

The University of Texas Health Science Center at Houston (UTHealth Houston)
Institutional Biosafety Committee
August 14, 2025
Minutes

Meeting Attendance:

Voting Members

Dr. Catherine Denicourt (Chair)
Dr. Nancy Crider
Dr. Carolyn Grimes
Dr. Nicholas Justice
Dr. Ashish Kapoor
Dr. Yang Liu
Dr. Duc Nguyen
Dr. Eunsu Park
Dr. Scott Patlovich
Mr. Spencer Chichester (SM)
Mr. Jesus Duran Ramirez (SM)
Mr. Petko Ivanov (CM)
Mr. Imad Khalil (CM)

Non-Voting Members

Dr. Joy Harrison
Dr. Kristin King
Mr. Zack Becker
Mr. Felipe Munoz (For Mr. Alan Lucas)
Ms. Rebecca Kairis
Ms. Allison Lino
Ms. Meredith Mills

Guests:

Marivonne Rodriguez
Perla Rodriguez
Shane Wilson

1. Call to Order

The meeting was called to order by Dr. Denicourt at 3:01 PM.

2. Conflicts of Interest

The Chairperson reminded the committee about the conflict of interest procedure. She also reminded the committee members that all protocols that are discussed at the meeting are to be considered confidential and are not to be discussed outside of the meeting with non-IBC members.

3. Review Previous Meeting Minutes (June 12, 2025 and July 10, 2025)

Approved = 13
Opposed = 0
Abstained = 0

4. IBC Administrative Items

IBC Member Renewals for FY2026-2028

- Four IBC voting members' commitment ends August 31, 2025; 3 have renewed.
- IBC roster will be updated by August 31, 2025, including the addition of a community member.

Recombinant or Synthetic Nucleic Acid Molecules Research Applications Review

During the review the committee assessed the containment levels as well as the facilities, procedures, practices and training and expertise of the personnel involved in recombinant

or synthetic nucleic acid molecules research. The committee also reviewed agent characteristics, types of manipulations planned, sources of the inserted nucleic acid sequences, the nature of the inserted nucleic acid sequences and whether an attempt will be made to obtain expression of a foreign gene, and if so, the protein that will be produced. Furthermore, the PI must determine the applicable section(s) of the *NIH Guidelines*.

5. Clinical Protocol Reviews (HGT)

None

6. Protocol Reviews

IBC-25-061 – Dr. Xiaoqin Wu – “Role of necroptosis mediators in liver disease; Role of MLKL in alcohol-associated liver disease; Role of adipose MLKL through EVs in NAFLD; Role of liver capsular macrophages in sterile liver injury and repair; Dual roles of MLKL in metabolic stress response”

Containment Level: BSL-2; for mice receiving AAV: ABSL-1; for mice receiving lentiviral vector: ABSL-2 for 5 days, then ABSL-1

NIH Section: III-D-1-a, III-F-8

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with the submission of a viral vector SOP, and clarification of viral vector injection location.

IBC-25-062 – Dr. Tatiana Barichello – “Association between experimental childhood meningitis and risk of schizophrenia in adulthood” AND “Infection-driven mechanisms associated with Alzheimer's disease pathology”

Containment Level: BSL-2; ABSL-2 for 7 days (ABSL-1 after antibiotic treatment)

NIH Section: Not applicable

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with clarification of ABSL-2 housing location.

IBC-25-063 – Dr. Jose Felix Moruno Manchon – “Senescence induced by iron overload in the brain vasculature”

Containment Level: BSL-1, ABSL-1

NIH Section: III-D-4-a

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with no additional recommendations.

IBC-25-069 – Dr. Susan Fisher-Hoch – “Cameron County Wastewater Surveillance”

Containment Level: BSL-2

NIH Section: Not applicable

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with no additional recommendations.

IBC-25-073 – Dr. Kendra Carmon – “Development of a Patient-Derived Xenograft Mouse Model of Solid Tumors” AND “Bispecific drug-conjugates for treating colorectal cancer “ AND “Preclinical efficacy of GPR56 antibody-drug conjugates and combination therapies for triple-negative breast cancer” AND “The Role and Therapeutic Targeting of GPR56 in Colorectal Cancer” AND “Therapeutic co-targeting of LGR5 and MET to overcome heterogeneity and therapy resistance in colorectal tumors”

Containment Level: BSL-2 enhanced per the UTHealth Houston Viral Vector guidance document; ABSL-1

NIH Section: III-D-1-a, III-D-2-a

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with no additional recommendations.

IBC-25-074 – Dr. Zhongcong Xie – “Effects of anesthesia and surgery on brain function”

Containment Level: BSL-2 (enhanced practices for Mosaic Needle assay as listed in the protocol); Mice receiving LNP: ABSL-2 for 72 hours; ABSL-1

NIH Section: III-D-1-a, III-D-4-b, III-F-1

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with clarification of ZFP genes.

IBC-25-086 – Dr. Yanjun Sun – “Neural circuit mechanisms underlying adaptive and maladaptive spatial learning in the mouse hippocampal formation”

Containment Level: BSL-1; ABSL-1

NIH Section: III-D-4-a, III-E-3-a

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with no additional recommendations.

7. Conditionally Exempt Protocol Reviews

IBC-25-077 – Dr. Bharti Manwani – “Sex Differences in Fibrosis and Inflammation in Cerebral Amyloid Angiopathy and Atrial Fibrillation” AND “Sex-Specific Mechanisms of Atrial Fibrosis and Inflammation in Atrial Fibrillation”

IBC-25-082 – Dr. Laura Goetzl – “Confirmation of Depression Medication Response Biomarkers”

IBC-25-083 – Dr. Peter Yang – “Evaluation of Choroid Plexus in Patients with Hydrocephalus”

IBC-25-085 – Dr. Matthew Harting – “Identifying Molecular, Cellular, and Tissue Targets for Congenital Diaphragmatic Hernia induced Pulmonary Hypertension”

8. Protocol Updates

a. Significant updates:

IBC-23-064 – Dr. Xiaotian Zhang – “Use of lenti and retrovirus for the transduction of hematopoietic cells” AND “The dissection of non-canonical cis-regulatory elements downstream of beta-globin locus in the fetal hemoglobin gene regulation” And “Dissect the novel function of mutant NPM1 on transcriptional hijacking”

- **Addition of bioagent:** Transgenic Mice (B.6SJL-Ptprca Pepcb/BoyJ on C57/BL6 background, NSG)
- **Addition of animal work:** NOD.Cg-Prkdcscid Il2rgtm1Wjl/SzJ mice and B6.SJL-Ptprca Pepcb/BoyJ (CD45.1 congenic strain) mice will be injected with transduced cells through tail vein injection. Use of GFP or RFP to track transplanted HSPCs via retro-orbital bleed. Administration of epigenetic targeting drugs (Reuvmenib, KCC-07, and UM171) for potential reduction in leukemia development.
- **NIH Guidelines:** Add III-D-4-b
- **Personnel Change:** Remove Ruijun Shen; Add Zhong Fan, Yanan Jiang, Runmeng Liu, John Mosior, and Miriam Zanovello
- **Addition of Location of Work:** MSB 6.000 and MSB 6.004

Containment Level: BSL-2 enhanced per the UTHHealth Houston Viral Vector guidance document, ABSL-2 for 5 days, then ABSL-1

NIH Section: III-D-4-b (added with amendment)

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with no additional recommendations.

IBC-25-027 – Dr. Matthew Harting – “Inflammation in Congenital Diaphragmatic Hernia”

- **Addition of bioagent:** AAV5 vector
- **Addition of work:** In vitro and vivo experiments with AAV (transducing human cell lines and administration to rats)

Containment Level: BSL-2 (no change from previous approval); BSL1, ABSL-1 for the addition

NIH Section: III-D-4-a (added with amendment)

Training status: all personnel listed on the protocol are current on safety training requirements

Approved = 13

Opposed = 0

Abstained = 0

The protocol was presented and approved with no additional recommendations.

b. Administrative updates:

IBC-21-027 – Dr. Anilkumar Pillai - “Complement component, neuroinflammation and depression” AND “Chronic stress, complement immune system and behavior” AND “Assessment of Complement Cascade Components in Patients With Major Depressive Disorder” AND “Effects of chronic unpredictable stress on tumor-bearing mice”

- **Addition of work:** Adding work to study the role of immune receptor gene C3Ar1 and TLR9 on synaptic plasticity and phagocytosis by Adeno Associated Virus (AAV virus) mediated gene silencing using human iPSC-derived cerebral organoids culture system.
- **Addition of rDNA:** AAV vectors (AAV2/7m8-GFP-U6-h-C3ar1-shRNA, AAV2/7m8-GFP-U6-scrmb-shRNA, AAV2/7m8-GFP-U6-h-TLR9 -shRNA, AAV2/7m8-GFP-U6-scrmb-shRNA)
- **Addition of bioagent:** AAV vectors (C3aR1-shRNA and TLR9-shRNA)

IBC-22-038 – Dr. Tatiana Barichello – “Influence of emergent SARS-CoV-2 on neurodegeneration - potential linkthrough gut microbiome” AND “Decoding Gut-Brain Biomarkers and Developing a Minimally Intrusive Gut Microbiome Sampling: Enhancing Cognitive Well-being in Athletes” AND “**Infection-driven mechanisms associated with Alzheimer's disease pathology**”

- **Addition of Bolded title**
- **Addition of bioagents:** de-identified plasma samples, which will be collected from health controls and patients with sepsis in Brazil
- **Update CPHS:** HSC-MS-24-0876, HSC-MS-19-0266
- **Removal of personnel:** Lucineia Danielski
- **Addition of personnel:** Mohd Tayyab and Eduardo Pereira Duarte da Silva
- **Addition of work location:** BBSB 5102A
- **Addition of Shipping information**

IBC-22-051 – Dr. Simon Young – “Hydrogel encapsulated and responsive micro-cytokine factories to treat oral cancer”

- **Addition of bioagents:** Murine oral cancer cell lines (NOOC1, OVA-NOOC1, OVA-NOOC2)
- **Addition of personnel:** Gemalene Sunga, Alejandra Cobos Perez, Sheyla Garcia

IBC-22-058 – Dr. Dung-Fang Lee – “Model Li-Fraumeni syndrome with induced pluripotent stem cells” AND “Dissecting the Biology and Therapeutic Vulnerabilities of RB1-Mutant Osteosarcoma Using RB iPSCs” AND “**The Epitranscriptomic Pathway is a Therapeutic Vulnerability in p53-mutant Osteosarcoma**”

- **Addition of Bolded title**
- **Addition of work:** Experiment 3: investigate the role of the patient-relevant p53(R249S) mutation in liver cancer. We will use H1 and H1-p53(R249S) human pluripotent stem cell-derived hepatic endoderms (HEs), endothelial cells (ECs), and hepatic stellate cell-like cells (HscLCs), mix these cell types to generate multilineage liver organoids (mLOs), and evaluate whether the p53(R249S) mutation contributes to liver cancer initiation in nude mice. BSL2/ABSL1 (standard animal housing)

- **Addition of bioagents:** Human hepatocellular carcinoma (HCC) cell lines: PLC/PRF/5-Luc, PLC/PRF/5-Luc-KO (knockout endogenous p53(R249S), PLC/PRF/5-Luc-p53(WT); H1-p53(R249S) cell lines (HscLS, ECs, HEs)
- **Removal of Personnel:** Ying Liu, Dandan Zhu, and An Xu
- **Addition of Personnel:** Yu-Wen Huang, Trinh Phan, Mo-Fan Huang, Megan Fisher, and Rachel Shoemaker

IBC-22-074 – Dr. Heidi Kaplan – “Testing for Contrasting Infection Rates and Biofilm Formation among Biomaterials in an in vitro Biofilm Infection Model” AND “The Role of Biofilm on the Margin Stability and the Development of Secondary Caries” AND **“Bacteriophage Targeting Staphylococcus”**

- **Addition of Bolded title**
- **Addition of work with CPHS:** Bacteriophage isolation and analysis from patient samples positive for Staphylococcus infection Ambrose HSC-MS-25-0596
- **Addition of bioagents:** Human fluids from negative pressure wound therapy, human nasal swabs and anti-staphylococcal bacteriophage
- **Removal of Personnel:** Gena Tribble and Jacob Jerril
- **Addition of Personnel:** Cora Kosnik and Luna Raquel

IBC-23-056 – Dr. Jianguo Wen – “Optimizing mRNA sequences with deep neural networks” AND “Developing mRNA designer tool package for optimization of mRNA sequence” AND “Systematic optimization of mRNA sequences for mRNA therapies” AND **“The effect of immune checkpoint inhibitor in cancer cells-bearing mice”**

- **Addition of bolded title**
- **Addition of bioagents:** Mouse melanoma cell line B16-OVA MO4; Human NSCLC cell line NCI-H2444, Anti-PD-L1 antibody
- **Addition of work** with new bioagents to protocol summary

IBC-24-020 – Dr. Carolyn Pickering – “Biological and Environmental Factors Driving Behavioral Symptoms in Alzheimer’s Disease”

- **Addition of personnel:** Santiago Sanchez Cabarcas

IBC-24-054 – Dr. Paul Schulz – “Mechanisms Underlying COVID-19-Induced Neurocognitive Dysfunction (Protocol No. NCDC-23-104)”

- **Addition of personnel:** Livia Merrill
- **Removal of personnel:** Deanna Hill
- **Addition of bioagent:** Cerebrospinal fluid (CSF)

IBC-24-067 – Dr. Mahboobeh Mahdavinia – “Cognitive Impairment in Chronic Rhinosinusitis (CRS)” AND “Microbiome in CRS” AND “Studying the mechanism and potential treatment for sleep disruption in CRS” AND “Sleep disruption in CRS” AND “Impact of Circadian-Microbiome Interaction on the Gut-Pancreas Axis in Aging”

- **Addition of personnel:** Baharan Fekry

IBC-24-070 – Dr. Mahboobeh Mahdavinia – “South African Food sensitization and Food Allergy (SAFFA)” AND “Impact of Circadian-Microbiome Interaction on the Gut-Pancreas Axis in Aging”

- **Addition of personnel:** Baharan Fekry

IBC-24-072 – Dr. Vijayasree Vayalanellore Giridharan – “Role of Alternative Polyadenylation in Cognition”

- **Addition of bioagent:** human fetal glial cells (SVG p12)

IBC-25-020 – Dr. David Rodriguez-Buritica – “A PHASE 1/2, DOSE-EXPLORATION STUDY TO EVALUATE THE SAFETY AND EFFICACY OF BEAM-301 IN PATIENTS WITH GLYCOGEN STORAGE DISEASE TYPE IA (GSDIA) HOMOZYGOUS OR COMPOUND HETEROZYGOUS FOR THE G6PC1 c.247C>T (p.R83C) VARIANT”

- **Clinical Protocol Update:** Submission of Pharmacy Manual v4.0 – general edits.

IBC-25-028 – Dr. Dinah Proctor – “The human microbiome”

- **Addition of work:** MEGA-plate experiment; increase culture volume to less than 1L
- **Addition of personnel:** Oliyad Oumer and Ranasinghe Weerakkody
- **Removal of personnel:** Naeun Kim

IBC-25-078 – Dr. Georgene Hergenroeder – “Biomarkers for pain in spinal cord injury (SCI)” AND “Clinical Interventions to Increase Organ Procurement, Nutritional Status and Enteral Absorption Capability after Brain Death” AND “Neurosciences Research Repository (NRR)” AND “Safety and Pharmacokinetics of Riluzole in Patients with Traumatic Acute Spinal Cord Injury” AND “Hypothermia for Patients requiring Evacuation of Subdural Hematoma: a Multicenter, Randomized Clinical Trial (“The HOPES Trial”)” AND “A Pilot Safety Study of Minocycline for the Treatment of Neuropathic Pain in traumatic spinal cord injury (HSC-MS-13-0199)” AND “The National Center for Testing Treatments for Chronic Spinal Cord and Traumatic Brain Injury (HSC-MS-15-0705)” AND “The Will Erwin Headache Research Center Study of Cluster Headache and Trigeminal Neuralgia (WEC): Creating a Cellular Model of Cluster Headache: Human Fibroblasts to Study Circadian Rhythms (HSC-MS-15-0780)” AND “Discovery of Biomarker Signatures Prognostic for Neuropathic Pain after Acute Spinal Cord Injury” AND “The effect of anti-GFAP antibodies on sensory function in a mid-thoracic spinal contusion rat model” AND “**Randomized double-blind placebo-controlled trial of galantamine after acute traumatic brain injury (HSC-MS-25-0742)**”

- **Addition of bolded title**
- **Addition of work for CPHS: HSC-MS-25-0742: Analysis of blood from patients for protein and biomarkers**
- **Addition of Personnel: Glenda Torres**

9. BSL-3 Update

The BSL3 autoclave was out of operation for approximately a month. The autoclave contingency plan was initiated, repairs occurred on August 12, 2025, and the autoclave is operational.

10. Biological Safety Program Activity Report

The Biological Safety Program Activity Report was provided for the committee to review. There were 3 reported injuries in both June and July. Sharps injury during cell

culture, needlestick during surgery with NHP (all procedures followed), burn from electrocautery, mouse bite, sharps injury during animal surgery, and clean needlestick in gross anatomy.

11. Environmental Protection Program Activity Report

The Environmental Protection Program Activity Report was provided for the committee to review. One autoclave in BBSB was repaired.

12. Other Items

Update to Biological Safety Program Activity Report, highlighted additions to expand categories, no objections from the committee, will be used to capture FY 2026 data.

13. Next Meeting

The meeting is scheduled for September 11, 2025, via Microsoft Teams from 3:00 PM to 4:00 PM.

14. Adjournment

The meeting was adjourned by Dr. Denicourt at 4:21 PM.