COMS meeting on 6/26/2026
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: 30
Total Needed for Quorum: 10
Total Present at Call to Order: 30
Members Arriving After Call to Order: 3

ATTENDEES PRESENT		
Committee Chair	**Committee Vice Chair**	
• S. Helaine	• R. Rasmussen	
Members		
• A. Baptista (IBC Member) • D. Barbeau (IBC Member) • S. Bhalchandra (IBC Member) • M. Dorf (IBC Member) • L. Gamer (IBC Member) • J. Kirby (IBC Member) • T. Kwan (Local Non-Affiliated Member) • R. Colgrove (IBC Member)	• M. Melisi (Biosafety Officer) • B. Neugeboren (IBC Member) • M. Nilsen (IBC Member) • J. Park (IBC Member) • R. Polak (IBC Member) • K. Pritchett-Corning (IBC Member) • C. Walsh (IBC Member) • M. Baym (IBC Member)	• A. Reid (Biosafety Officer) • S. Santra (IBC Member) • J. Sixsmith (IBC Member) • M. Super (IBC Member) • D. Tipper (Local Non-Affiliated Member) • T. Winters (IBC Member) • S. Mohr (IBC Member) • T. Brennan-Krohn (IBC Member)
• **Ex-Officios**		
• B. Corning	• E. Macleod	• S. Estime
• M. Corrigan		

Call to Order

The meeting was called to order at 10am.

Introduction of Guests

Two new members of COMS were introduced.

Meeting Minutes for Approval

Meeting	Minutes Approved	Link to Minutes
None		

Scheduled Business

Type	COMS #	Title	PI	Institution	Motion
Standard Review Protocols Involving Recombinant DNA	23-067-A03	Study of marine microbial metabolisms and interactions	Peter Girguis	Harvard Faculty of Arts and Sciences (FAS)	The amendment adds Deinococcus radiodurans. The bacterium will be transformed with custom plasmids to insert genes for the perchlorate reduction pathway and to express proteins of interest (e.g., for metabolic studies and fluorescent imaging). This falls under section III-E of the NIH Guidelines and will be conducted under BL1 per COMS policies and institutional biosafety manuals.

		with the environment			Deinococcus radiodurans can be safely handled at BL-1 following COMS policies. This work falls under section III-E of the NIH guidelines. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	23-131-A04	Maintenance, differentiation and perturbations of human embryonic stem cells	Sharad Ramanathan	Harvard Faculty of Arts and Sciences (FAS)	The lab works to understand early human development using stem cells and organoids to elucidate the role of genetic, morphogenetic and epigenetic changes on cell fate. This amendment adds the use of induced pluripotent stem cells for delivery into mice. CRISPR gene editing will be performed on some of the cells injected into mice. The cells may be transduced with high-risk genes. The lab will also use AAV vectors in cells and mice. This falls under section III-D and III-E of the NIH Guidelines and will be conducted under BL1/ BL1-N, BL2/ BL2-N with additional stipulations/ 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	24-029-A41	Pathogen induced mechanisms of neuronal activation	Isaac Chiu	Harvard Medical School (HMS)	The lab investigates the role of the nervous system in antimicrobial host defense and inflammation. This amendment adds the use of Herpes simplex virus type 1 (HSV1) including a recombinant strain for in vivo and in vitro studies. HSV1requires a consultation with occupational health be offered. This falls under section III-D of the NIH Guidelines, and will be conducted under BL2, 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	24-084-A02	Evolution and development of novel traits	Corey Allard	Harvard Medical School (HMS)	The lab studies the molecular mechanisms underlying the development of specialized traits in understudied aquatic species. This amendment adds several marine invertebrate species to previously approved experiments. None of these species poses a risk to human health; nor are any of them classified as agricultural pests. Genetic modification will be limited to sea slugs of the genus Elysia, using plasmid- and transposon-based integration methods. Additionally, one human cell line will be used in experiments involving approved plasmid constructs. The work falls under sections III-D and III-E of the NIH Guidelines and will be conducted at 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	24-130-A04	Single-molecule and super-resolution study of molecular, cell, and neural biology	Xiaowei Zhuang	Harvard Faculty of Arts and Sciences (FAS)	The lab studies biological systems at the single molecule level through imaging. This amendment adds production of lentiviral vectors with signaling-dead cytokine receptors into mouse cells and live mice. This work falls under sections III-D, III-E, and III-F of the NIH Guidelines and will be conducted under BL1, BL2 and BL2-N (72hrs) per COMS policies and institutional biosafety manuals. The committee discussed the portion of the project involving the use of viral open reading frames (ORFs). It was determined that the laboratory will need to revise the protocol to remove references to the viral ORFs proposed for use in HEK293T/17 cells. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.

					Approved: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	25-082-A04	Innate immunity to RNA viruses in C. elegans and human cell models	Jérémie Le Pen	Harvard T.H. Chan School of Public Health (HSPH)	The lab studies the mechanisms underlying host innate immunity to RNA viruses. This amendment adds human iPSC-derived neuronal cell lines and Zika virus to the research. Previously approved West Nile virus will be genetically modified to generate attenuated and reporter variants for in vitro infection studies. This work falls under sections III-D and III-F of the NIH Guidelines and will be conducted under BL2 and BL2 with additional stipulations per COMS policies and institutional biosafety manuals. Some agents require a consultation with occupational health be offered. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	25-094-A03	BSL3 - Growth, virulence, antibiotic susceptibility and host responses in Mycobacterium tuberculosis	Sarah Fortune	Harvard T.H. Chan School of Public Health (HSPH)	This amendment describes the establishment of a microscopy core within the BL3 facility, addition of established human cell lines and genetically modified murine cells for high-resolution microscopy, and updates to the study staff list. Fully prepared samples (live or fixed, genetically modified or not) will be received from internal users with COMS-registered protocols. These labs will add the facility to their COMS protocol and provide information to the core regarding pertinent COMS stipulations prior to use of the facility. Since the microscopes are housed in the BL3 facility, all applicable BL3 operational procedures will be followed. Imaging procedures will be performed by trained core staff. The work falls under Sections III-F of the NIH Guidelines and may 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	26-012-A03	Mechanisms of host-microbiome interactions	Marco Jost	Harvard Medical School (HMS)	The lab investigates how microbial signals affect human physiology and contribute to metabolic and inflammatory disorders. This amendment introduces multiple commensal bacterial species. One strain will be genetically modified to colonize mice, while all strains will be cultured for analysis of small-molecule production. The work falls under sections III-D and III-E of the NIH Guidelines and will be conducted under BL1/ BL1-N and BL2/ 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	26-043	Protein biosynthesis and quality control	Susan Shao	Harvard Medical School (HMS)	This is a 5-year rewrite, and the overall scope of work remains unchanged. The project investigates cellular protein biosynthesis, ribosome-associated quality control, and degradation pathways. Researchers use standard molecular and cellular biology approaches, including plasmid-based expression, recombinant protein production in nonpathogenic bacteria and yeast, mammalian cell transfection, siRNA-mediated knockdown, CRISPR-based genome editing, and lentiviral delivery systems to study the function and interaction of proteins involved in these pathways. The targeted genes are not considered high-risk. 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: 20 Against: 0

					Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	26-046	Use of viruses to express genes and reporters in mammalian cell culture & Recombinant DNA constructs encoding proteins involved in gene expression, also Yeast work	Stirling Churchman	Harvard Medical School (HMS)	This is a 5-year renewal for the lab. The lab will add a new human induced pluripotent stem cell line to the existing protocol. The group studies genes involved in gene expression pathways and gene regulatory sequences. Gene function is tested by overexpression, knockdown, or deletion using recombination. Third generation lentiviral vectors are used to manipulate genes in mammalian cells; other work is performed in non-pathogenic E. coli and S. cerevisiae. Lentiviruses will be used to introduce affinity-tagged proteins, GFP reporters, shRNAs, and related recombinant DNAs into mammalian cells. The 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	26-051	MCB BioCamp	Florian Engert	Harvard Faculty of Arts and Sciences (FAS)	This new protocol covers a new science camp run by the Dept of Molecular and Cellular Biology (MCB). This camp has been approved by the Youth Protection Office of Harvard and MCB has been granted a permit to run a camp by the City of Cambridge. The campers will handle two low-risk organisms — non-pathogenic Escherichia coli and Saccharomyces cerevisiae. Both will express fluorescent markers so that the campers can use them to make microbe art on agar plates. The campers will also place palm prints on agar plates. These plates will then be grown by camp staff and shown to the campers using a projector. The campers will never handle cultured plates. This falls under sections III-F of the NIH Guidelines, and will be conducted at BL1 and BL2 per COMS policies and institutional biosafety manuals. The committee discussed the biosafety procedures for student-generated cultures and agreed that any cultures derived from students' own hands should remain sealed and must not be opened by the students at any time. To further minimize the risk of exposure, all culture plates will be sealed with Parafilm. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	26-055	Engineering cellular and viral vectors for in vivo delivery	George Church	Wyss Institute	This protocol is a 5-year rewrite to engineer traditional viral vectors and T cells, plus phages and native contractile injection systems of bacteria to deliver effector nucleic acid and protein biomolecules. The research on viral vectors and T cells includes exploring ways to affect cell- and tissue-specific tropism, delivery of different payloads, and ways to ensure expression of the delivered biomolecules. All work was previously approved and no new procedures or materials are being added. The work falls under NIH Guidelines Sections III-D, III-E, and III-F, and will be conducted under BL1, BL1-N, BL2, BL2-N, BL2-N72 and BL2+ conditions 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Involving Recombinant DNA	26-056	Airway Biology_2026	Jin-Ah Park	Harvard T.H. Chan School of Public Health (HSPH)	This is a 5-year rewrite for the lab, which studies asthma with a focus on the role of airway epithelial cells. The lab works with human-derived materials, and primary human airway epithelial cells for in vitro studies, including the use of siRNA in gene knockdown experiments. Human rhinovirus is used for in vitro infection studies. The lab also works with transgenic mouse strains to model asthma in animals. This falls under section 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: 20 Against: 0 Abstentions: 1
Standard Review Protocols Not Involving Recombinant DNA	21-080-A46	2021 Renewal: Development of technologies for the rapid diagnosis and treatment of sepsis	Michael Super	Wyss Institute	Research in the lab includes the use of an engineered fusion protein with multi-pathogen binding properties for designing new pathogen diagnostics and potential vaccine development; work also includes studies of individual facets of microbe pathogenicity using organ-on-chip models. This amendment is to add SARS-CoV-2 to the list of pathogens. The work will be conducted under BL2+ conditions per COMS policies and institutional biosafety manuals. A member discussed the need for the lab to elaborate on the molecule nomenclature and this will be added to the protocol. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 21 Against: 0 Abstentions: 0
Standard Review Protocols Not Involving Recombinant DNA	25-026-A04	Allergy, environmental exposures and immunology lab	Mary Johnson	Harvard T.H. Chan School of Public Health (HSPH)	This amendment transfers PI responsibilities from Dr. Kari Nadeau to Dr. Mary Johnson. Dr. Johnson is a Principal Research Scientist for the Harvard T. H. Chan School of Public Health in the department of Environmental Health. The change is the result of Dr. Nadeau leaving the University. The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted. Approved: 21 Against: 0 Abstentions: 0
Standard Review Protocols Not Involving Recombinant DNA	25-031-A03	The effect of the intestinal and vaginal microbiome on host immunity to viruses	Smita Gopinath	Harvard T.H. Chan School of Public Health (HSPH)	The lab studies interactions between the commensal microbiota, pathogens and the host immune response. This amendment adds a wild-type strain of Pseudomonas aeruginosa for in vitro co-culture studies to assess bacterial growth responses and survival following exposure to metabolites. No recombinant or synthetic nucleic acid molecules will be used. This work does not fall under 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: 21 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

There were no incidents discussed.

Old Business

The committee recently discussed research with AAV-Tau and AAV-SCNA. The discussion was to review the following four protocols to align the containment and decontamination measures:

1. 21-086-A15 (Kaeser) - this amendment also involves the use of Pre-formed fibrils (PFF)
2. 26-016-A01 (Finley)
3. 23-132-A07 (Calderone)
4. 26-021 (Flanagan)

The BSO proposed the following changes to these COMS protocols:

- Lowering containment levels of 26-021 and 21-086-A15 from BL2-N-72 hours to BL1/BL1-N.
- Removing the requirement for 1% SDS with a 1-hour contact time for cage decontamination, while retaining AAV disinfection requirements.
- Updating decontamination language for work surfaces and instruments exposed to tissues from animals administered with these vectors.
- Including work with Tau and alpha-synuclein pre-formed fibrils to align with these practices.

The committee voted to approve these changes. New updated approval letters will be issued to the studies discussed above.
Approved: 21
Against: 0
Abstentions: 0

New Business

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

1. AI x Global Risk Nexus Project
2. Determinants of Fatalities and Secondary Transmission in Laboratory Pathogen Incidents, 1900–2025
3. How a Lab Accident Changed My Approach to Science
4. Science with Military Applications is Cited More Than Civilian-Only Research
5. Dual-Use Research Under Scrutiny
6. World-First Vaccine Designed by Artificial Intelligence
7. Biodefense in the Intelligence Age
8. When All Research Is Dual Use
9. First U.S. Suspected Case of New World Screwworm Reported in South Texas
10. Debugging: Google Requests Permission to Release 32m Mosquitoes in California and Florida

Adjournment

The meeting was adjourned at 10:35 AM