

# COMS meeting on 12/12/2025 Minutes

**Location:** Hybrid

**Time:** 10AM - 12PM

Harvard University Committee on Microbiological Safety (COMS)

[COMS@hms.harvard.edu](mailto:COMS@hms.harvard.edu)

## Documentation of Quorum

**Total Voting Members on Committee Roster:** 29

**Total Needed for Quorum:** 10

**Total Present at Call to Order:** 40

**Members Arriving After Call to Order:** 0

ATTENDEES PRESENT		
Committee Chair	Committee Vice Chair	
<ul style="list-style-type: none"> <li>S. Helaine</li> </ul>	<ul style="list-style-type: none"> <li>M. Nibert</li> </ul>	
Members		
<ul style="list-style-type: none"> <li>A. Baptista (IBC Member)</li> <li>D. Barbeau (IBC Member)</li> <li>S. Bhalchandra (IBC Member)</li> <li>M. Dorf (IBC Member)</li> <li>L. Gamer (IBC Member)</li> <li>R. Lee (IBC Member)</li> <li>T. Kwan (Community Member)</li> </ul>	<ul style="list-style-type: none"> <li>Y. Lu (IBC Member)</li> <li>M. Melisi (BSO Officer)</li> <li>B. Neugeboren (IBC Member)</li> <li>M. Nilsen (IBC Member)</li> <li>J. Park (IBC Member)</li> <li>R. Polak (IBC Member)</li> <li>T. Brenna-Krohn (IBC Member)</li> <li>R. Colgrove (IBC Member)</li> </ul>	<ul style="list-style-type: none"> <li>R. Rasmussen (IBC Member)</li> <li>A. Reid (BSO Officer)</li> <li>S. Santra (IBC Member)</li> <li>M. Super (IBC Member)</li> <li>D. Tipper (Community Member)</li> <li>T. Winters (IBC Member)</li> <li>C. Walsh (IBC Member)</li> <li>S. Mohr (IBC Member)</li> </ul>
Ex-Officios		
<ul style="list-style-type: none"> <li>B. Corning</li> <li>M. Schatz</li> </ul>	<ul style="list-style-type: none"> <li>M. Corrigan</li> <li>E. Kuszmar</li> </ul>	<ul style="list-style-type: none"> <li>S. Estime</li> <li>S. Elwell</li> </ul>

## Call to Order

The meeting was called to order at 10:05A.M

## Introduction of Guests

One guest was introduced.

## Meeting Minutes for Approval

Meeting	Minutes Approved	Link to Minutes
COMS meeting on 10/3/2025	Yes	<a href="#">Link</a>
COMS meeting on 11/7/2025	Yes	<a href="#">Link</a>
COMS meeting on 9/19/2025	Yes	<a href="#">Link</a>

## Scheduled Business

Type	COMS #	Title	PI	Institution	Motion
Appointed Review Protocols Involving Recombinant DNA	24-084-A01	Evolution and development of novel traits	Corey Allard	Harvard Medical School (HMS)	The lab investigates the molecular mechanisms that drive the evolution and development of specialized traits in poorly characterized aquatic species. This amendment adds two new invertebrate models for use in approved experiments aimed at generating stable fluorescent reporter lines. Both species are non-pathogenic and present no known infectious risk to humans. The lab is also adding one non-GM established human cell line. The work

					<p>falls under Section III-D of the NIH Guidelines and will be conducted at BL1/BL1-N 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: 18 Against: 0 Abstentions: 1</p>
Appointed Review Protocols Involving Recombinant DNA	25-122-A01	Chemical and Biological Diversity of Marine Mollusks	Mande Holford	Harvard Faculty of Arts and Sciences (FAS)	<p>The amendment adds the cloning of novel peptides from marine snails and cephalopods to support the development of new therapeutics. Candidate peptides will be screened using BLAST and other robust bioinformatic tools to identify those with the desired functional characteristics as ion-channel modulators. Experimental work includes peptide expression in <i>E. coli</i> and <i>Pichia pastoris</i>, followed by in-vitro testing of the purified peptides against human cancer cell lines. This work falls under Section III-E of the NIH Guidelines and will be conducted at BL-2 per COMS policies and institutional biosafety manuals.</p> <p>A member asked if there is published data to screen for known toxins. The PI provided information screening out toxins and the workflow was shown to the committee. The lab will work with the peptides that do not match toxins. No other concerns were raised by the committee.</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: 18 Against: 0 Abstentions: 1</p>
Standard Review Protocols Involving Recombinant DNA	21-099-A35	HBS Life Lab Projects 2021-2026	Adam Cohen	Harvard Business School (HBS)	<p>This amendment adds a new company, removes a few companies that have completed their work, and adds new materials. The new material includes additional human cell lines, additional murine and mammalian cells, lentiviral vector work with low risk gene targets, and new strains of non-pathogenic <i>Escherichia coli</i>. 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.</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	22-011-A08	Studying the specificity of regulatory protein degradation	Ying Lu	Harvard Medical School (HMS)	<p>This amendment adds new human cell lines and lentiviral vectors targeting low risk genes to study neurodegeneration and aging. This work falls under Categories III-D, III-E, and III-F of the NIH guidelines and will be conducted under 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	22-026-A06	Biology of Complement	Michael Carroll	Harvard Medical School (HMS)	<p>This amendment adds new Adeno-Associated viral vectors for use in mice to study the blood-brain barrier function. The viral vectors will contain labels and mechanisms to selectively target specific neurons and blood vessels. This work falls under section III-D of the NIH guidelines and will be conducted under BL1 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	22-047-A20	Combination Chemotherapy and Vaccine Nanoparticles	Samir Mitragotri	Harvard School of Engineering and Applied Sciences (SEAS)	<p>The lab is working to identify optimal methods for administration of synergistic chemotherapy and vaccine drugs. This amendment adds the use of new murine cell lines, human cell lines, and lipid nanoparticles carrying mRNA for in vivo and in vitro studies. This falls under sections III-D, III-E, and III-F of the NIH Guidelines, and will be conducted under BL1, BL1-N, BL2, and BL2-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	23-051-A15	Undercovering the antigenic landscape of endemic coronaviruses	Kizzmeki a Corbett-Helaire	Harvard T.H. Chan School of Public Health (HSPH)	<p>The lab studies vaccine development and therapeutic antibody discovery using endemic coronaviruses such as OC43. This amendment is for adding a recombinant OC43-mNG-Nluc virus containing reporter markers for propagation in mammalian cells and the corresponding BAC plasmid for amplification in non-pathogenic E. coli. No additional modification is proposed. The work falls under section III-D of the NIH Guidelines and will be conducted under 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	23-120-A03	Role of the TSC-mTOR pathway in tumor development and metabolic diseases rewrite	Brendan Manning	Harvard T.H. Chan School of Public Health (HSPH)	<p>The lab studies chromatin-mediated mechanisms in cancer to identify novel therapeutic targets. This amendment adds GRB7, a promoter of oncogenic signaling to the existing list of targets for use with the already approved non-replicating viral vectors in mammalian cell culture. The vectors will express sgRNAs and shRNAs targeting GRB7 to enable gene knockouts or knockdowns. This work falls under section III-D, III-E of 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: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving Recombinant DNA	23-128-A05	Genetic, Molecular, and Developmental Analysis of Signaling Pathways in Drosophila melanogaster	Norbert Perrimon	Harvard Medical School (HMS)	<p>A member associated with this study was placed in a Zoom waiting room before the discussion of this protocol.</p> <p>The amendment adds Diaphorina citri (Asian citrus psyllid), or DiCi3, cells for use in previously approved work, to develop in vivo genome-wide pooled CRISPR cell screening methodologies. The vectors used for this project remain the same as already described in the protocol. The work falls under section III-E of the NIH guidelines. The experiments can be safely done at BL1, 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 post discussion.</p>
Standard Review Protocols Involving Recombinant DNA	24-029-A34	Pathogen induced mechanisms of neuronal activation	Isaac Chiu	Harvard Medical School (HMS)	<p>The lab investigates the role of the nervous system in antimicrobial host defense and inflammation. This amendment includes the addition of organisms (Staphylococcus xylosum, Phocaeicola vulgatus, Staphylococcus hominis), and a genetically modified human cell line for use in vitro and in vivo studies. It also expands the work done with Sindbis virus to include its use in animals, as well as updating the strains of Staphylococcus aureus. This work falls under III-F of the NIH Guidelines and will be conducted at BL1,</p>

					<p>BL1-N, BL2, and BL2-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	24-081-A06	Salmonella persists	Sophie Helaine	Harvard Medical School (HMS)	<p>A member associated with this study stepped out of the room before the discussion took place.</p> <p>This amendment adds additional organisms (Salmonella enterica serovar Panama, and Klebsiella pneumoniae lytic phages) as well as established human cell lines to the lab's ongoing studies on bacterial pathogenesis and persistence. Experiments fall under Sections III-D and III-E of 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: 0</p> <p>A member associated with this study was brought back into the meeting, post discussion.</p>
Standard Review Protocols Involving Recombinant DNA	24-108-A12	Intestinal immune system analysis	Kazuki Nagashima	Harvard Faculty of Arts and Sciences (FAS)	<p>The lab studies the immune system and how it interacts with the gut microbiome. The amendment adds the use of a new mouse vector carrying low-risk genes and used in lab mice. This falls under sections III-D &amp; E of the NIH Guidelines and will be conducted under BL1/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	25-016-A01	Role of Nuclear positioning in establishment of Pseudostratified architecture in epithelial tissues	Purnati Khuntia	Harvard Faculty of Arts and Sciences (FAS)	<p>This amendment adds transgenic and wildtype Drosophila melanogaster to the protocol for the study of nuclear mechanisms in the developing eye. This falls under section III-D of the NIH Guidelines and will be conducted under 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	25-031-A02	The effect of the intestinal and vaginal microbiome on host immunity to viruses	Smita Gopinath	Harvard T.H. Chan School of Public Health (HSPH)	<p>This amendment adds human papillomavirus (HPV) pseudovirus encapsulating reporter genes and the plasmids required for their production. The replication-incompetent pseudoviruses will be used to infect approved human cell lines to study binding to bacterial cell wall components. This work falls under section III-D, III-E of 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: 20 Against: 0 Abstentions: 0</p>
Standard Review Protocols Involving	25-049-A01	Neural circuits and molecules modulating innate	Catherine Dulac	Harvard Faculty of Arts and Sciences (FAS)	<p>This amendment adds new viral vectors used in neuronal tracing to be used in Mus/lab mice. The vectors will only express reporter genes. This amendment also adds previously approved vectors for work in animals. Work will be conducted under BL1/BL1-N and BL2/BL2-N per COMS policies and</p>

Recombinant DNA		behaviors 2025			<p>institutional biosafety manuals. The work falls under sections III-D &amp; E of the NIH Guidelines.</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	25-082-A01	Innate Immunity to RNA Viruses in <i>C. elegans</i> and human cell models	J�r�mie Le Pen	Harvard T.H. Chan School of Public Health (HSPH)	<p>This amendment adds a replication-incompetent lentiviral packaging system, the SARS-CoV-2 WA1/2020 clone, and a mammalian cell line to the existing experimental workflow. The work falls under sections III-D, III-E, and III-F of the NIH Guidelines, and will be conducted under BL1, 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 Involving Recombinant DNA	25-100	Breeding Transgenic Mice for Studies on Autoimmune Disease	Myra Lipes	Joslin Diabetes Center	<p>This is a 5-year rewrite. Transgenic mice for human immune response genes and for the body's ability to sense glucose have been generated and bred. The transgenic mice have been created using genetic engineering of plasmids in non-pathogenic <i>E. coli</i>. The lab removes virtually all (&gt;99%) of the <i>E. coli</i>-derived plasmid sequences prior to microinjection of constructs into murine-derived pronuclei. This work falls under section III-E and III-F of the NIH Guidelines and will be conducted at BL1 and BL1N 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	25-107	Compartmentalization of Metabolism	Nora Kory	Harvard T.H. Chan School of Public Health (HSPH)	<p>This is a 5-year rewrite. The lab uses both in vitro and in vivo approaches to investigate gene function and regulation, focusing on metabolic pathways, gene expression, and cellular behavior. Researchers employ recombinant DNA technology and replication-incompetent lentiviral and retroviral delivery systems to introduce genetic constructs into cells. Genome-wide screens are conducted to study the function of genes. Experimental systems include mammalian cell lines, yeast (<i>Saccharomyces cerevisiae</i>), and transgenic or knockout mice. The work falls under sections III-D, III-E, and III-F of the NIH Guidelines, and will be conducted under BL1, BL1-N, 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	25-112	Using adenovirus and lentivirus to investigate regeneration of tissues in Diabetes	Rohit Kulkarni	Joslin Diabetes Center	<p>This is a 5-year rewrite. The lab investigates growth factor signaling mechanisms in the regulation of islet cell biology, such as pancreatic beta cell function, proliferation, and survival in mice and human pancreatic cells. Lab employs various viral vectors (adeno, adeno-associate, lenti) that carry the lab's genes of interest for both in vitro and in vivo experiments. The type of viral vectors chosen are dependent on the type of target cells or tissues:</p> <p>Another focus of the lab is islet cell regeneration. Lab has obtained induced pluripotent stem (iPS) cells from skin fibroblasts and/or blood cells derived from living human donors and rodent models with the long-term goal of differentiating them into mature pancreas and islet cells. This work falls under section III-D, III-E, and III-F of the NIH rDNA Guidelines and will be conducted under BL1, BL1-N, BL2 and BL2N per COMS policies.</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	25-128	Viral Triggers of Autoimmune Diabetes	J�r�mie Le Pen	Harvard T.H. Chan School of Public Health (HSPH)	<p>This new project aims to investigate how chronic viral infections contribute to virus-associated autoimmunity in diseases like Type1 diabetes. Researchers will use non-pathogenic E. coli, human and nonhuman primate cell lines, replication-incompetent lentiviral vectors, and infection of <math>\beta</math>-cell models with wild-type and reporter Coxsackievirus B strains to assess viral replication in vitro. This work falls under section 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.</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	25-129	Generation of Transgenic / Knockout Mice (Core Lab)	Arlene Sharpe	Harvard Medical School (HMS)	<p>This protocol covers work done by the Transgenic Mouse Core, which provides services for the generation of transgenic and knockout mice. PIs will submit DNA or lentiviral (3rd generation, replication incompetent) constructs to be employed in various methods for the creation of the transgenic strains. Work also includes the use of murine embryonic stem cells, fibroblasts, tissues and body fluids. This 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, 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	25-135	Investigation of Programmed Nucleic Acid Interactions in Cellular Systems	Peng Yin	Wyss Institute	<p>This protocol is a 5-year rewrite. The lab will continue using programmable nucleic acid systems, in conjunction with DNA nanotechnology, for a range of project applications for developing diagnostics for RNA viruses and identifying target molecules of pathogenic origin. Standard molecular, nanotechnology and biochemical techniques are employed to generate DNA-based reporter probe conjugates. Human materials for testing system probes will be obtained either commercially or via IRB-approved venipuncture or interstitial fluid collection. 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.</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	21-029-A07	Active Learning Labs, Bioengineering Teaching Lab	Anas Chalah	Harvard School of Engineering and Applied Sciences (SEAS)	<p>The Bioengineering Teaching Lab is a laboratory space used to support undergraduate and graduate level courses as well as independent student projects at the School of Engineering and Applied Sciences. This amendment is for the addition of a new bacterial strain, Geobacter sulfurreducens, to be used in the removal of metals from water samples. This work does not fall under the NIH Guidelines and will be conducted under 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	21-107-A60	Discovery of New	Emily Balskus	Harvard Faculty of	<p>This amendment adds 6 new bacterial species for DNA-damaging studies, natural product identification, metabolite analysis, and high throughput</p>

Protocols Not Involving Recombinant DNA		Biosynthetic Pathways and Enzymes 2021		Arts and Sciences (FAS)	<p>screens. This work does not fall under the NIH Guidelines. It will be conducted under 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 Not Involving Recombinant DNA	23-056-A28	Renewal: Alleviation of risks associated with age-related pathologies via viral-delivered epigenetic modifiers	George Church	Wyss Institute	<p>A member with this study stepped out of the room for the discussion of this study.</p> <p>This amendment is to test if the addition of alpha-synuclein pre-formed fibrils (PFFs), clinically associated with Parkinson's disease, induce Parkinsons-like features to in vitro cell cultures using cells from Parkinsons patients. Intracellular expression of various transcription factors, delivered using lentiviral vectors, will then be tested for amelioration of Parkinson-like histopathologies. Recombinant work was previously approved. Handling and work with alpha-synuclein PFFs will be done under BL2 conditions with additional stipulations. This does not fall under NIH Guidelines.</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, post discussion.</p>

## 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

None

## Reported Incidents

Summary: On 11/26/2025, a researcher pricked their finger with a needle containing wildtype *Listeria monocytogenes*. The needle appeared to penetrate skin, and the researcher noticed blood after removing gloves, so no glove integrity check was performed. They wore appropriate PPE. The researcher immediately washed for 15 minutes with soap and water, followed by an alcohol disinfectant, and medical evaluation was sought. During the investigation, it was noted that the researcher was not listed on the COMS protocol.

Corrective Actions: The lab has discussed changes to the workflow and sharps handling to avoid future injuries. The lab submitted an amendment to add the missing personnel to the relevant COMS protocols and updated their process for managing the protocols.

Notifications: This incident was reported to COMS.

## Old Business

None

## **New Business**

None

## **IBC Training**

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

## **Public Comments**

There were no public comments.

## **Adjournment**

The meeting was adjourned at 11:00 A.M.