

COMS meeting on 2/27/2026 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
Total Guests and Members of Public: 4

ATTENDEES PRESENT		
Committee Chair		Committee Vice Chair
<ul style="list-style-type: none"> S. Helaine 		<ul style="list-style-type: none"> R. Rasmussen
Members		
<ul style="list-style-type: none"> A. Baptista (IBC Member) D. Barbeau (IBC Member) S. Bhalchandra (IBC Member) M. Dorf (IBC Member) L. Gamer (IBC Member) S. Mohr (IBC Member) T. Kwan (Local Non-Affiliated Member) R. Colgrove (IBC Member) 	<ul style="list-style-type: none"> R. Lee (IBC Member) Y. Lu (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) 	<ul style="list-style-type: none"> A. Reid (Biosafety Officer) T. Brennan-Krohn (IBC Member) J. Sixsmith (IBC Member) M. Super (IBC Member) D. Tipper (Local Non-Affiliated Member) C. Walsh (IBC Member)
Ex- Officios		
<ul style="list-style-type: none"> B. Corning S. Elwell 	<ul style="list-style-type: none"> M. Corrigan E. Macleod 	<ul style="list-style-type: none"> S. Estime

Call to Order

The meeting was called to order at 10:00 A.M.
The meeting is now open for discussion.

Introduction of Guests

Two guests were introduced.

Meeting Minutes for Approval

Meeting	Minutes Approved	Link to Minutes
COMS meeting on 12/12/2025	Yes	Link

Scheduled Business

Type	COMS #	Title	PI	Institution	Motion
Appointed Review Protocols Involving Recombinant DNA	21-139-A20	Evaluation of Immune Responses to coronavirus vaccines other emerging	Kizzmekia Corbett-Helaire	Harvard T.H. Chan School of Public Health (HSPH)	The lab uses flow virometry to characterize the antigenic landscape of circulating viruses and is expanding this work to include wild-type Simian Hemorrhagic Fever Virus (SHFV). Small-volume SHFV stocks will be propagated for future in vitro studies and analyzed by flow virometry after chemical fixation and antibody labeling. No genetic modification is proposed. Although not known to cause disease in humans, SHFV poses a significant risk to non-human primates and must

		and re-emerging viruses			<p>be handled at BL2+. The amendment also adds engineered human renal cell carcinoma cell lines for cell culture which fall under NIH Guidelines III-F. This work will be conducted under BL2 and BL2+ per COMS policies and institutional biosafety manuals.</p> <p>The committee discussed the following: COMS began the discussion by showing a Cell paper image and discussing BL2+ containment versus BL3. The committee discussed published literature for animal studies under BL2N containment for work with SHFV. The committee reviewed the community level protection and personnel protection equipment for BL2+ and BL3. Current stipulation in the approval letter requires that all personnel must shower and change clothes before entering any animal facility. The committee discussed current knowledge of the agent's transmission potential and how that relates to in vitro and in vivo transmission. The committee also discussed the possibility of raising the containment to BL3 and used the information available to the committee to assist in making a decision on containment. It is important that an IBC make decisions based on evidence-based risk assessment. The agent does not involve known aerosol or human transmission and BL2+ may be appropriate. The PI primarily studies coronaviruses and works under BL3 containment for other protocols. If any evidence is obtained that experiments may have increased the risk of SHFV, the PI must cease all work and return to COMS for further review. After prolonged discussion, the committee motioned to approve SHFV at BL2+ containment.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 17 Against: 1 Abstentions: 1</p>
Appointed Review Protocols Involving Recombinant DNA	22-145-A07	Mechanisms of Gene Silencing	Danesh Moazed	Harvard Medical School (HMS)	<p>This amendment introduces a new yeast species, Schizosaccharomyces japonicus, which will be used to study genes involved in rixosome-mediated RNA degradation. They will also work with siRNA in approved mammalian cell lines. 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.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 19 Against: 0 Abstentions: 1</p>
Appointed Review Protocols Involving Recombinant DNA	23-032-A11	Molecular basis of novel traits	Nicholas Bellono	Harvard Faculty of Arts and Sciences (FAS)	<p>This amendment adds two new fungal species for further study of symbiotic vs free-living fungal strains of fungal species, and one new version of a genetically modified human cell line expressing ion channels and receptors from organisms studied. This falls under Sections III-E and III-F of the NIH guidelines and will be conducted under BL1 and BL2 per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 19 Against: 0 Abstentions: 1</p>
Appointed Review Protocols Involving Recombinant DNA	25-142	Synthetic biology and automated culture platforms for cellular systems	Ahmad (Mo) Khalil	Harvard School of Engineering and Applied Sciences (SEAS)	<p>This is a new protocol for the lab which aims to understand how cellular systems function and evolve to improve biomedical applications. The lab will introduce biomolecules into yeast and human cells, develop tools to generate targeted genetic variations in plants, and build technologies to reveal how cells adapt and evolve in response to environmental selection pressures. The lab will use murine cell lines, human cells/lines, viral vectors (lentiviral and adeno-associated viral) for transduction of human cell lines, various bacterial and yeast strains, transgenic mice, and transgenic plants (<i>Arabidopsis thaliana</i>, <i>Nicotiana benthamiana</i>). This falls under Sections III-D, III-E, and III-F of the NIH Guidelines and</p>

					<p>will be conducted under BL1, BL1-N, BL1-P, BL2 and BL2-N, per COMS policies and institutional biosafety manuals. Work with plants will require additional stipulations.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	23-132-A05	Mouse Behavior Core "Umbrella" Protocol 2024	Barbara Caldarone	Harvard Medical School (HMS)	<p>The lab is amending to add new AAV vectors to study mechanisms of drug addiction and pain in mice. The vectors will be used for chemogenetic, optogenetic, and calcium imaging procedures. This falls under Sections III-D of the NIH Guidelines, and the work can be safely conducted under BL-1 and BL1-N per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	25-028-A01	Delivery of siRNA to mice	Connie Cepko	Harvard Medical School (HMS)	<p>The lab is amending to add the injection of siRNA to knockdown RBP4 protein in mice. This work falls under Section III-D of the NIH Guidelines and can be safely conducted under BL-1/BL1-N per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	25-116-A01	Bacterial Envelope Assembly	Tom Bernhardt	Harvard Medical School (HMS)	<p>The project aims to identify genes critical for proper bacterial envelope assembly. This amendment is to request approval to add the BL1 bacterium <i>Agrobacterium tumefaciens</i>, a commonly used laboratory strain, to ongoing work. These bacteria will be used to study various cell envelope assembly genes. The 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.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	25-147	Synaptic mechanisms of sensorimotor integration	Rachel Wilson	Harvard Medical School (HMS)	<p>This is a 5-year rewrite. The project involves transgenic <i>Drosophila melanogaster</i> and exempt quantities of Tetrodotoxin to study motor control regions of the brain and how they interact with environmental sensory cues. The lab clones target genes and a vendor creates the transgenic <i>Drosophila</i>. The work falls under Section III-D of the NIH Guidelines and can be safely conducted at BL1 and BL2 per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	25-150	Mechanisms of infection of mosquitoes by alphaviruses	Flaminia Catteruccia	Harvard T.H. Chan School of Public Health (HSPH)	<p>A member associated with this study was placed in a Zoom waiting room before the discussion of this protocol.</p> <p>This is a 5-year rewrite. The project aims to elucidate the molecular mechanisms that enable alphaviruses to infect and be transmitted by specific mosquito species. To achieve this, the study will use screened human whole blood, human cell lines, genetically modified RG2 alphaviruses, and both wild type and genetically modified mosquito</p>

					<p>species in in vivo infection studies. This work falls under Sections III-D, III-E, III-F of the NIH Guidelines and will be conducted at BL1, BL2, ACL-1 and ACL-2 per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 19 Against: 0 Abstentions: 0</p> <p>A member associated with this study was brought back into the meeting after the vote.</p>
Standard Review Protocols Involving Recombinant DNA	26-006	Viral-mediated overexpression, knockdown or knockout of signaling pathways involved in tumor initiation and progression	Joan Brugge	Harvard Medical School (HMS)	<p>This is a 5-year rewrite. This project continues to investigate tumor initiation and progression using previously approved viral vectors and recombinant DNA and viral vector-based approaches in human and animal cell lines, patient-derived models, and genetically engineered mouse models to manipulate and tag genes, perform genetic screens, and study cancer-relevant pathways to identify potential therapeutic targets and biomarkers. This work falls under Sections III-D, III-E and III-F of the NIH Guidelines and will be conducted under BL1/BL1-N, BL2/BL2-N and BL2 with additional stipulations per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	26-007	Cre/lox Mouse Models for Mosaic Genetic Perturbations	Steven McCarroll	Harvard Medical School (HMS)	<p>This is a new protocol. The lab will maintain and breed established, commercially available transgenic and knock-in mouse lines that carry stably integrated recombinant DNA in the germline (e.g., Cre recombinase transgenes, loxP-flanked alleles, and humanized knock-ins) generated previously by standard transgenic/genome-editing methods. New experimental genotypes will be produced exclusively by breeding; no new transgenic lines will be generated by introduction of recombinant DNA. Conditional genetic modifications will be activated in vivo using Cre/lox systems, including tamoxifen-inducible CreERT2 as well as constitutive or tissue-/cell type specific Cre driver lines. Tissues will be collected for downstream analyses at BL-1. The work falls under Section III-F of the NIH Guidelines and will be conducted at BL-1/BL1-N in accordance with COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	26-010	Evaluation of Neuronal and Glial Glucose Metabolism by in vivo Viral Transduction of Mammalian Neurons	Gary Yellen	Harvard Medical School (HMS)	<p>This is a 5-year rewrite. The research involves work with a variety of viral vectors (lentivirus, AAV, AV, baculovirus) containing fluorescent proteins or sensors, or to knockdown cell signalling proteins. Project goals are to study how neural cells uptake and metabolize cellular fuel. They also work with human cells, rodent cells, and non-pathogenic E. coli. This work falls under Sections III-D, III-E, and III-F of the NIH Guidelines and will be conducted at BL1/1N and BL2/2N/2N 72 hours per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols	26-015	Structure-function analysis of	Lucas Farnung	Harvard Medical School (HMS)	<p>This is a 5-year rewrite. The lab studies how transcription machinery and chromatin interact to regulate gene expression and DNA replication. Work involves cloning and expressing transcription-related genes in</p>

Involving Recombinant DNA		transcription and DNA replication			<p>non-pathogenic <i>E. coli</i>. This work falls under Sections III-D, III-E, III-F of the NIH Guidelines and will take place at BL1 containment per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	26-016	Studies of the Ubiquitin-Proteasome System	Daniel Finley	Harvard Medical School (HMS)	<p>This is a 5-year rewrite. The project focuses on elucidating the mechanisms of the ubiquitin-proteasome pathway using recombinant techniques. <i>S. cerevisiae</i> and <i>E. coli</i> to express and purify proteins of interest. Viral vectors and chemical transfection methods are employed to express proteins of interest in cell lines. None of the genes or protein targets are considered high risk. The work falls under Sections III-D, III-E and III-F of the NIH Guidelines and can be conducted under BL1/BL1-N and BL2 conditions per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Appointed Review Protocols Not Involving Recombinant DNA	21-107-A63	Discovery of New Biosynthetic Pathways and Enzymes 2021	Emily Balskus	Harvard Faculty of Arts and Sciences (FAS)	<p>The lab seeks to discover and characterize enzymes used in biosynthesis of cellular metabolites to discover new chemical transformations. This amendment adds 9 new bacterial species. This work does not fall under the NIH Guidelines and will be conducted at BL1 and BL2 per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 19 Against: 0 Abstentions: 1</p>
Appointed Review Protocols Not Involving Recombinant DNA	24-001-A09	Antimicrobial Resistance: Imaging-based diagnostics and mechanism 2024	Johan Paulsson	Harvard Medical School (HMS)	<p>This amendment adds new BL1 and BL2 organisms to the protocol. These will be used to develop a platform to study environmental bacteria that produce antibiotics. This work does not fall under the NIH Guidelines and will be conducted at BL1 and BL2 per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 19 Against: 0 Abstentions: 1</p>
Standard Review Protocols Not Involving Recombinant DNA	24-013-A14	Friend or Foe & MUPPETS 2024	Johan Paulsson	Harvard Medical School (HMS)	<p>This amendment adds the use of environmental soil isolates to the protocol to test detection assays. The soils will be spiked with previously approved organisms. This work does not fall under the NIH Guidelines and will be conducted under BL2 and BL2+ per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Not Involving Recombinant DNA	25-108-A02	ICCB-Longwood Screening Facility	Jennifer Smith	Harvard Medical School (HMS)	<p>A member associated with this study was placed in a Zoom waiting room before the discussion.</p> <p>This amendment adds the use of <i>Neisseria gonorrhoeae</i> to the protocol. The bacteria will be used in screening assays. This work does not fall under the NIH Guidelines and will be conducted at BL2 per COMS policies and institutional biosafety manuals.</p>

nant DNA					<p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 19 Against: 0 Abstentions: 0</p> <p>A member associated with this study was brought back to the meeting after the vote.</p>
Standard Review Protocols Involving Recombi nant DNA	24-012-A01	Division of Continuing Education - BIOS E-1a/b and S-1a/b labs 2024	Casey Roehrig	Harvard Faculty of Arts and Sciences (FAS)	<p>This amendment for a teaching lab removes the animal development lab from the course and therefore removes zebra fish and sea urchins from the protocol. The students who opt in will still use their own cheek cells for DNA isolation. Lab staff will perform PCR & sequencing of mitochondria DNA. This does not fall under any of the NIH Guidelines, and will be conducted under BL1, and BL2 per COMS policies and institutional biosafety manuals.</p> <p>The committee had no other comments or questions about this protocol. A motion was made to approve the protocol. The committee voted.</p> <p>Approved: 20 Against: 0 Abstentions: 0</p>

Personnel Training

The PI and lab 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 lab and agent-specific training for their staff.

Laboratory Inspection

The Institutional Biosafety Officer confirmed compliance with the COMS inspection policy 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 incidents from February 2026, its risk assessment, and the corrective action taken to prevent further occurrence.

Incident #1

Summary: A possible exposure to an adeno-associated viral vector (AAV, BL1) occurred when a researcher accidentally stuck themselves with a contaminated needle following a procedure. At the time of the accident, the researcher was wearing appropriate personal protective equipment (PPE) and following other facility requirements. The researcher washed the injury with soap and water, contacted occupational health, and reported it to their supervisor.

Corrective Actions: Ensuring visual attention to sharps until they can be disposed of.

Notifications: Reports were made to COMS, Cambridge Public Health, and NIH OSP for the personnel exposure in accordance with required timelines.

Incident #2

Summary: A possible exposure to recombinant *Babesia divergens* (RG2, BL2) occurred when a drop of parasite-infected human blood transferred from contaminated PPE to their hand during doffing procedures, although contamination was not initially observed. They had been working in a biosafety cabinet, using standard BL2 personal protective equipment (lab coat with cuffs, gloves worn over the cuffs to prevent skin exposure, and safety glasses), but failed to notice the contaminated PPE during removal. They washed the area per protocol and contacted the occupational health physician who indicated a low risk of infection but did not advise on testing or post-exposure prophylaxis. No symptoms have been reported.

Corrective Actions: The lab will treat all PPE as potentially contaminated and practice doffing techniques to gently remove PPE and prevent contact with the external side of the PPE. Greater care will be exercised for work with infectious cultures.

Notifications: Reports were made to COMS, Boston Public Health Commission, and National Institute of Health.

Incident #3

Summary: While removing a cuvette that got stuck in a piece of equipment, a researcher experienced a splash to the eye with wild-type *Salmonella typhimurium* (BL2). They rinsed their eyes, notified their PI, and called to speak to an occupational health physician. Occupational health advised monitoring for symptoms but indicated risk of infection was low. No symptoms have been reported.

Corrective Actions: Maintaining situational awareness, reinforcing use of personal protective equipment (eyewear), and careful handling procedures for work with infectious cultures were emphasized to prevent recurrence.

Notifications: Reports were made to COMS in accordance with COMS Policy.

Old Business

There was no old business to discuss at this meeting.

New Business

Training Articles of Interest:

The committee was provided with four articles for the purposes of COMS member training.

1. A Goldilocks approach to centralization of high-risk pathogen research
2. NIH Policy on Research Involving Human Fetal Tissue
3. GAO Report on HHS Gain-of-Function Research of Concern and Risk Review Procedures
4. Key US infectious-diseases centre to drop pandemic preparation

Public Meeting

There were no public comments.

Adjournment

The meeting was adjourned at 11:30 AM.