

Modifications Completed: 9/8/2025

Protocol:	25-276	De Novo	Expiration Date:	10/12/2028
Title:	Olfactory processing in dipteran insects			
PI Name:	Hong			
Modifications Completed: 9/11/2025				

Protocol:	24-296-A2	Amendment	Expiration Date:	3/12/2027
Title:	Mechanisms of interaction between gut microbiota and the immune system and nervous system			
PI Name:	Mazmanian			
Modifications Completed: 9/18/2025				

Protocol:	25-182	De Novo	Expiration Date:	10/12/2028
Title:	Modulation of the Mammalian Nervous System for Psychiatric and Neurological Indications			
PI Name:	Gradinaru			
Modifications Completed: 9/23/2025				

Protocol:	25-395	New	Expiration Date:	10/12/2028
Title:	Dynamics of bacterial communities in complex fluids			
PI Name:	Datta			
Modifications Completed: 9/23/2025				

Protocol:	25-135	De Novo	Expiration Date:	10/10/2025
Title:	Pseudomonas aeruginosa			
PI Name:	Newman			
Modifications Completed: 9/29/2025				
<ul style="list-style-type: none"> ❖ The subcommittee reviewed and approved the protocol subject to the adherence to the standard stipulations, as well as adherence to the following special stipulations: <ul style="list-style-type: none"> • The lab must submit a DURC/PEPP Assessment Form for IRE review. • Subsequent IRE review. 				

B. Protocols - Approved Pending Modification, Modification Pending

The following protocol was previously approved pending implementation of additional IBC-required modifications at the September 2 meeting. The lab is still working on completing the modifications for validation from the BSO. If it is past the expiration date, all work on the protocol has ceased until the modifications are completed.

Protocol:	23-327-A1	Amendment	Expiration Date:	5/12/2026
Title:	Mechanism of protein biogenesis and quality control			
PI Name:	Shan			
Anticipated Completion: 11/1/2025				

3. New Business

A. Approval of Minutes: September 2, 2025

The September 2 meeting minutes were approved by a majority of the IBC. There were 2 abstentions from members who were not present at the September 2 meeting.

B. Occupational Health Updates

The BSO reported that there were no occupational health items to review at this time.

C. Protocols – Full Committee Review

The IBC reviewed the following protocols and conducted a robust risk assessment. The assessment included a determination of the appropriate biocontainment levels for the proposed research and confirmation that the research is compliant with the NIH Guidelines, as applicable.

Protocol:	25-396	New	Expiration Date:	New
Title:	In-bioreactor integrated cytometry and cell-metabolic monitoring process-analytic technology			
PI Name:	Yang			
Brief Description of Project: This project aims to develop optical probes for inline monitoring of cells in bioreactors, with the goal of assessing their physical and metabolic status.				
Biological Materials Review Summary: The target model cell for this work is CHO-S, a widely used cell line in industrial bioreactor production. The CHO-S cells will be purchased from Thermo Fisher, cultured under standard conditions to maintain healthy suspensions, and then imaged directly without any additional manipulations.				
NIH Guidelines:	N/A	Highest BSL Level:	BSL1	
Training: This protocol requires the following biosafety training: Basic Principles of Biosafety (BSL1) Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.				
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.				
IBC Action/Decision: Approved				
❖ The committee reviewed and unanimously approved the protocol subject to adherence to the standard stipulations.				

Protocol:	23-329-A1	Amendment	Expiration Date:	6/12/2026
Title:	Mechanisms of DNA repair			
PI Name:	Semlow			
Brief Description of Project: Faithful maintenance of genome integrity during DNA replication and cell division is essential for the growth and survival of living organisms. DNA interstrand cross-links (ICLs) represent a particularly toxic form of DNA damage, as they block critical processes such as replication and transcription. The Fanconi anemia (FA) pathway plays a central role in ICL repair, and our previous work using <i>Xenopus</i> egg extracts demonstrated that it repairs colibactin-induced ICLs. However, the physiological consequences of colibactin-induced genotoxicity in mammalian systems remain unclear. To address this, we aim to investigate cellular responses to colibactin-induced genotoxic stress by co-culturing human cancer cell lines (HT29/HeLa) with colibactin-producing pks+ <i>E. coli</i> .				
Biological Materials Review Summary: Co-culture human cancer cell-lines (HT29/HeLa) with colibactin-produced pks+ <i>E. coli</i> .				
NIH Guidelines:	III-D	Highest BSL Level:	BSL2 w/ BSL3 practices	
Training: This protocol amendment requires the following biosafety training: Comprehensive Biosafety (BSL2) and Bloodborne Pathogens Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.				
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.				
IBC Action/Decision: Approved pending Modifications (Pending Subcommittee)				
<ul style="list-style-type: none"> ❖ The committee reviewed and unanimously approved the protocol subject to adherence to the standard stipulations, as well as pending implementation of the following modification: <ul style="list-style-type: none"> • Update the risk assessment to include additional details. • Update BSL2 waste disposal procedures to be consistent with institutional guidelines. • Include the additional lab location and BSC certification date if applicable. 				

Protocol:	24-340-A1	Amendment	Expiration Date:	4/12/2027
Title:	MSR Phase A Program. Dry Heat Microbial Reduction Strategies for Mars Sample Return Break the Chain Technologies. Adding: Active UV Sterilization			
PI Name:	Schubert			
Brief Description of Project: Investigate the effectiveness of Ultra-violet radiation for the purposes of “sterilizing” hypothetical microorganisms that may be on the outside of surfaces of Mars Sample Return hardware. We propose to deposit test organisms by aerosol deposition, expose the organisms to Ultra-violet light and measure the dose response rate.				
Biological Materials Review Summary: We propose to study the inactivation of one fungal strain and two bacterial organisms: <i>Aspergillus fumigatus</i> (fungi) BSL-2 <i>Deinococcus radiodurans</i> BSL-1 <i>Bacillus pumilus</i> SAFR-032 BSL-1				
NIH Guidelines:	N/A	Highest BSL Level:	BSL2	
Training: This protocol amendment requires the following biosafety training: Biosafety/BSL2 Training in accordance with JPL programs. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.				

Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.
IBC Action/Decision: Approved pending Modifications (Pending Subcommittee)
<ul style="list-style-type: none"> ❖ The committee reviewed and unanimously approved the protocol subject to adherence to the standard stipulations, as well as pending implementation of the following modification: <ul style="list-style-type: none"> • Update the SOP for Aerosol Deposition with more detail regarding procedures with BSL-1 bacteria. • Update the protocol to include the rationale for use of microorganism in this study.

Protocol: 25-393-A1	Amendment	Expiration Date: 6/12/2028
Title: Evolutionary biochemistry of animal colors: leveraging natural history to uncover novel protein functions		
PI Name: Taboada		
Brief Description of Project: In our lab, we purify, sequence, and identify proteins from multiple amphibian species to characterize their biophysical properties and describe their novel functions in the creation of colors and signaling in nature. We use an evolutionary biochemistry approach to resuscitate ancestral proteins by inferring their ancestral sequences and physically expressing them.		
Biological Materials Review Summary: This protocol uses animal models and <i>E. coli</i> lab strains to study protein properties and functions.		
NIH Guidelines: III-F	Highest BSL Level:	BSL1
Training: This protocol amendment requires the following biosafety training: Basic Principles of Biosafety (BSL1) Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.		
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.		
IBC Action/Decision: Approved with Stipulation		
<ul style="list-style-type: none"> ❖ The committee reviewed and unanimously approved the protocol subject to adherence to the standard stipulations and the following special stipulations: <ul style="list-style-type: none"> • Provide results of LC-MS quantification of compounds in skin testing to the IBC. 		

D. Protocols - Expedited Review

Protocol: 23-371-A2	Amendment	Expiration Date: 11/12/2026
Title: Electron Transfer in Iron and Copper Oxygenases		
PI Name: Gray		
Brief Description of Project: This amendment includes the addition of <i>Priestia megaterium</i> .		
Biological Materials Review Summary: This amendment includes the addition of <i>Priestia megaterium</i> .		
NIH Guidelines: III-D-2	Highest BSL Level:	BSL1
Training: This protocol amendment requires the following biosafety training: Basic Principles of Biosafety (BSL1) Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.		
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.		

IBC Action/Decision: Chair Approved
❖ The Chair reviewed and approved the protocol subject to the adherence to the standard stipulations.

Protocol: 24-341-A1	Amendment	Expiration Date: 10/12/2027
Title: Geochemical Analysis of Biological Samples		
PI Name: Tissot		
Brief Description of Project: Urine and nail samples are collected under IRB approval with exclusion criteria to minimize infection risk, securely sealed, and transferred to the lab. All samples are decontaminated in BSL-2 conditions by ethanol treatment and/or acid-oxidative digestion at high temperature, ensuring complete inactivation of biological materials prior to downstream processing under BSL-2 conditions.		
Biological Materials Review Summary: Our work uses human samples obtained with IRB approval.		
NIH Guidelines: N/A	Highest BSL Level:	BSL2
Training: This protocol amendment requires the following biosafety training: Comprehensive Biosafety (BSL2) and Bloodborne Pathogens Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.		
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.		
IBC Action/Decision: Chair Approved		
❖ The Chair reviewed and approved the protocol subject to the adherence to the standard stipulations.		

Protocol: 24-378-A1	Amendment	Expiration Date: 7/12/2027
Title: Investigating spatiotemporal control of root growth and development		
PI Name: Nolan		
Brief Description of Project: This amendment is to include additional materials to study plant growth.		
Biological Materials Review Summary: The lab is adding BSL-1 soil microorganisms (non-pathogenic Bacillus and Pseudomonas strains) to study their effects on plant growth and responses to different stressors. This amendment also includes additional standard plant models (Brassica plants).		
NIH Guidelines: III-D	Highest BSL Level:	BSL1
Training: This protocol amendment requires the following biosafety training: Basic Principles of Biosafety (BSL1) Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.		
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.		
IBC Action/Decision: Chair Approved		
❖ The Chair reviewed and approved the protocol subject to the adherence to the standard stipulations.		

Protocol: 23-292-A3	Amendment	Expiration Date: 11/12/2026
Title: Bioelectronic devices for personalized medicine		

PI Name:	Gao		
Brief Description of Project: This amendment is to remove a project and materials that are no longer active.			
Biological Materials Review Summary: Removal of bacterial strain that is no longer in use.			
NIH Guidelines:	N/A	Highest BSL Level:	BSL2
Training: Removal of this material removes the requirement for Aerosol Transmissible Disease Training. This protocol requires the following biosafety training: Comprehensive Biosafety (BSL2) and Bloodborne Pathogens Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.			
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.			
IBC Action/Decision: BSO Approved			
❖ The BSO reviewed and approved the protocol subject to the adherence to the standard stipulations.			

Protocol:	23-370-A3	Amendment	Expiration Date:	10/12/2026
Title:	Culturing of bacteria from isolates and clinical samples			
PI Name:	Ismagilov			
Brief Description of Project: This amendment is to include two additional bacteria for development of nucleic acid platforms. Microbes will be cultured in small volumes and then inactivated to extract and quantify nucleic acid.				
Biological Materials Review Summary: This amendment includes the addition of two microbes: <i>Lactobacillus crispatus</i> and <i>Gardnerella vaginalis</i> .				
NIH Guidelines:	III-D	Highest BSL Level:	BSL2 w/ BSL3 practices	
Training: This protocol amendment requires the following biosafety training: Comprehensive Biosafety (BSL2) Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.				
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.				
IBC Action/Decision: BSO Approved				
❖ The BSO reviewed and approved the protocol subject to the adherence to the standard stipulations.				

Protocol:	23-372-A1	Amendment	Expiration Date:	11/12/2026
Title:	Studies of SARS-CoV-2 Proteins Nsp1 and Nsp5			
PI Name:	Gray			
Brief Description of Project: This amendment is an update to include a recently added protocol question and response.				
Biological Materials Review Summary: No changes in materials.				
NIH Guidelines:	III-D	Highest BSL Level:	BSL1	
Training: This protocol amendment does not lead to a change in training requirements. This protocol requires the following biosafety training: Basic Principles of Biosafety (BSL1) Training. Personnel who have not completed the required training will not begin this work until all appropriate training has				

been completed and documented.
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.
IBC Action/Decision: BSO Approved
❖ The BSO reviewed and approved the protocol subject to the adherence to the standard stipulations.

Protocol:	24-234-A3	Amendment	Expiration Date:	9/12/2027
Title:	Analyzing and designing genetic circuits in animal cells and tissues			
PI Name:	Elowitz			
Brief Description of Project: We will introduce non-toxic and non-pathogenic fluorescent proteins, binary expression systems, site-specific recombinases, optogenetic proteins, other widely used genetic tools of neuroscience, and other non-toxic and non-pathogenic proteins into post-mitotic cells. For applications involving microscopy, flow cytometry and sequencing.				
Biological Materials Review Summary: We will use commercially produced replication-incompetent adeno-associated virus—a safe, non-integrative, and widely used gene delivery vector—to deliver non-toxic genes to mitotic or post-mitotic cells. The commercial suppliers we may use (Addgene, https://www.addgene.org/guides/aav/ ; HHMI Janelia Vector Core, https://viraltools.janelia.org/ , Stanford Vector Core, https://neuroscience.stanford.edu/shared-resources/gvvc) follow standard safety practices cell line and triple plasmid system to prevent creation of replication-competent vectors.				
NIH Guidelines:	III-D	Highest BSL Level:	BSL2 w/ BSL3 practices	
Training: This protocol amendment requires the following biosafety training: Comprehensive Biosafety (BSL2), Bloodborne Pathogens, and Viral Vector Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.				
Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.				
IBC Action/Decision: BSO Approved				
❖ The BSO reviewed and approved the protocol subject to the adherence to the standard stipulations.				

Protocol:	24-301-A1	Amendment	Expiration Date:	7/12/2027
Title:	Engineering biocatalysts for new-to-nature activities			
PI Name:	Arnold			
Brief Description of Project: This amendment is to remove a project and materials that are no longer active.				
Biological Materials Review Summary: Removal of soil samples that are no longer in use.				
NIH Guidelines:	III-F	Highest BSL Level:	BSL1	
Training: Removal of this material removes the requirement for Biosafety BSL-2 Training. This protocol requires the following biosafety training: Basic Principles of Biosafety (BSL1) Training. Personnel who have not completed the required training will not begin this work until all appropriate training has been completed and documented.				

Review Summary: All facilities, procedures, and practices have been reviewed by the IBC and are considered appropriate and acceptable.
IBC Action/Decision: BSO Approved
❖ The BSO reviewed and approved the protocol subject to the adherence to the standard stipulations.

Personnel/Admin Amendments

- 23-110 Shapiro
- 23-207 Shapiro
- 23-218 Zinn
- 23-279 Lester
- 23-287 Voorhees
- 23-292 Gao
- 23-330 SEEC
- 23-332 Rothemund
- 24-299 Clemons
- 24-300 Rees
- 24-312 BECKMAN
- 24-374 SEEC
- 24-386 RSC HTE
- 25-271 Prober
- 25-347 Orphan

4. Other Business

A. IBC PAS

The BSO updated the committee that the IBC PAS system is currently beta testing, and there are plans to go live January 2026.

B. Biohazard Waste Management

The BSO updated the committee that the Institute has since changed biohazard waste management vendors.

C. ACB Policy & Procedures

The BSO and IO reminded the committee that the IBC Policy & Procedures had previously been deferred due to the anticipated new regulations to be released in September 2025. The IBC Policy & Procedures modifications will be deferred until the next IBC meeting.

D. Minors SOP

The BSO presented to the committee the Minors SOP.

Next Meeting – November 4, 2025

Meeting adjourned at 3:19pm

Approved 11/4/25 by the IBC