INSTITUTIONAL BIOSAFETY COMMITTEE
MEETING MINUTES

Chair: M.A. Amalaradjou
Meeting Time: 1:30 PM

April 2, 2026
Web Conference

Attendance

Voting Members	Committee Role	Record	Comments
Amalaradjou, Mary Anne	*IBC Chair*	Present	
Brennan, James	*Animal Care Services*	Present	*Joined at 1:34 PM*
Cavallaro, David	*BSO, Secondary NIH Contact*	Present	
Chen, Yupeng	*Biomedical Engineering*	Present	
Chidambaram, Ramaswamy	*Animal Expert*	Absent	
Heyduk, Karolina	*Plant Expert*	Present	
Macierowski, Bobbie	*Local Non-Affiliated Member*	Present	
Maltz-Matyschsyk, Michele	*Vice Chair, Molecular and Cell Biology*	Present	
Miller, Robert	*Local Non-Affiliated Member*	Present	
Wunder, Elsio	*Pathobiology*	Present	*Joined at 2:05 PM*
Wright, Dennis	*Pharmaceutical Sciences*	Present	
Non-Voting Members			
Delage, Danielle	*NIH Contact, IBC Program Director*	Present	
Lewchik, Brent	*EHS Director*	Present	
Lucas, Melanie	*RICS Director–Animal Research & Safety*	Absent	

The IBC has eleven voting members; a minimum of five members is required for quorum. Eight voting members were present, and quorum was met.

The Chair called the meeting to order at 1:31 PM.

I. Confidentiality Statement & Conflict of Interest

The Chair read the confidentiality statement and briefly reviewed the COI policy with the committee. Committee members were asked to declare potential conflicts and no conflicts were reported.

1:34 PM – J. Brennan joined the meeting remotely.

II. Announcements

1. None

III. Review of Minutes

The Committee reviewed the proposed meeting minutes from March 5, 2026. A motion to approve the minutes as written, was made and seconded. The Committee voted 8 in favor, 0 opposed, with 1 abstention. The motion carried.

IV. Chair Report

The Chair provided a report on administrative actions taken since the last meeting.

Submission	PI Name	Committee Action	Status	Date
Amendment #429A1	Ryberg, Eric	Approved with Conditions on 10/02/2025	Conditions Met Approval Finalized	03/06/26
Renewal #314R2	Lee, Ji-Young	Approved with Conditions on 01/15/2026	Conditions Met Approval Finalized	03/06/26
Renewal #320R2	Conover, Joanne	Approved with Conditions on 02/05/2026	Conditions Met Approval Finalized	03/06/26
Renewal #334R1	Heyduk, Karolina	Approved With Conditions on 03/05/2026	Conditions Met Approval Finalized	03/06/26
Renewal 316R1	Kienzler, Michael	Approved with Conditions on 03/03/2026	Conditions Met Approval Finalized	03/06/26

V. Biosafety Officer Report

Administrative Approvals

Submission	PI Name	Summary of Request	IBC Assigned Classifications	Approval Date
39R2A3 Amendment	Mulkey, Daniel	New transgenic rodent lines and new AAV vectors	III-D, III-E	03/16/26
400A1 Amendment	Ramsey, Kristen	New cell lines	III-E	03/25/26

** Criteria for administrative approval include projects that:*
1. Are exempt under the Guidelines.
2. Involve minor changes that do not affect risk assessment (same BSL, risk groups, and NIH classifications).
3. Add new awards utilizing previously approved activities (e.g., same host-vector systems).
4. Do not involve the creation or handling of materials containing covered rsNA constructs.

Audit Report

Laboratory audits are conducted periodically to assess facilities and lab practices to ensure compliance. The BSO presented a summary of recent biosafety audits to the committee.

In March, eleven biosafety audits were completed, six of which resulted in no findings. Identified corrective actions included overdue refresher training and outdated biological inventory records.

VI. Review of NIH Covered Experiments

Review #1

PI Name	Cindy Tian
Submission	Registration Renewal 57R3
Title	Animal Stem Cell and Disease Model Generation and Improving Bovine Production Efficiency Through Reproductive Biotechnologies

Project Overview

Summary

There are two project forms under this registration. The second was created when the Tian Lab absorbed the Tang Lab's research. While the summaries are separated by project, the risk assessment, NIH classifications, and recommendations include the entire registration.

Project 1: Animal Stem Cell and Disease Model Generation

Part 1 – To generate induced pluripotent stem cells (iPSCs) and embryonic stem cells (ESCs) in livestock animal models. The lab will use CRISPR technology to target genes responsible for differentiation in animal models, as well as other genes in cells. In vivo and in vitro differentiation testing of the stem cells will be performed through cell culture differentiation, generation of teratomas in rodents and chimeras in rodents, and livestock animal models. Human cell lines are used as controls for stem cells of the domestic species. The goal of the project is to establish completely reprogrammed mammalian induced pluripotent stem cells and naive state ESCs.

Part 2 – The goal of this aim of the project is to study kinase signaling pathways in rodent and human embryonic stem cell maintenance and metabolism. The lab will target and knockout specific kinase signaling pathways in ESCs and monitor the effects to pluripotency and metabolic change.

Part 3 – To identify and target transcription regulatory signaling pathways in mammalian macrophages to prevent the infection of PRRSV, the lab will perform pilot studies on in vivo toxicity, pharmacokinetics and efficacy in applicable animal models, for one of the identified molecules against PRRSV infection.

Project 2: Improving Bovine Production Efficiency Through Reproductive Biotechnologies

The lab's objectives are to study bovine oocyte and embryo development and improve in-vitro production efficiencies of bovine cloning and genome-editing (using a rodent model). The lab will study epigenetic regulations of early embryo development including genomic imprinting, X chromosome inactivation, and X-linked gene expression compensation.

Risk Assessment & Discussion

Engineering Controls

☒ BSC ☐ Safety Needles ☐ HEPA Filtered Cages/Racks
☐ Splash Shield ☐ Chemical Fume Hood ☐ Sealed Centrifuge Cups Rotors
☒ Appropriate PPE

Training	One lab member must complete refresher training.
Biosafety Level Assignment	BSL-2
NIH Guidelines Section	III-D-1, III-D-2, III-D-3, III-D-4, III-E-1, III-E-3, III-F
Risk Assessment	Containment practices were noted as adequate based on the details provided.

IBC Motion & Vote	
Committee Discussion	The Committee discussed minor clarifications needed from the lab. The primary reviewer noted that the lab must respond to the current open notes.
Motion	A motion was made to approve registration renewal 57R3, with conditions. The motion was seconded and the committee voted with 9 in favor, 0 opposed, and 0 abstentions. The motion carried.
Committee Action	The committee voted to approve registration renewal 57R3, with conditions, for a three-year term.

Review #2	
PI Name	Georgia Zarkada
Submission	Registration Renewal 309R1
Title	Development and Function of Blood and Lymphatic Vasculature
Project Overview	
Summary	This project will investigate the growth and function of the blood and lymphatic vascular systems. In humans, the blood vascular system carries oxygen and nutrients to various organs and removes waste products; while the lymphatic vascular system removes excessive fluids from the tissues and facilitates immune cell trafficking. Excessive / insufficient growth of blood and lymphatic vessels, or vessel malfunction, underlies the pathology of several human diseases, such as diabetic retinopathy, solid tumor growth and metastasis, and tissue edema. Therefore, understanding the mechanisms regulating vascular development and function may allow us to manipulate the vascular systems in conditions of disease and produce new therapeutic opportunities. Animal studies: Transgenic rodents will be bred and used to enable cell-type-specific gene knockout or overexpression in vivo. Recombinant gene activation will be induced using established drug- or reagent-based recombination systems and signaling pathways relevant to vascular biology may be activated or inhibited using pharmacologic agents. Following completion of experiments, rodents will be humanely euthanized, and tissues will be harvested and processed for downstream analysis. No infectious agents will be used. Cell culture studies: Commercially available human primary endothelial cells, established human cell lines, and rodent primary endothelial cells will be cultured under standard laboratory conditions. Cells will be treated with chemical or genetic reagents to activate or inhibit signaling pathways involved in blood and lymphatic endothelial growth and function. Plasmid transfections using lipofectamine will be performed to overexpress specific genes, using plasmids in combination with a Cre recombinase vector. Overexpression of gene targets in endothelial cells are associated with changes in cell identity and signaling behavior. In addition, siRNA-mediated gene knockdown will be used to transiently silence the expression of gene targets in endothelial cells. Gene targets are involved in cell signaling and cytoskeletal remodeling that influence cell migration and proliferation.

Risk Assessment & Discussion	
Engineering Controls	☒ BSC ☐ Safety Needles ☐ HEPA Filtered Cages/Racks ☐ Splash Shield ☐ Chemical Fume Hood ☐ Sealed Centrifuge Cups Rotors ☒ Appropriate PPE Other:
Training	Lab members are compliant with EHS training requirements.
NIH Classifications	III-E, III-F-1, III-F-8 C-VII
Biosafety Level Assignment	BSL-2, ABSL-1
Risk Assessment	The proposed studies use standard transgenic rodent models and cultured human cell lines, and rodent cells without infectious agents, recombinant pathogens, or hazardous biologics, presenting minimal risk to personnel or the environment. Genetic overexpression and knockdown experiments are confined to laboratory settings and pose low biological risk when conducted under approved animal care and biosafety procedures.
IBC Motion & Vote	
Committee Discussion	Remaining open notes must be addressed, and the lab should include additional details in the project form regarding BSL-2 procedures.
Motion	A motion was made to approve registration renewal 309R1, with conditions. The motion was seconded and the committee voted with 9 in favor, 0 opposed, and 0 abstentions. The motion carried.
Committee Action	The committee voted to approve registration renewal 309R1, with conditions, for a three-year term.

Review #3	
PI Name	Daniel Schwartz
Submission	Renewal 318R2
Title	Proteomics and phosphoproteomics investigating CSNK2B Mutations
Project Overview	
Summary	The research focuses on the application of proteomics and phosphoproteomics-based methods to study cellular signaling pathways. This project focuses on the CSNK2B protein and mutants to observe how changes in the CK protein effect the downstream signaling pathways. The research uses lysates prepared from both brain organoids and rodents which are generated at Columbia University. The lysates will be analyzed to generate datasets for each condition.
Risk Assessment & Discussion	
Engineering Controls	N/A
Training	Lab members are compliant with EHS training requirements.

NIH Classifications	N/A - The lab clarified that rsNA research is no longer being conducted, and removed applicable references.
Biosafety Level Assignment	BSL-1
Risk Assessment	Risk group 1 materials were noted, which are not associated with disease in healthy human adults.
IBC Motion & Vote	
Committee Discussion	With updates prior to committee review, it was discussed that the lab no longer conducts the rsNA research. That portion of the project is conducted by a collaborator.
Motion	A motion was made to approve registration renewal 318R2, as written. The motion was seconded and the committee voted with 9 in favor, 0 opposed, and 0 abstentions. The motion carried.
Committee Action	The committee voted to approve registration renewal 318R2, for a three-year term.

Review #4

PI Name	Daniele Fabris
Submission	Renewal 323R2
Title	Development of new technologies for RNA analysis and their biomedical applications.

Project Overview

Summary

Investigation of the structure-function relationships of nucleic acids and protein-nucleic acid assemblies involved in infectious diseases and cancer. Focus is on developing novel MS-based approaches to obtain information inaccessible by current techniques. Employ commercial RNA samples and rRNA from in vitro transcription.

Project 1: Enabling mass spectrometry-based mid-down sequencing of large modified RNAs - detection of RNA post-transcriptional modifications in ncRNA and viral genomes by enriching RNA samples (multiplexed capture/separation and automated processing carried out on liquid-handling robotics) and extending the effectiveness of capillary electrophoresis and gas-phase activation techniques. RNA from viruses are effectively deactivated by strand hydrolysis. Project will eventually involve entire genomes of RNA viruses, such as HIV-1, Hepatitis C Virus, Zika Virus.

Project 2: RNA post-transcriptional modifications as possible communication hubs between substances of abuse and HIV-1 replication processes - interaction between drug signal transduction and innate antiviral response in human neurons, astrocytes, and microglia. Gene knockouts might be generated using CRISPR.

Project 3: RNA post-transcriptional modifications as possible indicators of pathogen contamination of food and biological materials. Spiking milk samples with E. coli, S. typhimurium, and L. monocytogenes, followed by RNA extraction and MS analysis. A similar approach is used for the detection of Zika from infected cell cultures. The lab also tests clinical samples from a collaborator.

Project 4: Development of novel biophysical approaches for the investigation of the structure and dynamics of functional RNAs. The lab investigates how specific binding of proteins, metabolites, drugs, metal cations, and other possible ligands affects the structure and stability of RNA. Model RNA samples are from a commercial source or are generated by in vitro transcription. For proteins, they use plasmids from NIH AIDS Reagents Program or Addgene; expressed in BL21 for protein overexpression.

Risk Assessment & Discussion

Engineering Controls

☒ BSC ☐ Safety Needles ☐ HEPA Filtered Cages/Racks
☐ Splash Shield ☐ Chemical Fume Hood ☒ Sealed Centrifuge Cups Rotors
☒ Appropriate PPE Other:

Training Lab members noted must complete applicable EHS trainings.

NIH Classifications III-D-2, III-D-3, III-E, III-E-1, III-F

Biosafety Level Assignment BSL-2 enhanced

Risk Assessment	All work with infectious agents will be performed in a BSL-2 space with enhanced practices. Since this is a shared space, a sign will be posted outside the entrance door indicating that actual viral or pathogen work is in progress. Also, viral work area is clearly marked and separated. All work on pathogens, HIV-1, and viral vectors is carried out by trained personnel, who employ double gloving, eye protection, and disposable lab coats. The work is carried out within primary containment including a biosafety cabinet and sealed rotors with safety cups. No sharps material is allowed in the lab, including glass, needles, sharp tools, etc. The decontamination is carried out with 10% bleach made fresh daily followed by 70% ethanol and 1 hour UV sterilization. All materials are disposed of in a capped container with 20% bleach and left overnight. Any solids are then disposed of in biohazardous waste and sent for incineration. If a spill occurs, cover the spill with absorbent material. The absorbent material is soaked in 100% bleach for at least 10 min and then disposed of in biohazardous waste. Double gloves, disposable lab coat with a secondary cover over the sleeves, eye protection.
IBC Motion & Vote	
Committee Discussion	It was noted that pathogen registration forms are not required for microbes in storage only (e.g. Zika Virus). The lab must address Open Notes and clarify handling practices regarding full viral RNA. DURC Discussion: Since the DURC and PEPP Policy was never implemented, the Committee would refer to the 2014 DURC Policy, where the work described by the Fabris lab would not fit the criteria of DURC.
Motion	A motion was made to approve registration renewal 323R2, with conditions. The motion was seconded and the committee voted with 9 in favor, 0 opposed, and 0 abstentions. The motion carried.
Committee Action	The committee voted to approve registration renewal 323R2, with conditions, for a three-year term.

2:05 PM - E. Wunder joined the meeting.

Review #5	
PI Name	Matthew Hadden
Submission	Renewal 329R2
Title	Small molecule drug development
Project Overview	
Summary	The lab focuses on identification and optimization of small molecules as potential therapeutics. The primary emphasis is on anti-cancer compounds, with additional collaborative work on nonsteroidal contraceptives. The lab carries out two main categories of experimental work: 1) Cell-based assays: Standard anti-proliferation, qPCR, western blot, and clonogenic assays are performed using immortalized human cancer cell lines obtained from ATCC, including ovarian cancer, colon cancer, fibrosarcoma, and pancreatic cancer cell lines. A rodent basal cell carcinoma line is also used. 2) Protein expression and biochemical assays: Several target proteins responsible for regulation of gene expression, RNA modification, and cell signaling, are expressed and purified from BL21 competent E. coli. Compounds are then evaluated for binding and/or inhibitory activity against these proteins in biochemical assays. E. coli K-12 is also used as a host-vector system. BSL-2 containment is proposed for working with RG2 pathogens.
Risk Assessment & Discussion	
Engineering Controls	☒ BSC ☐ Safety Needles ☐ HEPA Filtered Cages/Racks ☐ Splash Shield ☐ Chemical Fume Hood ☒ Sealed Centrifuge Cups Rotors ☒ Appropriate PPE Other:
Training	Lab members noted must complete applicable EHS trainings.
NIH Classifications	III-E, III-F
Biosafety Level Assignment	BSL-2
Risk Assessment	The lab conducts BSL-2 small molecule anti-cancer drug development using immortalized human cell lines. No animals or Risk Group 3/4 organisms are involved. Overall biological risk is very low.
IBC Motion & Vote	
Committee Discussion	Biosafety practices should be added to the project form. D. Delage will add Open Note for the PI to address.
Motion	A motion was made to approve registration renewal 329R2, with conditions. The motion was seconded and the committee voted with 10 in favor, 0 opposed, and 0 abstentions. The motion carried.
Committee Action	The committee voted to approve registration renewal 329R2, with conditions, for a three-year term.

Review #6	
PI Name	Michael Santiago-Martinez
Submission	Renewal 336R1
Title	Metabolism of methane-producing microorganisms
Project Overview	
Summary	The lab studies methane producing microorganisms. They use omics analysis combined with detailed functional characterization of proteins, cofactors, and metabolites. Genes involved in metabolic pathways are isolated from the methane producers and cloned into E. coli K12 and BL21 strains. Proteins will be expressed, purified and subjected to biochemical characterization. Additional non-methane producing microorganisms are cultured in control experiments to evaluate the production of hydrogen, carbon dioxide, acetate, and formate. These metabolic products are the substrates for one of the methanogenic strains. Risk group 1 agents are noted which are not associated with disease in healthy human adults.
Risk Assessment & Discussion	
Engineering Controls	☐ BSC ☐ Safety Needles ☐ HEPA Filtered Cages/Racks ☐ Splash Shield ☐ Chemical Fume Hood ☐ Sealed Centrifuge Cups Rotors ☒ Appropriate PPE Other:
Training	
NIH Classifications	III-E, III-F
Biosafety Level Assignment	BSL-1
Risk Assessment	The lab currently uses ethanol on work surfaces and should add a broad-spectrum disinfectant when working with this organism. One of the non-methane producing organisms is characterized as an opportunistic pathogen.
IBC Motion & Vote	
Committee Discussion	None
Motion	A motion was made to approve registration renewal 336R1, as written. The motion was seconded and the committee voted with 10 in favor, 0 opposed, and 0 abstentions. The motion carried.
Committee Action	The committee voted to approve registration renewal 336R1, for a three-year term.

VII. Old Business:

1. IBC Policy Review

   Discussed the potential to include "Principal Investigator (PI)" in the definitions section. The initial draft included a “Roles and Responsibilities” section but was subsequently removed to ensure that policies remain separate from procedures.

   It was determined that the policy is mainly to outline institutional responsibilities. Therefore, "Roles and Responsibilities" will be included in the IBC Procedures.

VIII. New Business:

1. CDC and NIH statement about service animals in laboratories. A risk assessment must be done. They are not automatically banned by the statement to exclude non laboratory animals and plants.

IX. Items from the Floor: None

Chair made a motion to adjourn, which was seconded. Meeting adjourned at 2:33 PM.

Next Meeting: May 7, 2026 at 1:30 PM