Rutgers University
Institutional Biosafety Committee (IBC) – North Campus
Meeting for NIH Guidelines Materials
Minutes of May 12, 2026

1. ATTENDEES

☒ Preeti Bharaj	☒ Shaun Shahani	☒ Sergei Kotenko – Co- Chair
☒ Theresa (LiYun) Chang	☐ Jason Weinstein	☒ Brian Eggert - REHS
☒ Nancy Connell	☒ Lai-Hua Xie	☒ Marija Borjan - REHS
☒ Roberto Colangeli	☒ Amanda Hueting – Local Non-Affiliated	☒ Blas Peixoto - REHS
☐ Carla Cugini	☒ Michael Ricker – Local Non-Affiliated	☒ Robert Adcock - REHS
☐ Dominic Del Re	☐ Sonia Solano – Local Non-Affiliated	☒ Jacquelyn Vidal - REHS
☒ Jean-Pierre Etchegaray	☐ Jeetendra Eswaraka – Ex Officio	☒ Sophia Cheng - REHS
☒ Roseann Kehoe	☐ Alejandro Ruiz – Ex Officio	☐
☒ Yosuke Kumamoto	☐ Bryan Bocco – Ex Officio	☐
☒ Deborah Lazzarino	☐	☐
☒ Latisha Moody	☐	☐
☒ Dane Parker	☐	☐

2. MEETING LOGISTICS

CURRENT MEETING		
Called to Order: 10:00 AM	**Adjourned:** 10:26 AM	**Location:** WebEx
PREVIOUS MEETING		
Minutes from March 10, 2026		**Approved (15:0:0)**[1]
NEXT MEETING		
Date: July 14, 2026	**Time:** 10:00 AM	**Location:** WebEx

CONFLICT OF INTEREST STATEMENT
Committee members with a conflict of interest related to the review of a specific registration may not be involved in the review or approval of a project in which he or she has been or expects to be engaged or has a direct financial interest.

3. PRE-AGENDA

TOPIC	SUMMARY
New Business: **REHS Staff Update**	Sivarchana Boada left Rutgers to pursue other opportunities.

PROTOCOL REVIEWS

The following protocols were reviewed according to the risk assessment guidelines published in the *NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules* and the CDC/NIH publication *Biosafety in Microbiological and Biomedical Laboratories*. The risk assessment is documented in the REHS Biosafety Protocol Management System and includes a review of the engineering controls, work practices, safety training, and medical surveillance of project personnel. Individual protocols are evaluated on the following matters as appropriate: the proposed biosafety level and safety practices, agent characteristics, source and nature of agents or recombinant/synthetic nucleic acid sequences and resulting effects of expressed proteins, host animals/ cells, and cloning vectors to be used, and the type of manipulations planned.

Note: Protocols were not necessarily reviewed in the order they appear below.

1. ADMINISTRATIVE APPROVALS

PROTOCOL	PI	MATERIAL(S) OF INTEREST	BSL
21-007	Li, Simon	Renewal with changes – answered new questions of Addendum A	2
24-022	Gliniak, Christy	Amendment – adding one lab room	2
12-190	Verzi, Michael	Amendment – updating rooms and personnel	2
23-017	Miller, Shoreh	Renewal without changes	2
20-086	Yang, Jason	Renewal without changes	3
23-009	Hu, Huijuan	Renewal without changes	2
14-037	Siracusa, Mark	Renewal with changes – minor updates in Project Description	2
17-024	Brewer, Gary	Renewal without changes	2

2. ADMINISTRATIVE TERMINATIONS

PROTOCOL	PI	TITLE OF PROTOCOL	EXPIRY DATE

None			

3. BIOSAFETY OFFICER REPORT (BSO) Approved (15:0:0) [1]			
PROTOCOL	**PI**	**TITLE & MATERIAL(S) OF INTEREST**	**BSL / GUIDELINES**
17-060	Abraira, Victoria	**Title:** Mechanisms of spinal cord development, function and dysfunction **Materials:** rDNA, AAV vectors, Mice **Submission Summary:** This protocol investigates the mechanisms of spinal cord development, function, and dysfunction, with the broad goal of understanding the development, organization, and function of neural circuits underlying the sense of touch. The lab utilizes mouse genetics in combination with viral vector tools to visualize, trace, and manipulate somatosensory neurons. Approved biological agents include adeno-associated viruses (AAVs, serotypes 1–4, 5, 8, and 9), herpes simplex virus type 1 (HSV-1) strain H129, EnvA-pseudotyped rabies virus (RV), pseudorabies virus (PRV), and associated helper viruses. Biological toxins include diphtheria toxin (DTX) and tetrodotoxin (TTX). *E. coli* strains are used for standard cloning of recombinant DNA constructs. AAV vectors are purchased from the University of Pennsylvania viral core; HSV-1 H129 is obtained from the Princeton Viral Core or other commercial sources. HSV-1 H129 is applied to transgenic or knock-in mice expressing Cre to achieve polysynaptic labeling for circuit-tracing studies. None of the viral transgenes encode tumorigenic gene products or toxin molecules, and replication-incompetent vectors are produced in the absence of helper virus. This new amendment has been submitted for approval to include eight additional AAVs that will be used for anatomical characterization, optogenetic activation of neurons, and retrograde targeting of projection neurons, among other related applications. Experimental procedures include stereotaxic brain injection, spinal cord injection, intrathecal injection, muscle injection, and skin injection of viral vectors into genetically modified mice. Animals are perfused with paraformaldehyde	2 / III-D-1, III-D-4

		for tissue collection 2–3 days post-injection. All work is conducted under Biosafety Level 2 (BSL2) containment. Personnel at risk of vertical transmission from HSV-1 are notified and additional precautions are taken to minimize exposure. Viral agents are loaded into sterile glass needles inside an approved biosafety cabinet prior to injection. Biological waste, including animal bedding, is autoclaved before disposal. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable	

4. AD HOC MEETING APPROVALS			
PROTOCOL	**PI**	**TITLE & MATERIAL(S) OF INTEREST**	**BSL**
None			

5. NEW PROTOCOLS			
PROTOCOL	**PI**	**TITLE & MATERIAL(S) OF INTEREST**	**BSL / GUIDELINES**
26-009	Deng, Liwen	**Title:** Neuron-microbe crosstalk in host defense **Materials:** rDNA, *Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus pyogenes, Streptococcus pneumoniae, E. coli, Pseudomonas aeruginosa*, Botulinum neurotoxin A (BOTOX), Human cells, Mice **Submission Summary:** The goal of this research project is to understand how neuron-microbe crosstalk impacts host defense against infection and bacterial pathogenesis. This is a new protocol application seeking approval to perform cell-based experiments with bacterial pathogens, and infection and behavior experiments with mice. The biosafety level 2 (BSL2) pathogens in this protocol include *Staphylococcus aureus, Streptococcus pyogenes, Streptococcus pneumoniae*, and *Pseudomonas aeruginosa*. Work will also be done with BSL1 bacteria Staphylococcus epidermidis and *E. coli*. Molecular cloning techniques will be used to knock	2 / III-D-1, III-D-2, III-D-4

		out virulence factors in *Staphylococcus* and *Streptococcus* bacteria to determine how loss of these toxins impacts infection. Immortalized human cell lines and primary mouse neurons will be infected with bacteria for microscopy, transcriptomic, and ELISA experiments. Mice will be injected with siRNA to knock down expression of neuronal receptors, or injected with botulinum neurotoxin A to target local neurotransmission. Mice will be infected with pathogens for behavioral analysis, characterization of immune response, and bacterial load measurements. All experiments will be performed with BSL2 containment practices and with appropriate personal protective equipment. Biological waste materials, including animal bedding and bacterial culture media, will be autoclaved or treated with 10% bleach before disposal. Work surfaces and spills will be decontaminated with 10% bleach. Peroxigaurd will be used to decontaminate vivarium spaces. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Required before commencing work (Provision of approval) **IBC Vote: Approved (15:0:0)**[1]	

6. AMENDMENTS			
PROTOCOL	**PI**	**TITLE & MATERIAL(S) OF INTEREST**	**BSL / GUIDELINES**
19-034	Miller, Shoreh	**Title:** ICRS Biohazard Agents **Materials:** rDNA, Lentiviral vector, Mice **Submission Summary:** The addition of SW620, a human colorectal adenocarcinoma cell line originally derived from a lymph node metastasis of a colon cancer patient, is in the file cabinet (IVRS IBC tumor cells list 3_2025.pdf). The vector is a 4th-generation pseudo-lentiviral gene delivery vector, targeting cancer cells. The insert contains the Snake PLA2 and SVMP genes, which will express a cytotoxic protein in cancer cells only. The lentivirus construct is in the file cabinet The therapeutic lentivirus is self-inactivated and does not replicate. The modification of the VSVG	2 / III-D-1, III-D-4

		enhances the cancer cell specificity and reduces targeting. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable **IBC Vote: Approved (17:0:0)[1,2]**	
13-495	Gennaro, Maria	**Title:** Host pathogen interactions in M. tuberculosis and SARS-COV-2 **Materials:** rDNA, Lentiviral vector, C*ryptococcus neoformans*, Human cells **Submission Summary:** The Gennaro lab is investigating the hypothesis that foam cell formation is disease-specific. We will use monocyte-derived macrophages from healthy donors, as well as human and murine cell lines (THP1, iBMDM, RAW264.7, etc., and knockdown strain(s)), to investigate lipid droplet accumulation in cells infected with various strains of Mycobacterium tuberculosis and Cryptococcus neoformans, and purified or semi-purified components. Chemical inhibitors, THP-1 stable knockouts, and knockdown iBMDMs will be used in these experiments. To measure cellular lipid droplet content and determine cellular lipid profiles, various techniques will be used, including flow cytometry, imaging flow cytometry, and liquid chromatography-mass spectrometry. The protocol was previously approved for human MDM and THP1 cell lines. This amendment adds the use of murine BMDM, immortalized BMDM, and mouse macrophage cell lines (J774, RAW264.7) to study lipid droplet accumulation. To investigate the macrophage receptor(s) responsible for lipid droplet formation, we are using knockdown iBMDMs generated by Dr. Samatha Bell's lab. Biosafety level 2 (BSL-2) containment and work practices will be followed for the above-mentioned experiments. The Gennaro lab is also conducting antiviral antibody testing in SARS-CoV-2-infected children and adults presenting with clinical presentations ranging from asymptomatic and mild infection to severe COVID-19 requiring hospitalization and MIS-C. Moreover, we are also exploring the biological functions of anti-SARS-CoV-2 antibodies in children	3 / III-D-1

		and adults. We are examining their ability to elicit Fc-mediated effector functions, including antibody-dependent cellular cytotoxicity (ADCC), antibody-dependent cellular phagocytosis (ADCP), and complement-dependent cytotoxicity (CDC). The protocol was approved for a conventional ELISA in room W250A, reviewed by REHS, and approved by IBC. This amendment adds the use of the Luminex FlexMap 3D instrument at the flow core facility located in MSB F522 for ELISA. The Luminex instrument will also be used to perform a cell-free SARS-CoV-2 spike protein trimer-ACE2 surrogate neutralization assay. Biosafety level 2+ (BSL-2+) containment and work practices will be followed for COVID-19-related experiments. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable **IBC Vote: Approved (17:0:0)**[1]	
23-027	O'Brown, Natasha	**Title:** zebrafish neurovascular interactions **Materials:** rDNA, Lentiviral vector, Transgenic Zebrafish **Submission Summary:** This amendment to an existing approved protocol adds two components to ongoing zebrafish blood-brain barrier (BBB) research: the use of lentiviral vectors to generate stable fluorescently labeled mammalian cell lines, and the addition of new transgenic zebrafish lines to enable live imaging of distinct cell types in the zebrafish brain. The lentiviral work involves third-generation, replication-incompetent lentiviral vectors encoding fluorescent reporter proteins (GFP and BFP). These vectors are derived from previously validated plasmid sources and are pseudotyped with VSV-G to allow efficient transduction of mammalian cells in culture. The inserts encode only innocuous fluorescent proteins with no toxic, oncogenic, or otherwise hazardous properties. Mammalian cells will be transduced in vitro in tissue culture dishes, followed by antibiotic selection to establish stable fluorescent cell lines. No lentiviral work will involve animals. The additional transgenic zebrafish lines label specific cell populations to facilitate live	2 / III-D-1, III-D-4

		imaging of BBB-associated cell types in the zebrafish brain and do not introduce new biological hazards beyond those previously approved. All lentiviral work will be conducted at BSL-2 using standard containment practices, including the use of a certified Class II biosafety cabinet for all manipulations, appropriate PPE, and decontamination of all liquid waste with freshly prepared 1:10 bleach solution and autoclaving of solid waste. These measures are consistent with standard BSL-2 practices for Risk Group 2 agents and do not require additional risk mitigation beyond those already in place for the approved protocol. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable **IBC Vote: Approved (17:0:0)**[1]	
20-016	Sugimoto, Katsunori	**Title:** Genetic studies of Cryptococcus neoformans **Materials:** rDNA, *Candida glabrata* **Submission Summary:** The main goal of this project is to understand how environmental stresses encountered during infection influence fungal pathogenicity and genome stability in opportunistic fungal pathogens. The protocol was previously approved for gene knockout and reporter-based studies in Cryptococcus neoformans (strain H99) to identify regulatory pathways involved in environmental stress responses. This amendment expands the scope of the approved work to include environmental stress response and genome stability studies in Candida glabrata (strains BG2 and CBS138). All work is conducted under Biosafety Level 2 (BSL-2) containment appropriate for Risk Group 2 fungal pathogens. Key new experimental approaches include reporter-based analyses of subtelomeric recombination and genome instability in response to defined environmental stresses. These studies will assess how stress conditions influence subtelomeric dynamics and associated gene regulation. Risks remain limited to accidental exposure or aerosolization of BSL-2 fungal cultures and are mitigated through standard biosafety practices,	2 / III-D-1

		including use of biosafety cabinets, appropriate personal protective equipment, surface decontamination, and regulated waste disposal. Experimental endpoints are defined by quantitative measurements of subtelomeric genome instability, after which all cultures are fully inactivated prior to disposal. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable **IBC Vote: Approved (17:0:0)**[1]	

[1] Voting Decision (Yay: Nay: Abstain)
[2] Member(s) joined the meeting
[3] Member(s) left the meeting