mice. Standard housing and ABSL-1 practices are recommended for the transgenic zebrafish.

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

NIHG activity category: III-D-1-a, III-D-4-a, III-E-1, III-F-8/Appendix C-II, C-VIII

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

Principal Investigator	VBMR#	Modification Summary
Georgiev, Ivelin	100340 V4	Addition of RDNA inserts and vectors; previously approved for similar materials and activities
Harrison, David	100057 V2	Addition of RG2V, including its administration into mice (IACUC# M1900031); previously approved for similar materials and activities
Hartert, Tina	100196 V2	Personnel update and addition of unmodified human-derived materials; previously approved for similar materials and activities
Kaji, Izumi	100323 V4	Lab space and personnel addition; lab walk-through conducted on 2/25/2026
Schmitz, Jonathan	100116 V5	Personnel (UIAPP forms included)
Wanjalla, Celestine	100338 V2	Personnel

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

Other Business

The BSO reported a needlestick injury at the February meeting. During follow-up testing of the animals that were part of that study, one animal tested positive for HIV. These animals were receiving cells from HIV patients on antiviral therapy and each sample tested negative for the virus prior to injection. Due to this new information, OCRS now recommends that this work be done with ABSL-2 containment. The researchers are getting trained to work at ABSL-2 and an IBC amendment will be reviewed at the April meeting.

However, since there are animals currently on this study, the Chair and BSO have agreed to give the PI temporary approval for work at ABSL-2 to facilitate transfer of the study animals into ABSL-2 housing. The Committee concurred with this course of action.

Adjournment

The meeting was adjourned at 12:46 pm.