September 2025 Institutional Biosafety Committee Meeting Minutes

Element	
Institution	Auburn University
Meeting Date	Wednesday, September 03, 2025
Meeting Time	1:04 PM – 2:07PM
Meeting Type	Hybrid (In Person and Zoom)
IBC Members Present	Present: Catherine Situma, IBC Secretary (acting as Chair) Deepika Suresh, BSO Kassie Conner, IBC Member, Plant Expert Ruediger Hauck, IBC Member, Faculty Rep Kevin Huggins, IBC Member, IBC Chair Andrea Loewen, IBC Member, Institutional Policy Pat Rynders, IBC Member, Veterinarian/Animal Expert David Acker, IBC Alternate Member, Alternate for Situma Not Present: E.N. Burson, IBC Member, Local Non-Affiliated Julio Garcia, IBC Member, Local Non-Affiliated Zachary Noel, IBC Member, Plant Expert Miranda Reed, IBC Member, Faculty Rep Niki Johnson, IBC Non-voting Member (*Ex officio*)
Quorum	The IBC has 11 voting members, and 6 members are required to conduct business.
Other Individuals in Attendance	Valerie Riggins - IBC Administration Adrienne Booker - IBC Administration Nicholas May - Risk Management and Safety Chen Ding – Faculty, Forestry, Wildlife & Environment Mohtadin Hashemi – Faculty, Physics Ahmed Ismaeel – Faculty, Anatomy, Physiology & Pharmacology Jeba Jesudoss Chelladurai – Faculty, Pathobiology
Call to Order	The IBC Secretary (acting as Chair) called the meeting to order at 1:04 PM.
Conflicts of Interest, if Applicable	There were no conflicts of interest.
Review and Approval of Previous Meeting Minutes	July 2, 2025 Motion: To approve the July 2, 2025 meeting's minutes as written. • Votes for: 7 • Votes against: 0 • Abstain: 0

DEFERRED IBC REGISTRATIONS	
PI Name(s)	**Hao Chen**

BUA Number	Deferred Registration - #1125 (from November 2024 meeting)
Project Overview	This project aims to conduct field trials that will evaluate growth, resilience, and phenotype of CRISPR-edited low-lignin elite *Populus* varieties and compare greenhouse vs field phenotypes. Trials will involve planting gene-edited trees outdoors and thereby collecting agronomic and wood quality data over multiple seasons.
NIH Guidelines Section	Section III-E-2-a
Risk Assessment and Discussion	• The edited poplar varieties were developed by another institution using Multiplex CRISPR editing and sent to AU as plant tissue, which was then amplified in the lab, then grown in the greenhouse, and finally will be planted in the environment (release). • This project has an APHIS BRS permit to conduct a field release of these trees at an AU research and extension center. • The transgenic plants have been edited to contain a precise woody feedstock design by optimizing lignin composition and wood properties • To mitigate the risk of flowering, trees will be monitored weekly, particularly during the typical natural flowering season, to ensure early detection. Any flower buds identified will be promptly removed before petal opening to prevent maturation. • Any shedding of pollen or production of seed will require immediate removal and containment of flowers/seeds and will be reported immediately as an unauthorized release to APHIS BRS. • Testing procedures in the field will include non-destructive measurements such as tree height, stem basal diameter, and leaf gas exchange parameters. • Additionally, visual observations for morphology, flowering, and overall plant health will be conducted. • Destructive sampling of tissues (e.g., stem, xylem, and twig) will be collected from the field and transported to lab for additional tests such as RNA extractions, wood density measurements, lignin and sugar content analysis, and evaluations of modulus of elasticity (MOE). • Following the completion of the experiment, the field will undergo weed treatment and preparation for future agricultural or landscaping use. To ensure minimal competition from weeds, PI/staff will apply herbicides annually and perform weed control on a monthly basis. • After the experiments, all materials will be destroyed using one of the methods listed in the BRS permit, and all other plants, supplies, samples, etc. will be autoclaved and disposed of. • Monitoring and periodic review will ensure continued compliance and safety.
Training	All lab personnel have completed the required Laboratory Safety, Biological Safety, Managing Regulated Waste and NIH Guidelines training. The PI will conduct any protocol specific biosafety training and containment training.
Occupational Health Representative Review if Applicable	N/A
Biosafety Level Assignment	BL1-P

IBC Vote	A motion was made to defer the BUA registration pending additional information from the PI. • State that transgenic lines came from collaborator and which genes are edited. • Clarify which processes will be conducted in laboratory vs. greenhouse space. • Include information on how the trial will be terminated at the end of the study. • A biosafety cabinet (BSC) is not required for BL1; please remove wording related to BSC throughout the document. • Change 7% bleach to 10% bleach. • Confirm that all applicable permits are in place to cover receipt and planting locations. • Votes for: 7 • Votes against: 0 • Abstain: 0

NEW IBC REGISTRATIONS	
PI Name(s)	**Mohtadin Hashemi**
BUA Number	New Registration - SPROTO202500000040
Project Overview	The project aims to characterize how monomeric, dimeric and tetrameric proteins search for DNA sites and how they form loops by simultaneously binding two sites on the same DNA molecule. Methods will include amplification, protein expression and DNA substrate generation.
NIH Guidelines Section	Section III-F-8-C-II
Risk Assessment and Discussion	• Proteins are produced in standard laboratory expression systems (e.g., E. coli lab strains). • A commercial pET plasmid from GenScript containing a gene from native *Bacillus megaterium*, under lac control, will be used. • The plasmid will be amplified in chemically competent *E. coli* (K-12), and the gene will be expressed in another E.coli K-12 strain for enzyme production. • The generated PCR DNA substrates from the pET plasmid for DNA–protein interactions using Atomic Force Microscopy. • This project uses non-pathogenic laboratory *E. coli* strains K-12 derivatives and no mammalian cells, human specimens, pathogenic organisms, or replication-competent viral vectors are used. • The expressed protein is not a known toxin and is not associated with increased virulence • All rDNA manipulations will be conducted inside the certified Class II BSC. • Sealed rotors will be used for any centrifugation, and proper signage will be posted during active work. • After the experiments, all materials will be autoclaved or bleached and disposed of. • No additional containment beyond standard BL1 laboratory safety procedures is required. Monitoring and periodic review will ensure continued compliance and safety

Training	All lab personnel have completed the required Laboratory Safety, Biological Safety, Managing Regulated Waste and NIH Guidelines training. The PI will conduct any protocol specific biosafety training and containment training.
Occupational Health Representative Review if Applicable	N/A
Biosafety Level Assignment	BL1
IBC Vote	A motion was made to approve the registration pending the following changes or conditions are met. • Mention the use of primary and secondary containers, and that the secondary container will have biohazard signage. • Provide information on how waste is transported between locations. • Describe the gene activity. • Please specify the "sufficient time" for the disinfectant to react. • Provide autoclave parameters. • Provide details on surface decontamination. • Votes for: 7 • Votes against: 0 • Abstain: 0

PI Name(s)	**Ahmed Ismaeel**
BUA Number	New registration - SPROTO202500000042
Project Overview	This project aims to find out if a specific tiny molecule involved in skeletal muscle metabolic dysfunction helps muscles work properly when blood flow is reduced, and whether fixing problems with this molecule can help muscles get stronger with exercise training. The project will utilize specially bred laboratory mice (transgenic mice) that allow PI to turn specific genes on or off in muscle tissue.
NIH Guidelines Section	Section III-F-8-C-VII Section III-F-8-C-VIII
Risk Assessment and Discussion	• AU will receive the transgenic mouse lines generated at another university and deposited at Inotiv (SOPF) for breeding, genetic activation, hindlimb ischemia surgery, exercise training, and terminal tissue collection. • The genetically modified mice were previously created using recombinant DNA techniques, and the experimental procedures at Auburn do not involve direct handling, manipulation, or creation of recombinant nucleic acid molecules. The genetic modifications exist within the intact living animals and are activated through pharmaceutical treatments. The transgenic lines are documented in this protocol. • Breeding will occur at AU under BL1 containment to produce experimental and littermate control offspring. • Genotyping is performed from pre-weaning tail tissue. • No infectious agents, pathogenic organisms, or replication-competent viral vectors are introduced.

	• The animals will be maintained on ventilated caging racks with proper cage labeling and accurate animal numbers to prevent any accidental escape. • After the experiments, all materials will be autoclaved or incinerated and disposed of. • No additional containment beyond standard BL1 laboratory safety procedures is required. Monitoring and periodic review will ensure continued compliance and safety.
Training	All lab personnel have completed the required Laboratory Safety, Biological Safety, Managing Regulated Waste and NIH Guidelines training. The PI will conduct any protocol specific biosafety training and containment training.
Occupational Health Representative Review if Applicable	N/A
Biosafety Level Assignment	BL1-N

IBC Vote	A motion was made to approve the registration pending the following changes or conditions are met.
	
	• Confirm which BSL level the animals will be bred under.
	
	  • Votes for: 7
	  • Votes against: 0
	  • Abstain: 0

PI Name(s)	**Jeba Jesudoss Chelladurai**
BUA Number	New registration - SPROTO202500000047
Project Overview	The goal of this project is to study the effect of ivermectin and other macrocyclic lactone drugs on ATP binding cassette transporter of cats using Crandell Rees Feline Kidney Cells (CRFK cells). The gene of interest and the overexpression will be conducted in the same CRFK cell line before flow cytometry studies.
NIH Guidelines Section	Section III-F-1 Section III-F-5
Risk Assessment and Discussion	• PCR-amplified feline gene from CRFK-derived cDNA will be cloned into commercially available Mammalian expression vector with the CMV promoter. • The plasmid will be propagated in *E. coli* and the isolated plasmid DNA will be chemically transfected into CRFK (Crandell–Rees feline kidney) cells to generate overexpressing cultures. The transfected CRFK will be expanded using standard cell culture methods. • CRFK is a continuous feline cell line (not primary cells) with no human-derived material in use. • Transfection is chemical-based, not viral. • This project uses non-pathogenic laboratory *E. coli* strains K-12 derivatives and no mammalian cells, human specimens, pathogenic organisms, or replication-competent viral vectors are used.

	• The expressed protein is not a known toxin and is not associated with increased virulence. • All rDNA manipulations will be conducted inside the certified Class II BSC. • Sealed rotors will be used for any centrifugation, and proper signage will be posted during active work. • After the experiments, all materials will be autoclaved or bleached and disposed of. • No additional containment beyond standard BL1 laboratory safety procedures is required. Monitoring and periodic review will ensure continued compliance and safety.
Training	All lab personnel have completed the required Laboratory Safety, Biological Safety, Managing Regulated Waste and NIH Guidelines training. The PI will conduct any protocol specific biosafety training and containment training.
Occupational Health Representative Review if Applicable	N/A
Biosafety Level Assignment	BL2
IBC Vote	A motion was made to approve the registration pending the following changes or conditions are met. • Mention after autoclaving how the solid waste will be disposed of. • Mention solid waste will be autoclaved at 121°C at 15 psi for 30 minutes. • Include the location of flow cytometry. • Include a more detailed description of the experimental procedures. • Votes for: 7 • Votes against: 0 • Abstain: 0

ADDITIONAL IBC TOPICS	
Review of Prior Business	None
New Business/Additional Topics	None
Review of Incidents if Applicable	Nothing To Report
Inspections/Ongoing Oversight	Not Discussed During This Meeting. This Will Be Discussed Quarterly.
IBC Training if Applicable	N/A
Public Comments if Applicable	There were no public comments.
Adjournment	The IBC Secretary moved to adjourn the meeting at 2:07 PM. • Votes for: 7 • Votes against: 0 • Abstain: 0