University of Nebraska – Lincoln Institutional Biosafety Committee

Minutes of Regular IBC Meeting

Date: October 13, 2025

Location: Remote via Zoom
Call to Order: A. Mitra called the meeting to order at 2:37 PM
Members Present: H. Blair (BSO), T. George (Community Member), K. Heath (Animal SME), A. Hilske (Plant SME), A. Mitra (Plant SME), W. Niu (Member), N. Sexton (Member), D. Zinniel (Lab Rep)
Members Absent: D. Loy (Chair), M. Wiebe (Member), K. O'Neill (Community Member), D. Petrik (Community Member)
Quorum Met: Yes
Ex-Officio Advisors: D. Hamernik, B. Osthus
Others: R. Cederberg, K. Evans, L. Gregurek, L. Isom, A. Jungck, W. Riekhof
Review of Minutes from September 8th, 2025 Meeting:
Motion to approve minutes made by D. Zinniel, 2nd by N. Sexton
Minutes approved unanimously as written.
For: 7
Against: 0
Abstained: 1
Declaration of Conflicts of Interest: None

I. PUBLIC SESSION

A. Old Business:

1. Tabled Protocol registrations: None

2. Protocols with Contingencies Met:

NuRamp ID:	1359
Form ID:	**26176**
TITLE:	**Assessing the role of fatty acid metabolism in development of metabolic diseases.**
PI:	**Tomasz Bednarski**
DEPT:	Nutrition and Health Sciences
Project Biosafety Level:	BSL-2, ABSL-1 (Animal)
NIH Guidelines reference:	III-F-8 C-I, C-VII, C-VIII, III-E-1, III-D-4-a
Date of IBC Review:	**10/13/2025**
IBC MOTION:	Approve contingent all required training is completed.
IBC ACTION:	***Adopted by voice vote***
PROTOCOL NOTES:	
Date of PI Response:	**9/17/2025**
PI Response:	All training completed.

Additional Comments:	None.

NuRamp ID:	55
Form ID:	**26061**
TITLE:	**Gene regulation and signaling in the fungal model organism Candida albicans and other yeasts**
PI:	**Kenneth Nickerson**
DEPT:	School of Biological Sciences
Project Biosafety Level:	BSL-2
NIH Guidelines reference:	III-F-1, III-E, III-D-1-a, III-D-2-a
Date of IBC Review:	**10/13/2025**
IBC MOTION:	Approve contingent all required training is completed.
IBC ACTION:	***Adopted by voice vote***
PROTOCOL NOTES:	
Date of PI Response:	**9/18/2025**
PI Response:	The contingencies required for approval have been addressed as follows: All training has been completed.
Additional Comments:	None.

B. New Business:

1. New Protocol Registrations:

NuRamp ID:	1539
Form ID:	**26189**
TITLE:	**How to make a microtubule organizing center**
PI:	**Sophie Travis**
DEPT:	Biochemistry
Project Biosafety Level:	BSL-1
NIH *Guidelines* reference:	III-F-5, III-F-8, C-I, C-II, III-E
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	H. Blair
Seconded by:	K. Heath
IBC ACTION:	***Adopted by voice vote***
For:	8
Against:	0
Abstained:	0
PROTOCOL REVIEW SUMMARY:	
Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.

Summary of Project(s):	Understand how the microtubule-based cytoskeleton is generated in a divergent group of eukaryotes known as the kinetoplastids. Many kinetoplastids are free-living, but some are important human pathogens that cause neglected tropical diseases including African Sleeping Sickness, Chagas disease, and cutaneous, mucocutaneous, and visceral leishmaniasis. To develop new therapeutic approaches to treating these diseases, I aim to target an essential aspect of their cell biology, namely the microtubule cytoskeleton.
Risk Assessment Considerations:	
Genetic Material:	Fluorescent tag, microtubule associated proteins
Vector system:	N/A
Microbiological agents:	Nonpathogenic E. coli, Leishmania tarentolae
Organisms:	N/A
OTCC:	N/A
Toxins:	N/A
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐ Yes ☑No
IACUC Protocol(s):	☐Yes ☑No
Facility/Safety Summary:	The Committee reviewed the description of the facilities to be used and safety procedures and determined the facilities are appropriate for the proposed containment level and work to be conducted.
Safety Concerns:	None.
Facility Concerns:	None.
Vaccines/Medical Surveillance:	None.
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.
Date/Result of Pre-approval Safety Survey:	10/17/2025 — **Findings**: No biosafety related concerns.
IBC Discussion:	The ABSO provided an explanation for the selected NIH guidelines.

NuRamp ID:	1544
Form ID:	**26210**
TITLE:	**Detection of bacterial pathogens in food manufacturing samples.**
PI:	**Heidi Leonard**
DEPT:	School of Veterinary Medicine and Biomedical Sciences
Project Biosafety Level:	BSL-2
NIH *Guidelines* reference:	N/A
IBC MOTION:	Approve with the following contingencies:
Contingencies/Issues:	• All lab members complete required training.
Made by:	A. Mitra

Seconded by:	K. Heath
IBC ACTION:	***Adopted by voice vote***
For:	8
Against:	0
Abstained:	0

PROTOCOL REVIEW SUMMARY:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	The lab's goal is to shorten the detection timeline of harmful bacteria like Salmonella, E. coli, Listeria, etc. to same-day detection, making food production safer and reducing the risk of contaminated products reaching consumers.
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	E. coli, Salmonella, Listeria, and Campylobacter
Organisms:	N/A
OTCC:	Samples from food processing plants
Toxins:	N/A
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☐Yes ☑No
Facility/Safety Summary:	The Committee reviewed the description of the facilities to be used and safety procedures and determined the facilities are appropriate for the proposed containment level and work to be conducted.
Safety Concerns:	None
Facility Concerns:	None
Vaccines/Medical Surveillance:	None
Administrative issues:	
Current safety training for staff:	Not yet completed
Current equipment certification:	Yes
Date/Result of Pre-approval Safety Survey:	TBD — **Findings**: Pre-approval survey not yet conducted.
IBC Discussion:	Discussion on this work being done through a third party vendor, but conducted at the university.

2. Protocol Amendments:

NuRamp ID:	**1074**
Form ID:	**25618**
TITLE:	**Transgenic oil seed processing to clean seed and extract oil.**
PI:	**Loren Isom**

DEPT:	Industrial Agricultural Products Center
Protocol Biosafety Level:	**BSL-1**
NIH Guidelines reference:	III-E, III-E-2
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	H Blair
Seconded by:	N. Sexton
IBC ACTION:	***Adopted by voice vote***
For:	8
Against:	0
Abstained:	0

PROTOCOL NOTES:

Review of Protocol:	The PI provided an overview of the protocol and the IBC Chair opened discussion to the committee.
Summary of Project(s):	Transgenic oil seed processing to clean seed and extract oil. Transgenic oil seeds will be delivered to the laboratory, cleaned of debris as needed, feed into processing equipment to extract oil, and the resulting oil and meal components will be returned to the delivering party or properly disposed.
Changes to the Protocol:	Change in PI and removal of projects:
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	N/A
OTCC:	N/A
Toxins:	N/A
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☐Yes ☑No
Facility/Safety Summary:	The Committee reviewed the description of the facilities to be used and safety procedures and determined the facilities are appropriate for the proposed containment level and work to be conducted.
Safety Concerns:	None
Facility Concerns:	None
Vaccines/Medical Surveillance:	None
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.

Date/Result of last EHS Survey:	Annual	**Findings:**
	8/15/2025	None.

IBC Discussion:	This protocol is a continuation of the previous PI's work. Any transgenic material is autoclaved after use.

NuRamp ID:	**60**
Form ID:	**26102**
TITLE:	**Enhancing phenotypic attributes of commodity crops through biotechnology**
PI:	**Nathaniel Butler**
DEPT:	Agronomy and Horticulture
Protocol Biosafety Level:	**BSL-1, BSL-1-P (Plant)**
NIH Guidelines reference:	III-F-2, III-F-5, III-F-7, III-F-8, C-II, III-E, III-E-1, III-E-2, III-E-2-a, III-D-2-a, III-D-3-e
IBC MOTION:	Approve with the following contingencies:
Contingencies/Issues:	• Removal of the statement that there will not be live virus in the plants or evidence that there is no virus, and plant material is autoclaved after use.
Made by:	H. Blair
Seconded by:	N. Sexton
IBC ACTION:	***Adopted by voice vote***
For:	8
Against:	0
Abstained:	0

PROTOCOL NOTES:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	In an effort to enhance desirable phenotypic traits, commodity crops, such as soybean, wheat maize, sorghum, etc., are being evaluated following transformation of drought tolerant, lipid metabolism, or disease resistant genes. Transformation of genes from various plant species are accomplished using Agrobacterium tumefaciens or Agrobacterium rhizogenes.
Changes to the Protocol:	Change in PI from Tom Clemente to Nathan Butler Personnel changes Added NIH Guidelines III-E-1, III-D-3-e New Agrobacterium species Added genes from plant RNA viruses New CiDecon II disinfectant
Risk Assessment Considerations:	
Genetic Material:	Genes from plant RNA viruses
Vector system:	FoMV, BSMV, CpSMV
Microbiological agents:	Agrobacterium
Organisms:	N/A
OTCC:	N/A
Toxins:	N/A
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☐Yes ☑No

Facility/Safety Summary:	The Committee reviewed the description of the facilities to be used and safety procedures and determined the facilities are appropriate for the proposed containment level and work to be conducted.
Safety Concerns:	None.
Facility Concerns:	None.
Vaccines/Medical Surveillance:	None.
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	Pre-Approval: TBD — **Findings:** Pre-approval survey not yet to be conducted.
IBC Discussion:	The Committee wants clarification on the statement in the PI's research description that infections with viral vectors are transient and plants are "virus-free" post transduction. Committee reiterated that research plants still need to be autoclaved prior to disposal.

NuRamp ID:	**147**
Form ID:	**26069**
TITLE:	**Plant Transformation Core Research Facility**
PI:	**Nathaniel Butler**
DEPT:	Agronomy and Horticulture
Protocol Biosafety Level:	**BSL-1, BSL-1-P (Plant)**
NIH Guidelines reference:	III-F-1, III-F-6, III-F-8, C-I, C-II, III-E, III-E-1, III-E-2, III-E-2-a, III-D-2-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	A. Mitra
Seconded by:	D. Zinniel
IBC ACTION:	***Adopted by voice vote***
For:	8
Against:	0
Abstained:	0

PROTOCOL NOTES:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	This protocol is designed to cover general assembly of plasmids used in the Plant Transformation Core Research Facility and external projects not described in UNL IBC protocols.
Changes to the Protocol:	Change in PI from Tom Clemente to Nathan Butler Personnel changes New Agrobacterium species

	Added rice as a research organism Added new genes spreadsheet CiDecon II disinfectant added
Risk Assessment Considerations:	
Genetic Material:	New genes for expression in plants
Vector system:	N/A
Microbiological agents:	Agrobacterium species
Organisms:	Rice
OTCC:	N/A
Toxins:	N/A
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☐Yes ☑No
Facility/Safety Summary:	The Committee reviewed the description of the facilities to be used and safety procedures and determined the facilities are appropriate for the proposed containment level and work to be conducted.
Safety Concerns:	None
Facility Concerns:	None
Vaccines/Medical Surveillance:	None
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	Pre-Approval: TBD; **Findings:** Pre-approval survey not yet completed.
IBC Discussion:	This protocol is a continuation of the previous PI's work for the core facility.

NuRamp ID:	**264**
Form ID:	**26147**
TITLE:	**Biochemistry and genetics of metabolism and symbiosis in micro-organisms**
PI:	**Wayne Riekhof**
DEPT:	School of Biological Sciences
Protocol Biosafety Level:	**BSL-2**
NIH Guidelines reference:	III-F-1, III-F-2, III-F-3, III-F-5, III-F-6, III-F-8, C-II, C-III, C-IV, C-VI, III-E, III-D-1-a
IBC MOTION:	Approve with the following contingencies:
Contingencies/Issues:	• All lab members complete the required training.
Made by:	N. Sexton
Seconded by:	K. Heath
IBC ACTION:	***Adopted by voice vote***
For:	8

Against:	0
Abstained:	0

PROTOCOL NOTES:

Review of Protocol:	The PI provided an overview of the protocol and the IBC Chair opened discussion to the committee.
Summary of Project(s):	Microbial eukaryotes such as yeasts and alga, are used to understand biochemical and cell biological mechanisms of membrane biogenesis and energy homeostasis.
Changes to the Protocol:	Increase BSL status to BSL-2 and add/update Candida albicans as a RG2 organism, as well as genes from Plasmodium falciparum. III-D-1-a guideline added for C. albicans gene editing work.
Risk Assessment Considerations:	
Genetic Material:	Methionine salvage pathway genes
Vector system:	N/A
Microbiological agents:	Candida albicans
Organisms:	N/A
OTCC:	N/A
Toxins:	N/A
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☐Yes ☑No
Facility/Safety Summary:	The Committee reviewed the description of the facilities to be used and safety procedures and determined the facilities are appropriate for the proposed containment level and work to be conducted.
Safety Concerns:	None.
Facility Concerns:	None.
Vaccines/Medical Surveillance:	None.
Administrative issues:	
Current safety training for staff:	Not yet completed.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	Annual: 5/7/2025 — **Findings:** None
IBC Discussion:	Committee had questions about updated gene inventory and asked about addition of the gene that will be used as a positive control for genetic screening. PI explained that the work related to this gene is for future projects and is currently not being used, but still wanted to include it in the amendment to keep inventory current.

3. Notice of NIH Exempt Protocol Approvals: None

4. Notice of Administratively Approved Amendments:

NuRamp ID:	788
Form ID:	**26207**
TITLE:	**Role of noncoding RNAs, protein coding genes, and protein neddylation in cardiovascular and metabolic diseases**
PI:	**Xinghui Sun**
DEPT:	Department of Biochemistry
Project Biosafety Level:	BSL-2, ABSL-2
NIH Guidelines reference:	III-F-1, III-F-2, III-F-3, III-F-8, C-I, C-VII, C-VIII, III-E, III-E-1, III-E-3, III-D-1-a, III-D-3-a, III-D-3-e, III-D-4-a
PROTOCOL NOTES:	
IRB protocol:	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol:	☑Yes ☐No
Objective of Study:	Focusing on the role of noncoding RNAs, protein coding genes, and protein neddylation in the pathogenesis of cardiovascular and metabolic disease. Interested in the role of protein posttranslational modification (protein neddylation) and its interaction with RNA molecules in regulating the vascular endothelium.
Changes to the Protocol:	Modified IACUC protocols to add four strains of mice for study, also updating IBC protocol to reflect new mice strains.
Review comments:	None.

NuRamp ID:	286
Form ID:	**26211**
TITLE:	**Microbial Perturbation of Gastrointestinal Homeostasis**
PI:	**Amanda Ramer-Tait**
DEPT:	Department of Food Science and Technology
Project Biosafety Level:	BSL-2, ABSL-2
NIH Guidelines reference:	III-F-4, III-F-5, III-F-8, C-II, C-VI, C-VII, III-E, III-D-4-a, III-D-4-b
PROTOCOL NOTES:	
IRB protocol:	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol:	☑Yes ☐No
Objective of Study:	The long-term vision for our research program is to transform human health through discovery and application of the principles and mechanisms underlying host-diet-microbiota interactions. In pursuit of this long-term goal, we perform studies in our lab using various strains of gut bacteria. To study the effects of these bacterial strains on health and disease outcomes, we provide them to mice and culture them with cell lines.
Changes to the Protocol:	Adding new laboratory personnel Deleting laboratory personnel who are no longer in our lab Section III: Adding a new bacterial species (Enterococcus faecium)
Review comments:	None.

5. Notice of Minor Modification Forms Approved:

See attached report for a list of all Minor Modification forms received and approved since the last meeting.

6. Notice of Protocol Annual Updates Received:

See the attached report for a list of all Annual Update forms received and approved since the last meeting.

7. Notice of Protocol Terminations: None

C. Other Business:

1. EHS Report

2. Non-Compliance Reports

II. ADJOURN

Motion:	A. Mitra
2nd:	K. Heath
Time Adjourned:	3:35 PM

Minor Modification Forms Approved since Last IBC Meeting

Form ID	IBC Project ID	Approval Date	ProjectTitle	Protocol Status	Form Status	Lead PI	Form Changes
UNL-00026220	UNL-00001450	9/29/2025	Understanding the Cognitive and Brain Health in Relation to Diet and Dietary Interventions	Submitted to Biosafety Officer	Approved	Aron Keith Barbey	Personnel and co-PI
UNL-00026208	UNL-00000587	9/17/2025	Biomedical and Obesity Research Core (BORC) providing molecular and cellular biology assays and metabolic phenotyping measurements	Approved	Approved	Jingjie Hao	Personnel and facilities
UNL-00026204	UNL-00001293	9/5/2025	Cytokine effect on T cell plasticity and imbalance phenotype in normal context and pathogenic infection by Influenza and In Vitro Evaluation of Drug Combination Efficacy Against Various Respiratory Pathogens	Approved	Approved	Tomas Helikar	Personnel
UNL-00026191	UNL-00001338	9/5/2025	Viral Control of Cell Fate	Approved	Approved	Lindsey Crawford	Personnel

IBC Annual Update Form Approvals
since last IBC Meeting

Form ID	Approval Date	IBC Project ID	Project Title	Protocol Status	Form Status	Lead PI	Amendment Needed
UNL-00026229	10/2/2025	UNL-00000109	Microbiology Teaching Lab Protocol (BIOS313, 314 and 111)	Approved	Approved	Kristen Wertz	**No**
UNL-00026228	10/2/2025	UNL-00000052	Mechanisms of Viral host interactions in autoimmune diseases, cancer development, and anti-viral therapy development	Approved	Approved	Luwen Zhang	**No**
UNL-00026227	10/1/2025	UNL-00000026	Structure-Function Studies of Redox Proteins	Approved	Approved	Mark Wilson	**No**
UNL-00026226	9/30/2025	UNL-00001346	3D Bioprinting of Cell-laden Hydrogels	Approved	Approved	Fanben Meng	**No**
UNL-00026225	9/30/2025	UNL-00001114	Response of C. elegans to pathogenic bacteria	Approved	Approved	Michael Herman	**No**
UNL-00026222	10/2/2025	UNL-00000172	Cell Culture for Biomaterials/Mechanotransduction Studies	Approved	Approved	Jung Yul Lim	**No**
UNL-00026221	9/29/2025	UNL-00000982	Safe Handling of pathogenic bacteria, including Clostridium difficile and Acinetobacter	Approved	Approved	Kurt Piepenbrink	**No**
UNL-00026219	9/22/2025	UNL-00000125	VMED 676 Veterinary Parasitology - Laboratory	Approved	Approved	Roberto Cortinas	**No**
UNL-00026218	9/22/2025	UNL-00001347	One Health surveillance (International Projects)	Approved	Approved	Elizabeth VanWormer	**No**
UNL-00026165	9/22/2025	UNL-00001316	Assessing rabies and other pathogen exposure in working equids (Peru)	Approved	Approved	Elizabeth VanWormer	**No**
UNL-00026216	9/22/2025	UNL-00000853	Wildlife health and zoonotic disease field research (United States projects)	Approved	Approved	Elizabeth VanWormer	**No**
UNL-00026215	9/22/2025	UNL-00000199	Study of gut microbial community structure and function using metagenomics and metatranscriptomics approaches in ruminants and non-ruminants	Approved	Approved	Samodha Fernando	**No**
UNL-00026214	9/25/2025	UNL-00000356	Biomarkers for Dysbiosis-Related HIV-Associated Cognitive Disorders among Persons Who Inject Drugs in Puerto Rico	Approved	Approved	Samodha Fernando	**No**
UNL-00026209	9/23/2025	UNL-00000083	Veterinary Microbiology (VMED 686) Laboratory	Approved	Approved	Christina Topliff	**No**
UNL-00026206	9/9/2025	UNL-00000537	Promoting gastrointestinal health and reducing inflammation through dietary interventions	Approved	Approved	Devin Rose	**No**
UNL-00026203	9/30/2025	UNL-00001343	IACP Animal Study Service Center for External Projects	Approved	Approved	Anna Fitzwater	**No**
UNL-00026201	9/9/2025	UNL-00001256	The use of adenovirus associated vector technology to study the neural circuits involved in drug-related behavior in rats	Approved	Approved	Ken Wakabayashi	**No**
UNL-00026199	9/9/2025	UNL-00000093	Virus Replication Studies; Human papillomavirus (HPV) and Human Herpesvirus (HSV-1)	Approved	Approved	Peter Angeletti	**No**
UNL-00026197	9/9/2025	UNL-00000426	Skeletal muscle growth and metabolic development	Approved	Approved	Dustin Yates	**No**
UNL-00026196	9/9/2025	UNL-00001249	Intervention strategies to control low pathogenic avian influenza viruses	Approved	Approved	Hiep Vu	**No**

EHS/Biosafety Officer Report for IBC meeting on 10/13/2025

Biosafety Recurring Audits Since last meeting: Life Science Annex, Animal Science Complex, Veterinary Medicine & Biomedical Sciences

BSL-2	BSL-1
• 9 labs	• 3 labs

Pre-approval Audits:

- None

Most cited findings

Finding	EHS Checklist Code	Number of Findings	Number Corrected
Disinfectants are expired or containers not appropriately dated	BIO01	2	0
Sharps container overfull	LAB01	1	0
Emergency eyewash or shower not tested	CHE10	1	0

BSL-3 Lab Updates

- Facility updates
- Training space in Morrison

Other Activities: *(Regulation updates, news, new/revised policies, etc.)*

- NIH OSP Initiative to Modernize and Strengthen Biosafety Oversight
  - Statement: https://www.nih.gov/about-nih/nih-director/statements/nih-launches-initiative-modernize-strengthen-biosafety-oversight
  - Details and session information: https://osp.od.nih.gov/policies/biosafety-and-biosecurity-policy#tab2/
  - Link to provide feedback: https://osp.od.nih.gov/help-modernize-and-strengthen-the-oversight-of-biosafety/
- NIH Incident/Non-compliance report response; no additional information required
- UNL research covered in a Substack post
- Helikar Lab update