

California Institute of Technology
Administrative Committee on Biosafety
Minutes of the Institutional Biosafety Committee (IBC)

Date: September 1, 2026

Time: 2:35PM

Location: Zoom Videoconference

Voting Members: R. Ismagilov (Chair), M. Doshi, L. Cai, A. Hoelz, W. Gao, L. Quenee, A. Grossman, M. Barsever, N. Singh, K. Lencioni, C. Cortese, E. Hisserich

Nonvoting: 3 attendees

Guests: 2 attendees

Other: 1 attendee

Called to order at 2:38PM, with quorum in attendance.

1. Announcements

2. Old Business

A. Approved Pending Modifications, Modifications Complete

The following protocols were previously approved pending implementation of additional IBC-required modifications from the July 7 meeting. The modifications have been completed/implemented and the protocols are approved:

Protocol:	26-327-A1	Amendment	Expiration Date:	5/12/2029
Title:	Molecular mechanism of protein biogenesis and quality control			
PI Name:	Shan			
Modifications Completed:	7/16/2026			

Protocol:	25-395-A2	Amendment	Expiration Date:	10/12/2028
Title:	Dynamics of bacterial communities in complex fluids			
PI Name:	Datta			
Modifications Completed:	8/10/2026			

3. New Business

A. Approval of Minutes: July 7, 2026

The July 7 meeting minutes were approved by a majority of the IBC. There was 1 abstention from a member who was not present at the July 7 meeting.

B. 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 Institute

Policies.

Protocol:	CB26-0369	De Novo	Expiration Date:	10/12/2026
Title:	Detection and characterization of bacteria in human samples and cultures			
PI Name:	Ismagilov			
Brief Description of Project: We develop methods to detect and characterize small quantities of whole RG1 and RG2 bacteria and fungi in solutions and clinical samples. This work involves manipulations of small volumes of samples (~100µL to a few mL), inactivation steps that may include chemical and or mechanical lysis, extracting nucleic acids from these samples, and then performing quantitative measurements on the extracted nucleic acids.				
Biological Materials Review Summary: We will use a variety of RG1 and RG2 bacteria and fungi, animal samples, and the following human samples: urine, human blood samples and characterized human blood cultures, colon biopsies, stool samples, saliva.				
NIH Guidelines: Not Applicable			Highest BSL Level: BSL2 with BSL3 practices	
Training: This protocol requires the following biosafety training: Comprehensive Biosafety (BSL2), annual Bloodborne Pathogens, Viral Vector, ATD, and Agent-Specific 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.				
COI/Recusal: R. Ismagilov recused himself from the discussion of this protocol. L. Cai served as Chair for this portion of the review.				
IBC Action/Decision: Approved				
❖ The committee reviewed and unanimously approved this protocol subject to adherence to the standard stipulations.				

Protocol:	CB26-0370	De Novo	Expiration Date:	10/12/2026
Title:	Culturing of bacteria from isolates and clinical samples			
PI Name:	Ismagilov			
Brief Description of Project: This research aims to develop nucleic acid platforms for microbial characterization of nonpathogenic Risk Group 1 and pathogenic Risk Group 2 bacteria in clinical samples. To develop these technologies, in some cases, live and intact bacterial cells are needed, and therefore, the work includes culturing/propagating Risk Group 1 and Risk Group 2 bacteria.				
Biological Materials Review Summary: This protocol covers the culturing of bacteria from commercial live strains and live clinical samples.				
NIH Guidelines: Not Applicable			Highest BSL Level: BSL2 with BSL3 practices	
Training: This protocol requires the following biosafety training: Comprehensive Biosafety (BSL2), annual Bloodborne Pathogens, Viral Vector, ATD, and Agent-Specific 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.
COI/Recusal: R. Ismagilov recused himself from the discussion of this protocol. L. Cai served as Chair for this portion of the review.
IBC Action/Decision: Approved
❖ The committee reviewed and unanimously approved this protocol subject to adherence to the standard stipulations.

Protocol:	CB26-0144	De Novo	Expiration Date:	10/12/2026
Title:	Manipulating and recording neuronal activity in cortical and subcortical areas using viral vectors			
PI Name:	Siapas			
Brief Description of Project: The objective of this research is to understand how information is represented in the activity of collections of neurons, and how memories are formed as a result of changes in this activity. Understanding the structure of brain activity and its connection to behavior requires a combination of monitoring activity and selective perturbations of the underlying circuitry. We will monitor animal brain activity with electrophysiology and imaging of voltage and calcium indicators, and we will perturb the activity using optogenetics. Fluorescent indicators, optically-activated channels, voltage and calcium indicators and will be delivered with viral vectors.				
Biological Materials Review Summary: We use replication-incompetent viral vectors (lentiviral vector and AAV) with nonhazardous transgenes to measure and perturb the activity of neurons. Our animal models are housed in accordance with IACUC-approved protocols.				
NIH Guidelines: III-D-3; III-E; III-F			Highest BSL Level: BSL2 with BSL3 practices	
Training: This protocol requires the following biosafety training: Comprehensive Biosafety (BSL2), annual 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: Pending Modification - Subcommittee				
❖ The committee reviewed and unanimously deferred approval of this protocol pending implementation of the following modifications and subsequent review and approval by a subcommittee: ○ Update references to the current OLAR-approved disinfectant name. ○ Provide a description of in-lab IACUC training on animal use, including completion of the IACUC satellite facility checklist. ○ Revise response for materials that are not administered to animals. ○ Provide a description of containment procedures for genetically modified animals. ○ Provide response to additional question regarding shipping of biological materials.				

Protocol:	CB26-0205	De Novo	Expiration Date:	10/12/2026
Title:	New Mechanisms and Functions of the Pro/N-Degron and Arg/N-Degron Pathways			
PI Name:	Varshavsky			
Brief Description of Project: We aim to understand specific proteolytic systems in living cells and to do use a combination of biochemistry and genetics.				
Biological Materials Review Summary: We use E. coli for basic cloning of reporter genes and genes involved in the N-end rule pathways, and work with yeast Saccharomyces cerevisiae as a model organism and human cell line.				
NIH Guidelines: III-E; III-F			Highest BSL Level: BSL2	
Training: This protocol requires the following biosafety training: Basic Principles of Biosafety (BSL1) or Comprehensive Biosafety (BSL2) and annual 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: Pending Modification - Subcommittee				
❖ The committee reviewed and unanimously deferred approval of this protocol pending implementation of the following modifications and subsequent review and approval by a subcommittee: ○ Update the description of research to remove references to projects and materials that are no longer handled in the lab. ○ Provide response to additional question regarding shipping of biological materials.				

Protocol:	CB26-0291	De Novo	Expiration Date:	10/12/2026
Title:	Bacteria, fungi and plants interactions and the role of phenazines			
PI Name:	Newman			
Brief Description of Project: The goal of our research is to better understand the interactions that occur between bacteria, fungi and plants in the environment. We are specifically interested in how two classes of molecules produced by various soil bacteria, the phenazines and hopanoids, participate in bacterial physiology and in the interactions of those bacteria with their plant hosts and with other soil microbes. We will also be performing undirected genetic screens in bacteria to identify new genetic factors that impact plant-bacteria, bacteria-bacteria, and fungi-bacteria interactions in soil. We use E. coli for basic cloning, maintenance and propagation of reporter genes and plasmids vectors.				
Biological Materials Review Summary: To study interactions between bacteria, fungi and plants, we will be using various BSL1 and BSL2 microbes, plant samples and fungi.				
NIH Guidelines: III-D-5; III-E; III-F			Highest BSL Level: BSL2	
Training: This protocol requires the following biosafety training: Basic Principles of Biosafety (BSL1) or 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: Pending Modification - Subcommittee
❖ The committee reviewed and unanimously deferred approval of this protocol pending implementation of the following modifications and subsequent review and approval by a subcommittee: ○ Provide response to additional question regarding shipping of biological materials. ○ Update project description to include disinfection methods for fungal spores. ○ Update project description to clarify the growth medium components and presence of trace metals. ○ Update project description to include a description of PPE worn during soil collection and dry soil processing.

Protocol:	CB26-0334	De Novo	Expiration Date:	10/12/2026
Title:	Mechanisms of human sleep timing			
PI Name:	Patke			
Brief Description of Project: Humans spend approximately a third of their life asleep and chronic sleep deprivation is associated with a wide variety of health hazards, warranting efforts to understand when, why and how we sleep. The propensity for sleep varies based on prior sleep history as well as the time of day, i.e. humans are usually more prone to sleep at night than during the day. This differential propensity for sleep is due to an internal circadian clock which is genetically controlled and whose speed and strength can be affected by variants in so-called clock genes. Our research seeks to clarify how the circadian clock functions in humans to control sleep timing.				
Biological Materials Review Summary: For the genetic study of human subjects suffering from altered sleep timing, primary human saliva will be collected from subjects enrolled under IRB protocol 25-0981 as a source of genomic DNA. For the study of the circadian clock in cultured cells, cell culture work with human and murine cell lines will be performed to measure circadian oscillations or to characterize protein interactions following modulation of putative circadian clock genes. Transgenes to be expressed in human and mouse cells lines include circadian clock reporters and wild-type or mutated circadian clock genes; they will also include shRNA in order to block the expression of the circadian clock genes. Expression is of a transient nature via mammalian expression vectors to achieve over-expression or via lentiviral expression to achieve lower and more stable expression. CRISPR methods will also be used to generate cell lines deficient in human or murine circadian clock genes.				
NIH Guidelines: III-D-3; III-E; III-F			Highest BSL Level: BSL2 with BSL3 practices	
Training: This protocol requires the following biosafety training: Comprehensive Biosafety (BSL2), annual 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.				
COI/Recusal: A. Hoelz recused himself from the voting of this protocol.				
IBC Action/Decision: Pending Modification - Subcommittee				

- ❖ The committee reviewed and unanimously deferred approval of this protocol pending implementation of the following modifications and subsequent review and approval by a subcommittee:
 - Provide response to additional question regarding shipping of biological materials.

Protocol:	CB26-0402	New	Expiration Date:	Pending
Title:	Growth and mutagenesis of photosynthetic microbes for understanding their response to the environment			
PI Name:	Burlacot			
Brief Description of Project: Our research asks how photosynthetic organisms respond to changing environmental conditions. For this, we use photosynthetic microorganisms, do targeted mutagenesis to remove or express photosynthetic genes in them, grow them, and measure their photosynthetic capacity.				
Biological Materials Review Summary: Chlamydomonas, Phaeodactylum, Synechococcus and other photosynthetic microbes				
NIH Guidelines: III-D-5; III-F			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.				
COI/Recusal: A. Grossman recused himself from the discussion of this protocol.				
IBC Action/Decision: Pending Modification - Subcommittee				
❖ The committee reviewed and unanimously deferred approval of this protocol pending implementation of the following modifications and subsequent review and approval by a subcommittee: ○ Update decontamination procedures to include autoclaving of the bleach-resistant organism. ○ Provide response to additional question regarding shipping of biological materials.				

Personnel/Admin Amendments

- | | |
|--------------------|---------------------|
| • 25-078 Chan | • 24-296 Mazmanian |
| • 25-135 Newman | • 24-301 Arnold |
| • 25-156 Goentoro | • 24-303 Collazo |
| • 26-207 Shapiro | • 24-308 Vielmetter |
| • 23-221 Sternberg | • 24-310 Parker |
| • 25-261 Bjorkman | • 24-337 Chou |
| • 25-263 Dougherty | • 24-341 Tissot |
| • 25-271 Prober | • 24-342 Emami |
| • 26-286 Phillips | • 25-349 Ruby |

- 25-350 Hajimiri
- 25-351 Beacon
- 25-353 Hadt
- 24-384 Fianu

4. Other Business

A. NIH Incident Report – Human Derived Material

The BSO informed the committee that the NIH responded to the formal report we filed in July wherein they advised that no further action is required.

B. IBC PAS

The BSO provided an update regarding the transition to the online IBC PAS system. IBC PAS is now available to all laboratories and office hours are still being hosted to assist Pls with their submissions. Positive feedback has been provided by the labs regarding the new system.

C. Quarterly Inspection Report

The BSO presented the quarterly report to the committee with no pending significant issues to report.

D. NIH Implementation of New U.S. Government Policy

The IO provided an overview of the new government DGoF draft policy and NIH Biosafety draft policy. A subcommittee was formed to review the Institute's policies and ensure alignment with these new requirements.

Next Meeting – October 6, 2026

Meeting adjourned at 3:43PM

Approved by the IBC 10/6/26