IBC Meeting Minutes

Chair- Ken Bondioli
Research Safety- Abigail Fish
Thursday, September 11, 2025
1:30 pm via Zoom

Institutions	Louisiana.State.University.Agricultural.and.Mechanical.College.(A™M) Louisiana.State.University.Ag.Center

IBC.Members.	Ken Bondioli	LSU Ag Center	Chair, Animal Expert
	Abigail Fish	LSU A&M	BSO, Administrator, Voting Contact
	Sarah Keeton	LSU A&M	BSO
	Sue Hagius	LSU Ag Center	Animal Expert, Lab Rep
	Michael Hooks	LSU A&M	Member
	Jong Ham	LSU Ag Center	Plant Expert
	Christy White	Pennington Biomedical Research Center	Non-Voting Member
	Jeff Davis	LSU Ag Center	Plant and Insect Expert
	Niranjan Baisakh	LSU Ag Center	Plant Expert
	William Doerrler	LSU A&M	Member
	Ramanuj Lahiri	National Hansen's Disease Program	Member
	Rebecca Christofferson	LSU A&M	Member
	Michelle Dennis	Our Lady of the Lake Hospital	Local Non-Affiliated Member
	Brent Stanfield	LSU A&M	Member
	Ryoichi Teruyama	LSU A&M	Member

Members Present: Ken Bondioli, Sue Hagius, Abigail Fish, Ramanuj Lahiri, Ryoichi Teruyama, Michael Hooks, Jong Ham, Sarah Keeton, and Brent Stanfield

Members Absent: Christy White, Niranjan Baisakh, Michelle Dennis, Jeff Davis, and Rebecca Christofferson.

Others Present:	Fangneng Huang	Professor, LSU Ag Center, Entomology Department
	Amy Xu	Associate Professor, Chemistry
	Harikrishnan Mohan	Protein Core Assistant Director, LSU Vet School, Representative of the Kousoula's Lab

Call to Order: 1:31 pm

Approval of Minutes from: Thursday, August 15, 2025

Motion Made by:	Sue Hagius
Seconded by:	Brent Stanfield
Abstaining:	Ramanuj Lahiri, Sarah Keeton, Jong Ham, Ryoichi Teruyama

Update the date of the meeting listed at the top of the page from July 17, 2025, to August 14, 2025. Remove Ramanuj Lahiri from the members present. Add Ryoichi Teruyama to the absent members.

Business and Call for New Business

The IBC Charter and Policies have been updated. They have been sent to the committee for review and comments. Comments are requested by October 1, 2025.

The committee received an update regarding a federally funded research project for which funding was suspended following agency review. The project was identified as requiring additional oversight due to its potential risk categorization. The IBC has not yet closed the associated registration, as the process of safely discontinuing the research is currently underway. Further updates will be provided to the committee as they become available.

New IBC Registrations and Amendments for Review

Reg. #	PI Name	Affiliation of PI	Date Received	Title of Project	Reviewer 1	Reviewer 2
25050 (On Hold)	Huangen Ding	Biological Sciences	8/15/2025	Electron Transfer Activity of the Membrane-Bound MitoNEET/CISD	Michael Hooks	Ryoichi Teruyama

Project Overview:

This project focuses on understanding the role of a protein called mitoNEET (CISD1), which sits in cell membranes and helps move electrons—tiny packets of energy that cells rely on for survival. The main goal is to determine how mitoNEET transfers electrons and whether it contributes to glycolysis, the process by which cells break down sugar for energy. To do this, we will measure how quickly and efficiently mitoNEET passes electrons in the presence of molecules that normally take part in metabolism, such as oxygen, ubiquinone-10, NADH, and FMN. We will also search for small molecules that might block mitoNEET's electron transfer activity, which could provide clues for future drug development. These experiments will be carried out using a UV-Vis absorption spectrometer, a tool that shines light on samples and allows us to track electron movements. By uncovering how mitoNEET influences energy transfer in cells, this work could provide valuable insights into how cells regulate metabolism and open the door to new therapeutic strategies for diseases linked to energy imbalances, such as diabetes or cancer.

Risk Assessment and Discussion:

This project presents minimal safety and security risks. The research involves biochemical studies of the protein mitoNEET (CISD1) using recombinant DNA constructs that were previously developed and approved under an existing IBC protocol. The work does not involve infectious agents, human subjects, or hazardous genetic modifications beyond this already reviewed construct. All manipulations are limited to standard molecular biology and protein biochemistry techniques.

The primary risks are standard laboratory considerations such as handling of recombinant DNA, purified proteins, and common chemical reagents (e.g., NADH, FMN, ubiquinone-10, and solvents such as DMSO). These materials present only low-level hazards when handled according to LSU's established biosafety and chemical safety protocols. Routine precautions—such as use of personal protective equipment, fume hoods, and proper waste disposal—are sufficient to mitigate risks.

Biosafety Level 1 (BSL-1) practices are appropriate for this work, as it involves non-pathogenic recombinant constructs and low-risk biochemical reagents. No environmental or security concerns are anticipated, and the overall project is classified as low risk within standard biosafety guidelines

NIH Guidelines:	Section III-F-8.
Biosafety Level:	BSL-1
Training Requirements:	All personnel, including the PI, involved in this project must complete BSL-1 training in accordance with LSU's Environmental Health and Safety (EHS) and Institutional Biosafety Committee (IBC) requirements. All training must be completed before beginning work and refreshed as required by LSU policies and SOPs.
IBC Vote:	**Approved at BSL-1 pending receipt of modifications**
	Motion made by: Michael Hooks
	Seconded by: Ryoichi Teruyama
	Abstaining: None
	Conflicts of Interest: None

Requested Modifications:

- General Comment for entire protocol. Please double-check room numbers. Inconsistencies were noted throughout the protocol.
- Section A. Project Information.
    - Personnel. Training. Please have all lab personnel, including the PI, complete the EHS-required online BSL1 safety training and list the courses under specific training.
- Section B. Project Description.
    - Procedures and Methods. Please indicate what work takes place in what lab.
- Section C. Risk Evaluation.
    - Biosafety. Radiation is listed as a potential hazard present in the lab. Please elaborate on the use of radioactive materials. If you do not use radioactive materials, please remove it from this section.
    - Biosecurity. Please describe how liquid and solid biological waste are handled.

Reg. #	PI Name	Affiliation of PI	Date Received	Title of Project	Reviewer 1	Reviewer 2

25051	Gus Kousoulas	Pathobiological Sciences	7/31/2025	HSV1 Vaccine Efficacy in Mice and Rabbit Models	Brent Stanfield	Ramanuj Lahiri

Project Overview:	This study is designed to evaluate how well a new candidate vaccine against Herpes Simplex Virus Type 1 (HSV-1) works in animal models. Mice and rabbits will be immunized with either the vaccine or a control treatment and then exposed to a virulent strain of HSV-1. Researchers will measure protection by monitoring when and how the disease develops, the amount of virus present in the animals, and the strength of their immune responses. By comparing vaccinated animals with controls, the study will provide important evidence on whether the vaccine can reduce infection and disease severity, supporting its potential for further development as a preventive strategy against HSV-1 infection.
Risk Assessment and Discussion:	This project evaluates a candidate vaccine against Herpes Simplex Virus Type 1 (HSV-1) in mouse and rabbit models. HSV-1 is a common human pathogen, but the laboratory strains used here are well characterized and can be safely handled under BSL-2 conditions for in vitro procedures and ABSL-2 containment for animal studies. The main risks are accidental exposure during animal handling or sample processing, which are mitigated by the use of biological safety cabinets, PPE, sealed equipment, and restricted access. All laboratory and animal work will follow BSL-2 and ABSL-2 standards, with housing in ventilated caging and regulated medical waste disposal for carcasses, bedding, and sharps. Overall, the project is considered low to moderate risk and fully manageable under LSU's existing BSL-2 and ABSL-2 protocols.
NIH Guidelines:	Section III-D-4-b
Biosafety Level:	BSL-2, ABSL-2, and BL2-N
Training Requirements:	All personnel, including the PI involved in this project, must complete BSL-2 and ABSL-2 training in accordance with LSU's Environmental Health and Safety (EHS), Institutional Biosafety Committee (IBC), and Institutional Animal Care and Use Committee (IACUC) requirements. All training must be completed before beginning work and refreshed as required by LSU policies and SOPs
IBC Vote:	**Approved at BSL-2, ABSL-2, and BL2-N pending receipt of modifications** Motion made by: Brent Stanfield Seconded by: Ramanuj Lahiri Abstaining: None

Conflicts of Interest: None

Requested Modifications:

- Section B. Project Description.
  - Procedures and Methods. Please indicate what work takes place in what lab and what takes place inside a BSC. Please briefly describe procedures for cell and viral culture, neutralizing antibody titer assay, plaque assay, PCR, and molecular and histopathological analysis. Be sure to include how and when potentially infectious material is inactivated. Please include a statement that the recombinant herpes virus had been previously constructed under IBC 24044.
- Section C. Risk Evaluation.
  - Biosafety. Please include a statement on training for lab personnel and indicate when a BSC is used. Please describe the PPE that is worn in the lab and when working with animal work.
  - Biosecurity. Please describe building and lab security measures and secure transport between labs and DLAM. Please detail how inventory is managed and where stocks are stored.
- Section F. Recombinant DNA.
  - Item 2 DNA/RNA deletions. Number 4. Please add a sentence about the nature of the deletions.
  - Item 4. Vectors. Number 1. Please change yes to no, and mention IBC 24044 under "a".
- Section J. Human Pathogens.
  - Item 1. Pathogen Chart. Please add wild-type herpes virus.
  - Item 4. Pathogen Attenuation. Please confirm deletions.
- Section K. Animal Pathogens.
  - Item 1. Pathogen Chart. Please add wild-type herpes virus.
  - Item 3. Livestock. Please change no to yes.
  - Item 4. Pathogen Attenuation. Please confirm deletions.
- Section M. Human or Primate Blood, Body Fluids, or Tissues.
  - Please uncheck blood, tissues, and serum.
  - Item 6. Containment, Disposal, and Destruction. Please describe "proper method" and add information regarding fixing tissue to Section B. Procedures.
- Section N. Safety.
  - Administrative Controls. Please ensure personnel listed are also listed under Section A. Personnel.
  - Biosafety Cabinet. Please add information for BSC in DLAM.
  - Personal Protective Equipment. Gown/Smock and shoe covers are checked but are not described under Section C. Biosafety. Please add this information to that section.

Reg. #	PI Name	Affiliation of PI	Date Received	Title of Project	Reviewer 1	Reviewer 2

25052	Amy Xu	Chemistry	8/20/2025	Elucidate the Phase Behavior of Tau Protein in a Crowded Environment	Ryoichi Teruyama	Sarah Keeton

Project Overview:	This project aims to understand how tau proteins, which are strongly linked to Alzheimer's disease and other neurodegenerative disorders, change their physical state when they are in crowded environments inside cells. Tau proteins can undergo a process called phase transition, where they shift from being freely soluble to forming droplets or aggregates. By studying the molecular mechanisms behind this transition, researchers hope to uncover why tau sometimes remains functional and stable, but at other times clumps together in harmful ways. Gaining this insight will improve our understanding of how tau contributes to disease progression and may identify new points for therapeutic intervention.
Risk Assessment and Discussion:	This project presents minimal safety risks. The work involves recombinant tau protein purified from non-pathogenic hosts and biochemical assays to study phase transition in crowded environments. The protein itself is non-infectious and does not pose a biological hazard. Risks are limited to routine use of laboratory reagents such as buffers, reducing agents, and fluorescent dyes, which carry only low-level chemical hazards. These are fully mitigated through standard BSL-1 practices, including the use of PPE, fume hoods for volatile reagents, and proper waste disposal. No environmental or security concerns are anticipated, and the overall project is considered low risk within established biosafety guidelines
NIH Guidelines:	Section III-F-8
Biosafety Level:	BSL-1
Training Requirements:	All personnel, including the PI, involved in this project must complete BSL-1 training in accordance with LSU's Environmental Health and Safety (EHS) and Institutional Biosafety Committee (IBC) requirements. All training must be completed before beginning work and refreshed as required by LSU policies and SOPs
IBC Vote:	**Approved at BSL-1 pending receipt of modifications**
Motion made by:	Ryoichi Teruyama
Seconded by:	Sarah Keeton
Abstaining:	None
Conflicts of Interest:	None

Requested Modifications:

- Section A. Project Information.
  - Title. Please update the title to state “molecular crowded environments”.
  - Personnel. Training. Please have all lab personnel, including the PI, complete the EHS-required online BSL1 safety training and list the courses under specific training
- Section B. Project Description.
  - Project Goals. Please briefly expand and explain the project goals in layman's terms.
  - Procedures and Methods. Please indicate what work is done in what room and what takes place inside a BSC. Please indicate how bacteria are inactivated during plasmid acquisition. Please spell out FPLC the first time you use the acronym.
- Section C. Risk Evaluation.
  - Biosecurity. Please state which approved vendor is used for waste disposal, and elaborate on disposal post autoclave. Please briefly describe the lab-specific SOPs mentioned in this section and attach detailed protocols.
- Section F. Recombinant DNA.
  - NIH Guidelines. Please change the current section to Section III-F-8.
  - DNA/RNA Insertion/Deletions. Please indicate if there will be insertions and specify the source and nature of the DNA. Please list coding and noncoding sequences if applicable and describe gene products’ effects.
  - Please indicate the method of selection during amplification and identify the organisms in which the vector will be amplified. If cells are commercially available, please indicate that as well.
  - Please identify experimental hosts.
- Section N. Safety.
  - Disinfection/Decontamination. Please uncheck 10% bleach for solid waste and 70% ethanol for solid and liquid waste.
  - Stock cultures. Please indicate if stock cultures will be maintained, how long they will be kept, where they are stored, including room number, and inventory procedures.
  - Biosafety Cabinets. Please indicate if the BSC is located out in the general lab area or in a containment suite. Please also ensure that the BSC has been certified within the last year. If not, please have the cabinet certified before use.
  - Personal Protective Equipment. Please check lab coat and uncheck gown/smock.
  - Other Safety Equipment. Please check fume hood, safety, shower, and eyewash.

Reg. #	PI Name	Affiliation of PI	Date Received	Title of Project	Reviewer 1	Reviewer 2

25053 (Renewal)	Igor Schneider	Biological Sciences	8/25/2025	Identification of the Genetic Program of Limb, Fin, and Tail Regeneration in Vertebrates	Sarah Keeton	William Doerrler

Project Overview:	This project aims to uncover the genetic programs that allow certain animals to regrow complex body parts such as limbs, fins, and tails. By identifying the genes and DNA regulatory elements that are activated during regeneration in species naturally capable of this process—such as the Mexican salamander (Ambystoma.mexicanum), three lungfish species (Protopterus.annectens, Lepidosiren.paradoxa, Neoceratodus.forsteri), and the bichir (Polypterus. senegalus)—the research team hopes to better understand how regeneration works at the molecular level. Insights from these studies may provide valuable strategies and molecular tools that could eventually inform new approaches in regenerative medicine, with the long-term goal of improving healing and tissue repair in humans.
Risk Assessment and Discussion:	This project presents minimal safety risks. The work involves recombinant tau protein purified from non-pathogenic hosts and biochemical assays to study phase transition in crowded environments. No infectious agents or animals are used, and the protein itself is non-hazardous. Standard laboratory reagents, such as crowding agents, buffers, reducing agents, and fluorescent dyes, pose only low-level chemical hazards that are readily managed through LSU's established chemical safety protocols. All work will be conducted at BSL-1, with the exception of any optional mammalian cell culture validation, which would require BSL-2. Appropriate use of PPE, chemical fume hoods for volatile or toxic reagents, and regulated waste disposal will fully mitigate risks. No environmental or security concerns are anticipated, and the overall project is considered low risk within standard biosafety guidelines.
NIH Guidelines:	Section III-D-4-a
Biosafety Level:	BSL-1, ABSL-1, and BL1-N
Training Requirements:	All personnel, including the PI, involved in this project must complete BSL-1 training in accordance with LSU's Environmental Health and Safety (EHS) and Institutional Biosafety Committee (IBC) requirements. Personnel must also complete IACUC-approved animal care and use training, including species-specific handling and husbandry, and enroll in the Occupational Health and Safety program. All training must be completed prior to beginning work and refreshed as required by LSU policies and SOPs.
IBC Vote:	**Approved at BSL-1, ABSL-1, and BL1-N pending receipt of modifications**
Motion made by:	Sarah Keeton
Seconded by:	William Doerrler
Abstaining:	None

Conflicts of Interest: None

Requested Modifications:

- Section A. Project Information.
  - Locations. Please ensure all rooms that house fish are listed under room numbers.
  - Personnel. Please add relevant lab personnel to the protocol under staff members.
  - Training. Please have all lab personnel, including the PI, complete the EHS-required online BSL1 safety training and list the courses under specific training.
- Section B. Project Description.
  - Procedures and Methods. Please indicate what work occurs in what lab. Please describe how tissue samples will be lysed and indicate what is used. Please indicate if antisense oligonucleotides are provided by a commercial vendor or synthesized in the lab. Please indicate how materials and animals are transported to and from the lab. Be sure to indicate that all material must be transported in primary and secondary leak-proof containment. Please briefly describe what kind of libraries you are creating.
- Section C. Risk Evaluation.
  - Containment Level. Please check ABSL-1.
  - Biosafety. Please describe what PPE is worn in the lab and when working with animals.
  - Biosecurity. Please indicate how animal carcasses are handled after euthanasia. Please describe how waste is handled after it is autoclaved. Please also describe secure transport between labs.

Reg. #	PI Name	Affiliation of PI	Date Received	Title of Project	Reviewer 1	Reviewer 2
25054	Anne Grove	Biological Sciences	8/26/2025	The Correlation Between Abundance of Ribosomal Protein Paralogs and Proteome Changes in Burkholderia. thanilandensis	William Doerrler	Michelle Dennis

Project Overview:	This project aims to understand how certain ribosomal proteins affect the overall set of proteins made by a cell (the proteome). To do this, researchers will create strains of the bacterium Burkholderia.thailandensis E264 in which the gene for one specific ribosomal protein, known as a bS21 paralog, is either deleted or overproduced. These modified strains will then be analyzed using quantitative mass spectrometry to see how changes in this ribosomal protein influence which proteins are produced and at what levels. The results will help clarify the role of bS21 paralogs in ribosome function and provide insight into how subtle differences in ribosomal proteins can shape cellular protein expression.
Risk Assessment and Discussion:	This project involves genetic modification of Burkholderia.thailandensis E264 to delete or overexpress genes encoding ribosomal protein paralogs of bS21. B¡.thailandensis is a BSL-2 bacterium, closely related to B¡. pseudomallei but generally regarded as avirulent and widely used as a non-pathogenic surrogate in laboratory studies. Risks are limited to accidental exposure through contact with cultures, aerosols, or contaminated surfaces. These risks are effectively managed under BSL-2 containment, using biosafety cabinets, PPE, sealed centrifuge rotors, and restricted access. Waste, including cultures and materials in contact with the organism, will be autoclaved or otherwise decontaminated in accordance with LSU's biosafety protocols. No environmental or security risks are anticipated, and the project is considered moderate risk, appropriately managed under BSL-2 guidelines
NIH Guidelines:	Section III-D-1-a
Biosafety Level:	BSL-2
Training Requirements:	All personnel, including the PI, involved in this project must complete BSL-2 training in accordance with LSU's Environmental Health and Safety (EHS) and Institutional Biosafety Committee (IBC) requirements. This includes instruction in biosafety cabinet use, aerosol and spill response, proper PPE, and waste decontamination. Personnel must also complete Laboratory Safety and Chemical Hygiene training, as well as hazardous waste management training. All training must be completed before beginning work and refreshed as required by LSU policies and SOPs.
IBC Vote:	**Approved at BSL-2 pending receipt of modifications**
	Motion made by: William Doerrler
	Seconded by: Ramanuj Lahiri
	Abstaining: None
	Conflicts of Interest: None

Requested Modifications:

- Section A. Project Information.
  - Personnel Training. Please have all lab personnel, including the PI, complete the EHS-required online BSL2 safety training and list the courses under specific training
- Section B. Project Description.
  - Project Goals. Please briefly describe bS21.

    - Procedures and Methods. Please indicate what work takes place in what lab. Alternatively, if the labs are connected, please include a statement that the rooms are connected and there is no movement of potentially infectious materials in hallways.
- Section C. Risk Evaluation.
    - Biosafety. Please add a sentence indicating that B¡.thailandensis is a potential human pathogen. Please also state that you will use a final concentration of 10% bleach for disinfection. Please include a statement on how aerosols are controlled outside of a BSC.
    - Biosecurity. Please describe secure transport if applicable. Please describe solid and liquid biohazardous waste management and personnel training.
- Section N. Safety.
    - Safety Equipment. Please check safety shower.

Reg. #	PI Name	Affiliation of PI	Date Received	Title of Project	Reviewer 1	Reviewer 2
25055 (Renewal)	Fangneng Huang	Entomology	8/26/2025	Susceptibility of Corn Earworm, Fall Armyworm, Sugarcane Borer, Southwestern Corn Borer, and European Corn Borer to Bt and Other Gene-Edited Insecticidal Proteins and Corn Plants	Ramanuj Lahiri	Michael Hooks

Project Overview: This project focuses on improving the management of five major insect pests of corn in the United States—corn earworm, fall armyworm, sugarcane borer, southwestern corn borer, and European corn borer. These pests cause significant yield losses in corn production, including in Louisiana. Recent advances such as transgenic Bacillus thuringiensis (Bt) corn, which produces multiple Bt proteins, and gene-edited plants have shown strong potential for pest control. The objectives of this study are to measure how susceptible these pest species are to purified Bt toxins and novel gene-edited insecticidal proteins, and to test the performance of new transgenic Bt and gene-edited corn lines against them. Results from this work will provide critical data to guide the development of next-generation corn varieties with enhanced resistance to lepidopteran pests, contributing to more sustainable crop protection strategies.

Risk Assessment and Discussion:	This project presents minimal safety and security risks. The work involves evaluating the susceptibility of major corn pests (corn earworm, fall armyworm, sugarcane borer, southwestern corn borer, and European corn borer) to purified Bt toxins, gene-edited insecticidal proteins, and newly developed transgenic or gene-edited corn lines. All insect species are common agricultural pests already present in the United States, including Louisiana, and do not pose unusual risks when maintained in a controlled laboratory or greenhouse environment. Bt proteins and gene-edited insecticidal proteins are well characterized, non-infectious to humans, and widely used in agricultural research. Potential risks are limited to routine laboratory and greenhouse hazards, including handling of live insects, purified proteins, and transgenic plant materials. These risks will be effectively mitigated by LSU's established BSL-1/plant containment practices, use of PPE, restricted access to growth and rearing areas, and proper disposal of plant and insect materials to prevent unintended release. No human, animal, or environmental pathogens are involved. Overall, the project is considered low risk and fully manageable under LSU's biosafety and plant containment protocols.
NIH Guidelines:	Section III-E-2-a
Biosafety Level:	BSL-1 and BL1-P
Training Requirements:	All personnel, including the PI, involved in this project must complete BSL-1 and plant biosafety/containment training in accordance with LSU's Environmental Health and Safety (EHS) and Institutional Biosafety Committee (IBC) requirements. Personnel must also complete Laboratory Safety and Chemical Hygiene training and hazardous waste management training. For work with live insects, staff will receive instruction in proper rearing, handling, and disposal practices to prevent unintended release. All training must be completed prior to beginning work and refreshed as required by LSU policies and SOPs.
IBC Vote:	**Approved at BSL-1 and BL1-P pending receipt of modifications**
	Motion made by: Ramanuj Lahiri
	Seconded by: Michael Hooks
	Abstaining: None
	Conflicts of Interest: None

Requested Modifications:

- Section A. Project Information.
  - Personnel Training. Please have all lab personnel, including the PI, complete the EHS-required online BSL2 safety training and list the courses under specific training.
- Section B. Project Description.
  - Procedures and Methods. Please describe insect collection techniques and mention that insects are harvested from the field. Please also describe insect handling procedures. Please briefly describe "other edited proteins".
- Section C. Risk Evaluation.
  - Biosafety. Please describe PPE worn in the lab, greenhouse, and field. Please add biosafety procedures for insect and field work.

    - Biosecurity. Please add biosecurity procedures for insect and field work. Please describe the transport of material collected from the field to the lab and describe insect containment.
- Section H. Transgenic Plants
    - This protocol falls under Section III-E-2-a. A new question has been added to the IBC registration form under Section H. to capture this information.
- Section L. Toxins
    - Please indicate the name of the collaborator at the University of Tennessee.
- Section T. Environmental and/or non-human samples with an unknown history
    - Item 7. Please describe the PPE work and how insects are effectively contained.
    - Item 8. Please add coordinates for research stations and growers' crop fields if known.
    - Item 9. Please remove mention of incineration if this technique is not used for the destruction of plant materials.

Reg. #	PI Name	Affiliation of PI	Date Received	Title of Project	Reviewer 1	Reviewer 2
25056 (Renewal)	Jong Ham	Plant Pathology and Crop Physiology	9/4/2025	Molecular Genetics Study of Burkholderia.cenocepacia	William Doerrler	Ramanuj Lahiri

Project Overview: This project aims to uncover how the onion pathogens Burkholderia cenocepacia and Burkholderia gladioli pv. alliicola cause disease and withstand copper, a metal commonly used in plant protection. We will identify the genes and regulatory pathways that drive virulence and copper resistance by combining comparative genomics/transcriptomics with targeted gene knockouts or overexpression. Laboratory assays will test bacterial growth and survival under copper stress, while onion infection models will measure changes in disease severity when key genes are disrupted. By linking specific molecular mechanisms to both pathogenicity and metal tolerance, the work will provide targets for improved diagnostics and copper stewardship strategies, and inform development of more effective control measures for onion crops.

Risk Assessment and Discussion:	This project uses the onion pathogens Burkholderia cenocepacia (member of the B. cepacia complex; opportunistic human pathogen) and Burkholderia gladioli pv. alliicola (plant pathogenic; occasional opportunist) and will be conducted under BSL-2 for all in-vitro work and Plant Biosafety Level-2 (BSL-2P/BL2-P) for greenhouse/onion infection assays. Primary risks are accidental exposure to cultures or aerosols and unintended environmental release. These are mitigated by performing manipulations in a certified Class II biosafety cabinet, using sealed centrifuge rotors, wearing appropriate PPE (lab coat, gloves, eye protection), restricting access, and following LSU decontamination and waste procedures (autoclave or approved disinfectant for all cultures, plant material, soils, and disposables; effluent and spill response per SOP). Copper treatments (e.g., $CuSO_4$ or other salts) present routine chemical hazards (skin/eye irritation, environmental toxicity) and will be handled with PPE and, when appropriate, in a chemical fume hood with collection as hazardous chemical waste. The work will use standard molecular biology approaches without procedures intended to enhance virulence or environmental survival. With these controls, the project is considered moderate risk and appropriately managed under LSU's BSL-2 and BSL-2P containment and safety protocols, with no anticipated risks to the public or environment.
NIH Guidelines:	To be determined
Biosafety Level:	BSL-2 and BL2-P
Training Requirements:	All personnel, including the PI, involved in this project must complete BSL-2 training in accordance with LSU's Environmental Health and Safety (EHS) and Institutional Biosafety Committee (IBC) requirements. This includes biosafety cabinet use, spill and exposure response, proper PPE, and decontamination procedures. Personnel must also complete Laboratory Safety and Chemical Hygiene training and hazardous waste management training. If recombinant DNA–modified strains are introduced into onion plants, staff must also complete BL2-P (Plant Biosafety Level-2) training and plant pathogen containment training as required by LSU's plant biosafety program. All training must be completed before beginning work and refreshed as required by LSU policies and SOPs.
IBC Vote:	**Approved at BSL-2 and BL2-P pending receipt of modifications**
	Motion made by: William Doerrler
	Seconded by: Ramanuj Lahiri
	Abstaining: Jong Ham
	Conflicts of Interest: None

Requested Modifications:

- Section A. Project Information.
  - Personnel Training. Please have all lab personnel, including the PI, complete the EHS-required online BSL2 safety training and list the courses under specific training.
- Section B. Project Description.

    - Procedures and Methods. Please indicate what work takes place in what lab and what is done inside a BSC. Please also indicate what genes you plan to knock out. Please briefly describe bacterial culture techniques and the complementation assay. Please indicate what bacteria will be inoculated onto onions. Are recombinant strains also used?
- Section C. Risk Evaluation.
    - Containment Level. Please check BL2-P if inoculating onions with genetically modified bacteria.
    - Biosafety. Please describe the use of the BSC and indicate what "toxic materials" you plan to use.
    - Biosecurity. Please describe secure transport between labs and how liquid biological waste is managed.
- Section F. Recombinant DNA.
    - NIH Guidelines. Please add Section III-E-2-b-(4).
    - Specify gene product. Please list specific genes.
- Section N. Safety.
    - Biosafety Cabinet. Please update the BSC certification date.
    - Safety Equipment. Please check safety shower.

Upcoming Meetings:	September 11, 2025 @1:30 pm via Zoom
Adjourned:	2:14 pm