

COMS meeting on 9/4/2026

Minutes

Location: ZOOM

Time: 10AM - 12PM

Harvard University Committee on Microbiological Safety (COMS)

COMS@hms.harvard.edu

Documentation of Quorum

Total Voting Members on Committee Roster: 29

Total Needed for Quorum: 16

Total Voting Members Present: 18

ATTENDEES PRESENT		
Committee Chair		Committee Vice Chair
• S. Helaine		• R. Rasmussen
Members		
• A. Baptista (IBC Member)	• M. Baym (IBC Member)	• A. Reid (Biosafety Officer)
• D. Barbeau (IBC Member)	• Y. Lu (IBC Member)	• J. Sixsmith (IBC Member)
• S. Bhalchandra (IBC Member)	• M. Melisi (Biosafety Officer)	• M. Super (IBC Member)
• M. Dorf (IBC Member)	• M. Nilsen (IBC Member)	• D. Tipper (Community Member)
• L. Gamer (IBC Member)	• J. Park (IBC Member)	• T. Winters (IBC Member)
• T. Kwan (Community Member)	• R. Polak (IBC Member)	
• V. D'Souza (IBC Member)	• K. Pritchett-Corning (IBC Member)	
• L.M. Silva (IBC Member)		
Ex-Officios (Non-Voting)		
• B. Corning	• M. Corrigan	• E. Macleod
• M. Schatz		
Guests and Members of Public (Non-Voting): 7		

Call to Order

The meeting was called to order at 10:00 A.M.

The meeting is now open for discussion.

Introduction of Guests

One guest was introduced.

Meeting Minutes for Approval

Meeting	Minutes Approved	Link to Minutes
COMS meeting on 5/1/2026	Yes	Link
COMS meeting on 5/29/2026	yes	Link
COMS meeting on 7/31/2026	yes	Link

Scheduled Business

Type	COMS #	Title	PI	Institution	Motion
Appointed Review Protocols Involving Recombinant DNA	22-104-A09	Production of biosynthetic plant enzymes in heterologous hosts	Ryan Nett	Harvard Faculty of Arts and Sciences (FAS)	The lab is adding Beauveria bassiana, Rhizophagus irregularis, and Rhizobium rhizogenes for testing metabolite production. B. bassiana and R. rhizogenes can be handled at BL1. All organisms are not known to be human pathogens. The experimental procedures fall under Sections III-D and III-E of the NIH Guidelines and will be conducted under BL1 per COMS policies and the institutional biosafety manual.

					The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Appointed Review Protocols Involving Recombinant DNA	25-094-A04	BSL3 - Growth, virulence, antibiotic susceptibility and host responses in Mycobacterium tuberculosis	Sarah Fortune	Harvard T.H. Chan School of Public Health (HSPH)	A member associated with this study was placed in a Zoom waiting room before the discussion of this protocol. The project investigates Mycobacterium tuberculosis (Mtb) growth requirements and host drivers of tuberculosis susceptibility and resistance. This amendment describes use of fusion protein tags in Mtb, identifies a previously approved Mtb deletion strain by name, and clarifies the use of genetically modified Mtb strains in mice. It also documents the use of intraperitoneal route of administration in addition to the previously approved intravenous route. The work falls under Section III-D of the NIH Guidelines and will be conducted under BL3 per COMS policies and institutional biosafety manuals. The committee reviewed the risk for GOF. The executive order released in May 2025 considered the dGOF regulation found on: https://www.whitehouse.gov/presidential-actions/2025/05/improving-the-safety-and-security-of-biological-research/ The work is focused on a triple-gene deletion. The PI underwent a review in 2025 and the work did not fall under the scope of dGOF. This study will be sent to the Boston Public Health Commission for additional BL3 review and approval. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 15 Against: 0 Abstentions: 2 A member associated with this study was brought back into the meeting after the vote.
Appointed Review Protocols Involving Recombinant DNA	25-150-A01	Mechanisms of infection of mosquitoes by arboviruses	Flaminia Catterucia	Harvard T.H. Chan School of Public Health (HSPH)	The project studies the molecular pathways involved in flavivirus infection and vector transmission. This amendment adds insect-specific BinJV-flavivirus chimeras combining a BinJV non-structural protein backbone and structural proteins from yellow fever virus (17D and Asibi strains) and tick-borne encephalitis virus (Neudoerfl, European subtype) to be used in ongoing in vivo infection studies in mosquitoes. This work falls under Sections III-D and III-E of the NIH Guidelines and will be conducted at ACL-1 and ACL-2 per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 15 Against: 0 Abstentions: 2
Appointed Review Protocols Involving Recombinant DNA	26-067	Role of lipids in MTB in pathogenesis (BSL3)	Eric Rubin	Harvard T.H. Chan School of Public Health (HSPH)	A member associated with this study was placed in a Zoom waiting room before the discussion of this protocol. This is 5-year rewrite. The lab will continue to conduct in vitro studies with Mycobacterium orygis, M. bovis, M. africanum, M. kansasii, as well as M. tuberculosis (MTB) strains including genetically modified and clinical isolates, for comparative lipid profiling and studies of cellular lipids associated with MTB virulence. No multidrug-resistant strains are used; all strains remain drug-susceptible. The work is consistent with previous COMS approval. It falls under Section III-D of the NIH Guidelines categories and will be conducted under BL2 and BL3 per COMS policies and institutional biosafety manuals. This study will be sent to the Boston Public Health Commission for additional BL3 review and approval.

					The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 16 Against: 0 Abstentions: 1 A member associated with this study was brought back into the meeting after the vote.
Standard Review Protocols Involving Recombinant DNA	22-090-A04	Viral Tracing of Serotonergic Circuits that Mediate Behavior in mice	Susan Dymecki	Harvard Medical School (HMS)	The amendment covers the addition of a new strain of modified, replication-incompetent rabies virus strain carrying low risk genes for stereotaxic injection in mice. This work falls under Section III-D of the NIH Guidelines and will be conducted under BL2 and BL2-N per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	23-056-A37	Renewal: Alleviation of risks associated with age-related pathologies via viral-delivered epigenetic modifiers	George Church	Wyss Institute	The lab work under this protocol is to evaluate different viral vectors, and modifications to those vectors, in order to make epigenetic alterations to cellular genes for addressing age-related pathologies, including neurological maladies. This amendment is to use a replication-incompetent lentiviral vector with an inducible-expression system to screen a library of transcription factors for any effects on microglial-differentiated human iPSCs exposed to materials associated with an aged-brain environment. The work falls under Sections III-D and III-F of the NIH Guidelines and will be conducted under BL2 per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	23-070-A05	Bacillus envelope biogenesis, sporulation, germination	David Rudner	Harvard Medical School (HMS)	The lab studies sporulation and germination in Gram-positive soil bacteria. This amendment expands earlier work with an attenuated Bacillus anthracis Sterne derivative lacking both pXO1 and pXO2 virulence plasmids to additionally characterize genes involved in cell envelope biogenesis. Established genetic approaches, including transposon mutagenesis, complementation, and fluorescent protein fusions, will be used to investigate growth, sporulation, germination, and cell envelope assembly in mutant phenotypes. The work falls under Section III-D of the NIH Guidelines and will be conducted at BL2 per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	24-001-A11	Antimicrobial Resistance: Imaging-based diagnostics and mechanism 2024	Johan Paulsson	Harvard Medical School (HMS)	This amendment adds a new project to study non-pathogenic bacteria responses to antibiotic pulse applications using micro-fluidics. The amendment adds a new organism (Vibrio natriegens). This organism and non-pathogenic Escherichia coli will be modified with fluorescent marker proteins and standard lab antibiotic resistance markers for selection. This work falls under Sections III-E and III-F of the NIH Guidelines and will be conducted at BL1 per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review	24-029-A46	Pathogen induced	Isaac Chiu	Harvard Medical	The lab investigates the role of the nervous system in antimicrobial host defense and inflammation. This amendment adds murine derived AKP organoid cells to

Protocols Involving Recombinant DNA		mechanisms of neuronal activation		School (HMS)	administer into animals for cancer models, and Vero cells for viral plaque assays. A new project to study itch and pain will involve the use of human source materials including human cell lines exposed to experimental stimuli as well as human embryonic stem cells and induced pluripotent stem cells which will be transduced using BL2 viral vectors carrying low risk genes. This falls under sections III-D, III-E, and III-F of the NIH Guidelines, and will be conducted under BL1, BL1-N, and BL2 per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	25-077-A03	HBS Life Lab Projects - Tissue and Cell work 2025 - 2030	Adam Cohen	Harvard Business School (HBS)	The group works with ovarian cells and studies platforms to help with fertility. This amendment transfers a company from one protocol to another. They handle human cells and tissues, non-human primate cells and tissues, bovine tissues, non-pathogenic Escherichia coli, lentiviral vectors with fluorescent markers and genes involved in the creation and differentiation of iPSCs. This work falls under Sections III-D, III-E, and III-F of the NIH Guidelines and will be conducted at BL1 and BL2 per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	26-020-A01	Development of a Gene-Transfer-Resistant and Biocontained Bacterial Host	Akos Nyerges	Harvard Medical School (HMS)	The goal of this project is to generate a bacterial strain that constantly requires a noncanonical amino acid for survival and blocks incoming and outgoing horizontal gene transfer using its engineered genetic code. This amendment is adding a new bacterial strain, Acinetobacter baylyi ADP1, and additional rooms to the protocol. A. baylyi ADP1 is a non-pathogenic soil organism with COMS precedent and will be handled under BL-1 conditions. These experiments fall under Section III-E of the NIH Guidelines and will be conducted under BL1 per COMS policies and the institutional biosafety manual. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	26-062	Engineering Biological Systems - 2026	Pamela Silver	Harvard Medical School (HMS)	This is a 5-year rewrite. The lab studies the creation of microbial systems to create engineered therapeutic proteins, produce chemicals of interest, or assist in mineral dissolution or metal uptake. The work involves various pathogenic and non-pathogenic bacteria and yeasts, human cell lines, mouse cells and tissues, transgenic mice, lentiviral vectors containing low risk genes, sendai virus, and plants. Some of these organisms will be genetically modified. This work falls under sections III-D, III-E, and III-F of the NIH Guidelines and will be conducted at BL1, BL1-1N, BL2 and BL2-N per COMS policies and institutional biosafety manuals. The committee was notified that this study was reviewed for potential dGOF. It was noted that there is no potential dGOF as the Francisella tularensis attenuated vaccine strain is going into Bacillus subtilis. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	26-066	Presynaptic Mechanisms	Pascal Kaeser	Harvard Medical School (HMS)	This is a 5-year rewrite where the lab studies signal transmission and the processes that control release of neurotransmitters. The lab works with transgenic mice and tissues, human cells, non-human primate cells, non-pathogenic Escherichia coli, exempt quantities of Tetrodotoxin, and viral vectors (AAV, 3rd generation lentiviral vectors) containing or targeting low risk genes. This work falls under sections III-D, III-E, and III-F of the NIH Guidelines and will be conducted at

					BL1, BL1-N, BL2, and BL2-N per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Involving Recombinant DNA	26-070	Identification and investigation of small molecule production by human-associated bacteria	Sloan Devlin	Harvard Medical School (HMS)	This is a 5-year rewrite. The laboratory studies how human-associated gut bacteria metabolize small molecules that affect host physiology and is adding Enterobacter cloacae to the protocol. The lab will clone and express candidate metabolic genes in non-pathogenic E. coli and Bacteroides species, and generate targeted chromosomal disruptions in Clostridia, Lactobacillus, and Bacteroides using ClosTron or two-step homologous recombination. The lab will also test small-molecule inhibitors of bacterial enzymes under anaerobic conditions. Human and murine intestine and liver cell lines are exposed to bacteria-derived metabolites to assess changes in metabolic and immune signaling and gene expression, including limited siRNA-mediated knockdown of host receptors. The experiments described in this protocol fall under Sections III-D, III-E, and III-F of the NIH Guidelines and will be conducted at BL1 and BL2 per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0
Standard Review Protocols Not Involving Recombinant DNA	26-072	Detecting nosocomial pathogen outbreaks-2026	Yonatan Grad	Harvard T.H. Chan School of Public Health (HSPH)	This is a 5-year rewrite where the project focuses on the development and evaluation of genomic approaches for predicting nosocomial pathogen outbreaks. The lab will continue to work with a variety of clinical bacterial isolates, including opportunistic and pathogenic organisms, for culture, DNA isolation, and whole-genome sequencing; select organisms will be maintained for freezer storage only. No recombinant genetic modifications of organisms will be performed. Some agents may require consultation with occupational health be offered. This work does not fall under any Section of the NIH Guidelines and will be conducted at BL1, BL2, and BL2 with additional stipulations per COMS policies and institutional biosafety manuals. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 17 Against: 0 Abstentions: 0

Personnel Training

The PI and laboratory staff are required to be trained in accordance with the COMS Training Policy. Current PI training was verified by the Institutional Biosafety Officer for all protocols discussed at today's meeting, and PIs are responsible for ensuring laboratory and agent-specific training for their staff.

Lab Inspections

The Institutional Biosafety Officer provided inspection dates for all protocols discussed at today's meeting. Facilities are considered appropriate for the proposed work and proposed containment levels. No significant findings/noncompliance were noted to the committee. The laboratories are working on any necessary corrective actions.

New Policies and Procedures

There were no new policies or procedures to discuss.

Reported Incidents

Members were presented with and informed of an incident from July 2026, its risk assessment, and the corrective action taken to prevent further occurrence.

Incident #1: Mice administered human cells (approved for BL2 containment) were housed in an animal facility space designated at BL1-N. No exposure to or release of biological materials requiring BL2 containment is anticipated. BL2-level PPE was worn and cage changes were performed in a biosafety cabinet. The PI and researchers involved were responsive during the investigation and will work with EHS and the animal facility moving forward to ensure that proper containment is followed for housing their mice requiring BL2 containment.

Corrective Actions: Mice were relocated to the appropriate facility. The PI met with the entire lab to discuss the situation and confirm that no other mice requiring BL2N were housed in that space. The PI will confirm with the animal facility in the future.

Notifications: Reports were made to COMS.

Old Business

There was no old business to discuss at this meeting.

New Business

1) 2027 COMS Meeting Schedule

- The new 2027 COMS Meeting schedule was provided to committee members.

2) IBC Training

The committee was provided with several articles for the purposes of COMS member training as follows:

- U.S. Government Policy for Stopping High-Risk Life Sciences Research.
- Notes from the Field: Misidentification of a Specimen as *Neisseria meningitidis* During a University Classroom Laboratory Exercise — Utah, 2025.
- Securing Cell-Free Biomanufacturing as a Strategic National Capability.

Regulatory updates

NIH released a draft Biosafety Policy for Research Involving Biohazards on August 19 that, if finalized, would replace the NIH Guidelines and extend IBC jurisdiction from recombinant and synthetic nucleic acids to all biohazards — including wild-type agents, toxins, and prions. It also proposes 24-hour incident reporting, public posting of IBC minutes and incident reports, and a federally defined Biosafety Officer role, while easing requirements for low-risk work. Comments are due October 19; COMS is preparing an institutional response and sent a PI survey Monday, requesting feedback by September 11. COMS members can provide input on scope, workload, and the transparency provisions.

The COMS Vice Chair is retiring from the committee after today's meeting. The committee thanked him for his year of service as Vice Chair and 10 years of service as Biosafety Officer to Harvard COMS.

Public Comments

There were no public comments.

Adjournment

The meeting was adjourned at 10:45AM.