Vanderbilt University Medical Center
Institutional Biosafety Committee (MC IBC) Minutes
July 28, 2026
Virtual Meeting

Attendance

Voting Members (Quorum = 7 voting members)

- ☒ Mark Boothby
- ☒ Alexandra Elliott (BSO)
- ☒ Iuliia Gilchuk
- ☐ Rachelle Johnson
- ☒ Izumi Kaji
- ☐ 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
- ☒ Kevin Warren

Call to Order/Introductions/Announcements

The July 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 June 2026 meeting. The Committee voted to approve the minutes as presented.

Protocol Reviews

Kropski, Jonathan – Allergy, Pulmonary and Critical Care Medicine
TOPAZ Ref. # 100388 – Lung Development, Injury and Repair (RENEWAL)

Lab Description (as stated by PI): We utilize transgenic animal, mouse and human-derived primary cell organoid, and in-vitro systems to study mechanisms of lung development, injury-repair and fibrosis. Using tools such as cell lines, human-derived materials, viral vectors, and recombinant DNA-molecules, we study molecular mechanisms that regulate lung cellular biology.

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

The lab cultures Risk Group 2 viruses (Influenza A strain and RSV) and Risk Group 1 viruses that are murine pathogens (Murine Herpesvirus 4 and murine CMV)

In animal experiments, genetically modified murine cells, adeno-associated viral vectors, adenoviral vectors, or one of the viruses listed above will be administered to mice.

BSL-1 practices and containment are recommended for rDNA work in non-pathogenic *E. coli* and Risk Group 1 mammalian cells. BSL-2 practices and containment are recommended for experiments with Risk Group 2 agents and Risk Group 1 murine pathogens, rDNA work in human-derived cells including modification with AAVs, adenoviral vectors 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 mice receiving AAVs, adenoviral vectors and murine cells. ABSL-2 practices and containment are recommended for animals receiving Risk Group 2 viruses and Risk Group 1 murine pathogens.

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

NIHG activity category: III-D-3, III-D-4-a, III-E-1, III-F-8/Appendix C-I,II,VIII

Lee, Youngmin – Section Surgical Research

TOPAZ Ref. # 100386 – Fibroblasts in Liver and Cardiovascular Disease (RENEWAL)

Lab Description (as stated by PI): Our lab studies fibroblasts in liver and cardiovascular diseases. To model these diseases in mice, we use genetically engineered mouse models and cell culture models to overexpress or delete target proteins, clone vectors, which are amplified in bacteria, and use DNA plasmids, lentiviral, adeno-associated viruses. We also process human, mouse and rat tissues from which we isolate protein, RNA, DNA, or primary cells for our studies. We also use human, mouse and rat cell lines to study cell biology of targets of interest.

Committee review: The lab propagates plasmids expressing genes of interest in non-pathogenic *E. coli* and expresses those genes in murine, rat and human-derived cell lines using adeno-associated viral vectors, retroviral vectors, and 3rd generation lentiviral vectors. The viral vectors are produced in the lab. In addition to human cells, the lab obtains patient samples of liver, heart and salivary gland tissue for analysis.

In animal experiments, genetically modified murine cells, expression plasmids, AAVs, or lentiviral vectors will be administered to mice.

BSL-1 practices and containment are recommended for rDNA work in non-pathogenic *E. coli* and Risk Group 1 mammalian cells. BSL-2 practices and containment are recommended for experiments with rDNA work in human-derived cells including modification with AAVs, retroviral vectors 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 all experimental animals.

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

NIHG activity category: III-D-3, III-D-4-a, III-E-1, III-F-8/Appendix C-II, VIII

Newcomb, Dawn – Allergy, Pulmonary and Critical Care Medicine
TOPAZ Ref. # 100392 – Role of Sex Hormones on Innate and CD4+ T Cell-Mediated Airway Inflammation and Metabolic Pathways **(RENEWAL)**

Lab Description (as stated by PI): Our laboratory uses multi-disciplinary approaches to determine how sex hormones regulate inflammatory mechanisms important in asthma. As children, boys have an increased prevalence of asthma. However, after puberty, women are two-times more likely than men to have asthma, including severe asthma. This change in the prevalence of severe asthma strongly suggests a role for sex hormones in asthma pathogenesis.

To delineate these mechanisms, we isolate PBMCs from the blood of patients with asthma, determine in vitro cell signaling mechanisms and metabolic pathways involved with T cell and innate lymphoid cell effector function, and use mouse models of airway inflammation and/or T cell mediated inflammation. We are also interested in studying multiple forms of insults to the immune system and will study both viral and allergen-induced inflammation in the lung. This multi-pronged approach allows us to determine mechanisms which regulate airway inflammation from many different angles, provides rapid generation of data and the foundational research required for the development of therapeutics and strategies for to treat asthma.

Committee review: The lab propagates genes of interest in non-pathogenic *E. coli* and expresses them in murine and human derived cell culture via retroviral and 3rd generation lentiviral vectors. Viral vectors are produced by the lab. In addition to cultured human cells, patient samples of blood, lung tissue, nasal polyps and lymph nodes are obtained for analysis.

The lab cultures several Risk Group 2 respiratory viruses (Influenza A, RSV, and Rhinovirus A).

In animal experiments, genetically modified murine cells or RSV 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 practice and containment are recommended for work with Risk Group 2 agents, retroviral vectors, lentiviral vectors and human-derived materials. 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

animals receiving modified murine cells. ABSL-2 practices and containment are recommended for animals receiving Risk Group 2 virus.

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

NIHG activity category: III-D-3, III-D-4-a, III-E-1, III-E-3, III-F-8/Appendix C-II, C-VIII

Wilson, Keith – GI Medicine
TOPAZ Ref. # 100391 – Experimental Models of Inflammatory Bowel Disease, Gastrointestinal Infections, and Cancer (RENEWAL)

Lab Description (as stated by PI): The lab's research is focused on gastrointestinal mucosal inflammation and carcinogenesis. To this end we utilize several disease models and use a variety of biological materials in our studies. These experiments include infection of gerbils and genetically modified mice with infectious bacteria, coculture of infectious organisms with murine- and human-derived cell lines, and analysis of animal and human tissues and serum samples for changes in disease markers.

Committee review: The lab's rDNA work is limited to bone marrow transplants from transgenic mice into recipient mice.

The cultures human-derived cells and obtains patient samples of blood, serum, urine, colon tissue, stomach tissue and stool for analysis.

The lab cultures several Risk Group 2 bacteria (*H. pylori, C. jejuni, F. nucleatum, A. junii*) and a Risk Group 1 rodent pathogen, *C. rodentium*.

In animal experiments, the infectious agents listed above, human cells or human organoids will be administered to animals.

BSL-2 practice and containment are recommended for work with Risk Group 2 agents, Risk Group 1 rodent pathogens 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-1 practices and containment are recommended for animals receiving human cells or organoids. ABSL-2 practices and containment are recommended for animals receiving Risk Group 2 bacteria or the Risk Group 1 rodent pathogen.

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

NIHG activity category: III-D-4-a

Zhu, Wenhan – Pathology, Microbiology and Immunology
TOPAZ Ref. # 100389 - Resilience Mechanism of Gut Commensals During Colitis (RENEWAL)

Lab Description (as stated by PI): Our group uses a multidisciplinary approach combining microbiology, next-gen sequencing and animal models to understand the mechanisms underlying the interactions between the host and the gut microbiota in the inflamed gut. We use commensal members of the human microbiota and models of Inflammatory Bowel Disease and Infectious Colitis to understand the mechanisms by which these bacteria survive the changes that occur during intestinal inflammation. A separate project in the lab focuses on understanding how certain gut pathobionts causes colon cancer using murine models of Colorectal Cancer. One additional project will look at how antioxidants (in this case, the flavonoids) affect disease progression in interstitial pulmonary fibrosis.

Committee review: The lab propagates plasmids containing genes of interest in non-pathogenic *E. coli* and expresses them in *E. coli* and human-derived cells using expression plasmids. Some of those genes are from Risk Group 2 agents and one expresses a bacterial toxin (Bacteroides fragilis toxin). In addition to cloning the toxin gene, the lab isolates the toxin from the supernatant of the cultured bacteria.

The lab cultures several species of Risk Group 2 and Risk Group 1 bacteria present in normal gut microflora and some GI pathogens. Several of these species are genetically modified by the lab. One of the Risk Group 1 agents is *C. rodentium*, a rodent pathogen.

In animal experiments, wild-type and genetically modified Risk Group 2 and Risk Group 1 bacteria will be administered to animals. Tissue and fluid samples from these animals will be returned to the lab for analysis.

BSL-1 practices and containment are recommended for rDNA work in non-pathogenic E. coli and other Risk Group 1 bacteria. BSL-2 practices and containment are recommended for cloning of Risk Group 2 genes and bacterial genes into Risk Group 1 agents. work with Risk Group 2 agents and Risk Group 1 rodent pathogens and human-derived materials. Personnel working with human-derived materials and 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-D-1-a, III-D-4-a, III-E-3, 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
Bacchetta, Matthew	100265 V3	Personnel updates
Crowe, James	100309 V14	Addition of new BSL-3 lab space
Flores, Anthony	100250 V3	Personnel update
Flynn, Robb	100112 V3	Personnel update
Freiberg, Jeffrey	100311 V4	Personnel update
Ikizler, Talat	100234 V8	Personnel update
Jan, Taha	100336 V2	Personnel update and lab relocation; new lab space inspected on 7/16/2026
Park, Ben	100313 V3	Addition of shared lab space, previously inspected as part of Hurley's IBC approval in January 2026
Patel, Mayur	100257 V11	Personnel update
Rollins-Smith, Louise	100278 V3	Addition of one stable cell line; previously approved for similar material. Personnel update, lab relocation; new lab space inspected 7/21/2026
Rosenberg, Adam	100305 V3	Personnel update; transfer from Todd Peterson
Sterling, Tim	100286 V3	Addition of new BSL3 lab space
Watson, Robert	100232 V7	Addition of new BSL3 lab space
Weiss, Vivian	100235 V9	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.

The BSO announced that the new BSL-3 facility has been certified and will be open for research sometime in September. Tours will be arranged for IBC members and others before work begins.

Adjournment

The meeting was adjourned at 12:40 pm.