Vanderbilt University Medical Center
Institutional Biosafety Committee (MC IBC) Minutes
October 28, 2025
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
- ☒ Chris Svitek
- ☒ Scott Bury
- ☐ Maria Garner
- ☒ Bettye Ridley
- ☒ Venita White
- ☒ Kevin Warren

Call to Order/Introductions/Announcements

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

The BSO reported on one lab incident. A researcher was cutting a sample from a dirty diaper and cut their finger with the scalpel. The lab has decided to switch to a new method for sample isolation that eliminates the use of a sharp. This incident was not reportable.

Minutes Review/Approval

The Chair opened the floor for comments or proposed revisions of the minutes from the September 23rd meeting. The Committee voted to approve the minutes as presented.

Protocol Reviews

Flores, Anthony – Pediatric Infectious Diseases
TOPAZ Ref. # 100250 V2 – Investigative studies of bacterial pathogens (MODIFICATION)

Lab Description (as stated by PI): Our laboratory uses a combination of clinical bacterial strain epidemiology, bacterial whole genome sequencing, bacterial strain mutagenesis, and in vitro/in vivo models of disease to study the host-pathogen interface. Specific bacterial genetic differences identified in our WGS studies are interrogated in an effort to define bacterial mechanisms of disease in humans. We are especially interested in bacterial gene regulatory systems and bacterial gene regulation influences clinical phenotypes observed in our epidemiological studies. Much of our work involves gene regulatory systems common among Gram-positive pathogens (e.g., staphylococci and streptococci).

Committee review: This modification adds the administration of Risk Group 2 bacteria to mice.

BSL-2 practices and containment are recommended for culturing and handling Risk Group 2 agents. ABSL-2 practices and containment are recommended for the experimental animals.

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

NIHG activity category: N/A, infectious agent risk only

Georgiev, Ivelin – Vaccine Center

TOPAZ Ref. # 100313 – Structural, Sequence, and Systems Analysis and Design of Vaccines and Antibodies Against Agents of Biomedical Interest (RENEWAL)

Lab Description (as stated by PI): For ongoing research projects in the Georgiev laboratory, we identify and characterize immune responses to infection, vaccination, and disease, specifically focusing on antibodies, in human specimens, animal models, and cell lines. Affinity and size exclusion chromatography is used to purify antigens and antibodies from recombinant DNA expression. We also modify genes by performing site-directed mutagenesis, truncations, and fusions by PCR; the modified genes are re-introduced into an expression vector for protein expression and production. Some antigens are used in animal experiments, and we evaluate the immune response to these antigens by assessing various factors such as the B cells and their receptors/antibodies that are expressed/secreted.

Committee review: The lab propagates many genes of interest, including those from Risk Group 2, 3 and 4 agents, in non-pathogenic *E. coli* and expresses them in *S. cerevisiae* using expression plasmids, in insect cells using baculoviral systems and in human, macaque, murine and other mammalian cell lines using 3rd generation lentiviral vectors.

The lab genetically modifies HIV (Risk Group 3) and influenza A (Risk Group 2) to express antigens of other infectious agents in non-infectious virion particles in order to present the antigen for the development and testing of neutralizing antibodies.

The lab processes samples from patients that were exposed to or were actively infected with Risk Group 2 or 3 viruses.

The lab also propagates several strains of Risk Group 2 respiratory viruses in human or macaque cell culture.

BSL-1 practices and containment are recommended for standard rDNA work in non-pathogenic E. coli, S. cerevisiae, and insect cells. Modification of those systems with genes from Risk Group 2, 3 and 4 agents should be done using BSL-2 practices and containment. BSL-2 practices and containment are recommended work with Risk Group 2 agent, lentiviral vectors, human-derived cells and macaque-derived cells. Personnel working with lentiviral vectors, human-derived materials should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy. Personnel working with macaque-derived materials should adhere to the practices of the VUMC MDM in Basic Research Policy. BSL-2+ practices and containment are recommended for work with human patient samples from HIV and HCV positive patients and work with HIV virions.

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

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

Ogden, Kristen – Pediatric Infectious Disease
***TOPAZ Ref. # 100314 – Virus Replication, Heterogeneity, and Interactions with Cells* (RE*NEWAL*)**

Lab Description (as stated by PI): Research in the Ogden lab is focused on double stranded RNA viruses, including rotavirus and reovirus. Rotavirus is an important cause of pediatric gastroenteritis. Reovirus infects humans but rarely causes disease. However, it is very good at killing certain types of cancer cells and is being investigated as a cancer treatment. Our research centers broadly around viral protein functions, virus-cell interactions, and viral heterogeneity. Themes we currently investigate include packaging signals, RNA recombination, gene segment reassortment during coinfection of cells, virus egress and infection of in cell-derived extracellular vesicles, and structural dynamics of the attachment protein during cell entry. A long-term goal of the lab is to engineer RNA viruses to make better vaccines, therapeutics, and research tools.

Committee review: The lab propagates genes of interest, including genes from Risk Group 2 viruses, are propagated in non-pathogenic *E. coli* and express them in insect cells via baculoviral systems and in human, NHP and mammalian cells using expression plasmids. In addition to human cells, serum samples from infants that have been vaccinated against rotaviruses will be used to study neutralizing antibodies.

The lab propagates strains of Risk Group 1 and Risk Group 2 viral strains using human, macaque and other NHP cell lines. Genetically modified of these viruses will also be used.

In animal experiments, Risk Group 2 viruses (Rotavirus or Reovirus) will be administered to mice. Samples from these animals will be processed and analyzed in the lab.

BSL-1 practices and containment are recommended for rDNA work in non-pathogenic *E. coli,* insect cells and most mammalian cell lines. BSL-2 practices and containment are recommended for experiments with Risk Group 2 virus, human-derived materials and macaque-derived materials. Personnel working with human-derived materials should adhere to the practices of the VUMC HDM/BBP in Basic Research Policy. Personnel working with macaque-derived

materials should adhere to the practices of the VUMC MDM in Basic Research Policy. ABSL-2 policies 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-1-a, III-D-2-a, III-D-3, III-D-4-a, III-E-I, III-F-8/Appendix C-II

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

Principal Investigator	VBMR#	Modification Summary
Bacchetta, Matthew	100265 V2	Personnel update
Jallouk, Andrew	100074 V2	Personnel update and lab relocation; inspection of new lab space conducted on 10/1/2025
Lacy, D. Borden	0021 R8	Personnel update including ABSL-2 work
Mason, Frank	100312 V2	Personnel update
Zachos, Nicholas	100287 V2	Personnel update

The Committee approved the administrative updates as presented.

Other Business

The BSO informed the Committee of the current plans for the NIH to modernize the NIH Guidelines and shared the timeline for the regional listening sessions.

Adjournment

The meeting was adjourned at 12:51 pm.