Rutgers University
Institutional Biosafety Committee (IBC) – North Campus
Meeting for NIH Guidelines Materials
Minutes of March 10, 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	☒ Sivarchana Boada - REHS
☒ Carla Cugini	☒ Michael Ricker – Local Non-Affiliated	☒ Blas Peixoto - REHS
☐ Dominic Del Re	☐ Sonia Solano – Local Non-Affiliated	☒ Robert Adcock - REHS
☐ Jean-Pierre Etchegaray	☐ Jeetendra Eswaraka – Ex Officio	☒ Jacquelyn Vidal - REHS
☒ Roseann Kehoe	☐ Alejandro Ruiz – Ex Officio	☒ Sophia Cheng - REHS
☒ Yosuke Kumamoto	☐ Bryan Bocco – Ex Officio	☐
☒ Deborah Lazzarino	☐	☐
☒ Latisha Moody	☐	☐
☒ Dane Parker	☐	☐

2. MEETING LOGISTICS

CURRENT MEETING		
Called to Order: 10:01 AM	**Adjourned:** 10:24 AM	**Location:** WebEx
PREVIOUS MEETING		
Minutes from January 13, 2026		**Approved (14:0:0)[1,2]**
NEXT MEETING		
Date: May 12, 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
Old Business: **NIH Initiative: Modernizing and Strengthening Oversight of Biosafety**	NIH has completed the last listening session of Phase 1 of the initiative. The last listening session was at the end of February. The NIH is still currently accepting comments and input from the public while they are drafting the proposed new rules (https://osp.od.nih.gov/help-modernize-and-strengthen-the-oversight-of-biosafety/).

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
14-135	Meers, Paul	Amendment – synthetic nucleic acids questions	1
17-048	Meers, Paul	Amendment – synthetic nucleic acids questions	2
12-168	Ping, Xie	Renewal without changes	2
12-128	Aleksunes, Lauren	Amendment – COS-7 cells and lab personnel	2
24-022	Gliniak, Christy	Amendment – synthetic nucleic acid questions & location updates	2
20-047	Qi, Xingyun	Renewal – minor changes to add fluorescent reporter genes and GUS (beta-glucuronidase) reporter gene	1
20-005	Fei, Jia	Renewal without changes	2
12-123	Covey, Lori	Renewal – minor changes to lab personnel and no long er shipping cells	2

17-018	Bergsbaken, Tessa	Renewal – minor changes to add murine plasmids, mouse cells, removal of – lactobacillus murinus – bifidobacterium spp.	2
17-007	Shimizu, Emi	Renewal without changes	2
16-053	Tyagi, Sanjay	Renewal without changes	2
23-010	Holly, Elizabeth	Renewal without changes	2
22-011	Rajsbaum, Ricardo	Renewal without changes	3
13-494	Freundlich, Joel	Renewal without changes	3
20-002	Shi, Zheng	Renewal with minor changes – synthetic nucleic acid questions	3
23-005	Cuesta, Santiago	Renewal without changes	2
14-046	Babu, Gopal	Renewal without changes	2
16-025	Panettieri, Reynold	Amendment – adds Alternaria tenuis extract administration to mice	2
25-035	Firestein, Morgan	Amendment – adding personnel and clarifying centrifuge location	2
23-027	O'Brown, Natasha	Renewal without changes	2
23-008	Matasar, Matthew	Renewal without changes	2
13-577	Zaborszky, Laszlo	Renewal without changes	2
21-004	Rossi, Mark	Renewal without changes	2
13-376	Xue, Chaoyang	Amendment – adding personnel	2

2. ADMINISTRATIVE TERMINATIONS			
PROTOCOL	**PI**	**TITLE OF PROTOCOL**	**EXPIRY DATE**
None			

3. BIOSAFETY OFFICER REPORT (BSO) Approved (14:0:0) [1]			
PROTOCOL	**PI**	**TITLE & MATERIAL(S) OF INTEREST**	**BSL / GUIDELINES**
22-042	Glytsou, Christina	**Title:** The role of mitochondria in hematopoiesis, blood malignancies and drug resistance **Materials:** rDNA, lentiviral vector, human cell lines **Submission Summary:** This protocol describes a BSL-2 research project investigating how cancer cells alter mitochondrial structure and functions to acquire drug resistance and evaluating combination anti-cancer therapies targeting mitochondrial	2 / III-D-1

		dynamics and cell death pathways in leukemias. It builds on standard, previously approved BSL-2 tissue culture, viral vector, and animal use practices. The primary biological agents include human and murine leukemia cell lines, immunodeficient mice (Mus musculus), and replication-incompetent lentiviral and retroviral vectors used for gene editing or ectopic gene expression. This current amendment is to add additional lentiviral constructs expressing COX8A and GFP/RFP with prior approved backbones to further study alteration to mitochondrial structure. These vectors are non-pathogenic, environmentally labile, and handled under BSL-2 containment by trained personnel. Recombinant nucleic acids are derived from animal or human genes involved in mitochondrial structure and function and CRISPR components, such as Cas9, Cas13, single guide RNAs, without incorporation of toxins or known oncogenic viral sequences. Lentiviral and retroviral constructs are self-inactivating and lack genes required for replication, minimizing the risk of vector mobilization, with extensive decontamination, use of a biosafety cabinet, waste handling, and PPE practices used to mitigate exposure risks. Experimental manipulations include mammalian tissue culture, viral transduction, and transfection, protein analysis, flow cytometry, and transplantation of modified leukemia cells into non- or sublethally irradiated mice, followed by pharmacologic treatments. Experimental endpoints include leukemic burden, assessed through peripheral bleeds and flow cytometry, and humane euthanasia of moribund animals in accordance with IACUC guidelines. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable	
15-003	Pinter, Abraham	**Title:** CDC – Cloning and expression of anti-LAM antibodies, TB genes, and assays of LAM present in various bodily fluids from TB patient **Materials:** rDNA, Mycobacterium tuberculosis auxotroph strains **Submission Summary:** The goal of the project is to define the structural differences between lipoarabinomannan (LAM) detected in the urine of	2e / III-D-1

		patients with active tuberculosis (uLAM) and LAM purified from cultured Mycobacterium tuberculosis (bLAM). The Lab's prior work demonstrated that uLAM and bLAM display distinct antigenic epitopes, enabling development of a more sensitive urine-based TB diagnostic assay than currently WHO-approved tests. However, further improvement in diagnostic sensitivity requires a better understanding of the origin and structure of uLAM.To address this, THP-1 macrophages will be infected with auxotrophic M. tuberculosis strains (mc2 6020, mc2 6030, mc2 6230, mc2 6230, mc2 7000, and mc2 6206) to characterize LAM secreted from infected host cells and compare it with patient-derived uLAM. In the current amendment, they are adding Mtb auxotroph mc2 6206. The lab will continue to evaluate the protective activity of candidate antibodies by measuring intracellular growth of Mtb auxotrophs in THP-1 cells in the presence or absence of plasma from BCG-vaccinated or Mtb-infected individuals and monoclonal antibodies targeting Mtb cell-wall antigens. All work with Mycobacterium tuberculosis auxotroph mutant strains will be conducted under BSL-2 Plus containment using appropriate PPE, decontamination and waste disposal procedures. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable	
13-139	Hu, Wenwei	**Title:** The function of novel p53 pathway in tumorgenesis **Materials:** rDNA, Moloney Murine Leukemia Virus (MMLV) retroviral vector **Submission Summary:** The main goal of this project is to understand the regulation of metabolic and signaling changes in response to different stress signals in tumors and host organs during cancer development. The protocol has been approved to use a set of human and mouse cell cancer lines and mouse cancer models with the change of a set of genes of interest. This amendment adds a gene whose product regulates lipid metabolism into the protocol. We will induce	2 / III-D-1, III-D-2, III-D-4

		the expression of the gene in cells by transduction of retroviral vectors containing this gene. The transduction using retroviral expression vectors is similar to currently approved work. All work is conducted under BSL-2/ABSL-2 containment following institutional biosafety guidelines. Personnel use standard personal protective equipment, Class II biosafety cabinets for vector manipulation, and leakproof secondary containers for transport of biological materials. All waste is disinfected and disposed of as regulated medical waste, and work surfaces are disinfected with bleach and ethanol. **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**
25-034	Chung, Dah-Eun	**Title:** Investigation of tau pathology and neurodegeneration **Materials:** rDNA, E. coli, AAV vectors, Lentiviral vectors, Human cells, Human brain lysate & protein aggregates, Mice **Submission Summary:** This protocol is for a new research laboratory. The overarching goal of this lab's projects is to investigate effective ways to mitigate abnormal changes occurring in the microtubule-associated protein tau in neurodegenerative diseases like Alzheimer's disease, as well as other deficits accompanied by tau pathology, by understanding the complicated tau biology. Projects include modulation of the	2 / III-D-1, III-D-4

		expression of tau variants, and other genes of interest associated with tau pathophysiology, in the mammalian cell culture or mouse brains using recombinant adeno-associated virus (AAV). Non-toxic fluorescent proteins (e.g., GFP) may also be virally expressed for injection control in mice. AAVs will be either purchased from commercial sources or obtained from the institutional core facility. Similar gene expression modulation in the cell culture can also be achieved using lentiviruses. All viral vectors for this research are replication-deficient, non-pathogenic, and non-oncogenic. For certain projects, tau pathology will be induced in these models by using proteinaceous tau seeding materials from various sources (e.g., produced from E. coli as recombinant protein or isolated from mouse or human brain tissues), along with control, non-tau seeding materials. Manipulation of gene expression or tau pathology in mouse models will involve intracranial injection of virus or proteinaceous tau seeding materials. As appropriate, Biosafety level 2 (BSL2) containment practices will be followed to reduce biohazard risk, and only trained lab personnel will be authorized to handle samples and experiments. All experiments involving live animals will be performed following the approved and established procedures and handling methods, including appropriate aseptic technique. Waste and carcasses will be decontaminated by autoclaving or chemical disinfection and subsequently disposed of as regulated medical waste. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Required before commencing work (Provision of approval) **IBC Vote: Conditionally Approved (14:0:0)[1]** 1. Need confirmation that the requested adjustments are acceptable to reviewer	

6. AMENDMENTS

PROTOCOL	PI	TITLE & MATERIAL(S) OF INTEREST	BSL / GUIDELINES
19-078	Wong, Ching On	**Title:** Lentiviral transduction of primary glial cells **Materials:** rDNA, Lentiviral vectors, Human cells	2 / III-D-1

		Submission Summary: This amendment updates an existing, previously approved lentiviral vector–mediated gene knockdown protocol in human iPSC-derived astrocytes (iAstrocytes). The prior approval covers use of a 3rd-generation lentiviral system carrying gene-specific short-hairpin RNAs (shRNAs) to achieve targeted knockdown in vitro. The current amendment requests addition of three new individual gene targets—IGFBP7, DOCK4, and LRP1B—to the same established workflow, with the goal of evaluating the cellular functions of each gene in iAstrocytes through separate knockdown experiments. The work will continue to use the previously approved 3rd-generation lentiviral vector psi-LVRU6MH, a replication-attenuated system designed to improve biosafety while maintaining stable delivery and expression of shRNA constructs. The nucleic acid sequences introduced by the vector encode shRNAs that target an approximately 21-bp region of each target gene's transcript, supporting post-transcriptional gene silencing rather than genome editing. Accordingly, the shRNA-mediated knockdown is not intended to introduce insertions/deletions or otherwise modify host genomic DNA, and the lentiviral system remains replication-incompetent under the approved packaging approach. Experimentally, cultured iAstrocytes will be transduced by incubation with lentiviral particles for ~16 hours, followed by replacement with fresh medium lacking viral particles. Spent medium will be decontaminated using 2% bleach for at least 15 minutes prior to disposal, and transduced cells will be assessed approximately one week later for knockdown efficiency. All procedures will be conducted at BSL-2 using a BSL-2 biosafety cabinet, consistent with the biosafety level and risk profile of the previously approved protocol. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable **IBC Vote: Approved (14:0:0)[1]**	

21-028	Yang, Qi	**Title:** Innate Lymphoid Cell Biology **Materials:** rDNA, dCas9 system **Submission Summary:** The main goal of this project is to whether ITGAV enhancer regulates expression of ITGAV and other genes in CD4 T cells. This amendment adds a dCas9-KRAB-ITGAVenhancersgRNA plasmid. This plasmid will repress the activity of mouse ITGAV enhancer without modifying the genome. The mouse ITGAVenhancer small guide RNA (sgRNA) will guide KRAB to the ITGAV enhancer. KRAB will then repress ITGAV enhancer in mouse cells. The ITGAV gene encodes integrin alpha V, which may promote the expression of cytokine genes in CD4 T cells. Specifically, the plasmids will be obtained from a commercial source. We will transfect primary mouse CD4 T cells with this plasmid, following by examination of gene expression. This experiment is BSL2. Biological waste materials will be decontaminated by 10% bleach. **Occupational Health:** In Place **Training:** In Place **BioAudit:** Facilities are Acceptable **IBC Vote: Approved (14:0:0)**[1]	2 / III-E

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