University of Nebraska – Lincoln Institutional Biosafety Committee

Minutes of Regular IBC Meeting

Date: July 20th, 2026

Location: Remote via Zoom
Call to Order: D. Loy called the meeting to order at 2:32 PM
Members Present: H. Blair (BSO), T. George (Community Member), K. Heath (Animal SME)*, A. Hilske (Plant SME), D. Loy (Chair), W. Niu (Member), S. Tatineni (Member), D. Zinniel (Lab Rep),
Members Absent: A. Mitra (Plant SME), K. O'Neill (Community Member), N. Sexton (Member), M. Wiebe (Member)
*Left after the discussion of NuRamp ID Protocol 15.
Quorum Met: Yes
Ex-Officio Advisors: D. Hamernik, B. Osthus, R. Wenzl
Others: R. Cederberg, A. Jungck, K. Piepenbrink, L. Pingault, E. Schulz, H. Vu
Review of Minutes from June 8th, 2026 Meeting:
Motion to approve minutes made by D. Zinniel, 2nd by K. Heath
Minutes approved unanimously as written.
For: 7
Against: 0
Abstained: 1
Declaration of Conflicts of Interest: D. Zinniel on Protocol 15.

I. PUBLIC SESSION

A. Old Business:

1. Tabled Protocol registrations:

NuRamp ID:	434
Form ID:	**26516**
TITLE:	**Environmental fate of microorganisms originating from livestock production systems**
PI:	**Amy Schmidt**
DEPT:	Department of Biological Systems Engineering
Project Biosafety Level:	BSL-2, ABSL-2 (Animal), BSL-2-P (Plant)
NIH Guidelines reference:	III-E, III-D-1-a
Date of IBC Review:	**6/8/2026**
Last IBC Motion:	Table pending addressing the following:
Contingencies/Issues:	More information on PRRSv, spiked manure, and infected larvae containment and microbiological practices.
PI Response:	**Working with biosafety officers to resolve concerns.**
IBC MOTION:	Denied

Contingencies/Issues:	• Denied amendment 26516, work described in protocol 434 is suspended.
Made by:	K. Heath
Seconded by:	H. Blair
IBC ACTION:	***Adopted by vote***
For:	***8***
Against:	***0***
Abstained:	***0***

PROTOCOL Review Summary:

Review of Protocol:	The IBC Chair and Biosafety Officer provided an overview of the protocol and concerns, and IBC Chair opened discussion to the committee.
Summary of Project(s):	Recent sampling and analysis of fly larvae collected from the manure storage pits of swine operations with PRRS-positive animals has not produced positive results for the virus in maggots via PCR analysis. To perform the intended study to determine if the viral material contained in the gut of maggots are infectious when consumed by pigs, we are utilizing a new approach. Fly larvae purchased from Carolina Biological will be placed in a secure container with swine manure solids that have been spiked with PRRS virus. The larvae will be held in the Schmidt Lab for four days to allow ingestion by the larvae. The larvae will then be used in the intended live swine bioassay to assess infectivity of the virus in maggot guts.
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	Porcine Reproductive and Respiratory Syndrome (PRRS) virus (isolate from infectious clone)
Organisms:	Musca domestica larvae; Swine
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 not appropriate for the proposed containment level and work to be conducted; ACL2 is also needed. Additional concerns regarding containment of virus are described below.
Safety Concerns:	Training and experience needed.
Facility Concerns:	Arthropod containment needed for this work
Vaccines/Medical Surveillance:	N/A
Administrative issues:	

Current safety training for staff:	Lab member needs to complete BIO100, BIO101, and BIO201	
Current containment device certification:	N/A	
Date/Result of last EHS Survey:	Annual	**Findings:**
	4/8/2026	Expired bleach.
IBC Discussion:	After much discussion, the Committee did not feel that the PI or laboratory staff showed satisfactory evidence of sufficient training to work with the pathogenic isolates proposed in this amendment. There was also great concern that this work continued, despite it being tabled last month, leading to the Committee's decision to suspend all ongoing projects described in this protocol (including those previously approved). The Committee also discussed next steps for the PI to continue their research, including creating a new protocol, working with a collaborator for the pathogenic isolates project, and reaching out to the biosafety team.	

2. Protocols with Contingencies Met:

NuRamp ID:	719
Form ID:	**26458**
TITLE:	**The role of fatty acids in placenta, liver, brain, eye and fetal health**
PI:	**Sathish Kumar Natarajan**
DEPT:	**Department of Nutrition and Health Sciences**
Project Biosafety Level:	**BSL-2, ABSL-2 (Animal)**
NIH Guidelines reference:	III-F-1, III-F-2, III-F-8, C-II, C-VIII, III-E, III-D-1-a, III-D-2-a, III-D-3-a
Date of IBC Review:	**6/8/2026**
IBC MOTION:	Approve with following contingencies: Training is completed and a spill kit is available for the lab
IBC ACTION:	***Adopted by vote***

PROTOCOL NOTES:

Date of PI Response:	**6/23/2026**
PI Response:	All of my lab members have completed their training. We also have a spill kit in the lab.
Additional Comments:	None.

NuRamp ID:	76
Form ID:	**26460**
TITLE:	Regulation of the PutA Protein and Proline Metabolism
PI:	Donald Becker
DEPT:	Biochemistry
Project Biosafety Level:	BSL-2; ACL2; BSL-1P
NIH Guidelines reference:	III-F-3, III-F-4, III-F-8, C-I, C-II, C-III, III-E, III-E-1, III-D-3-a, III-D-4-a

Date of IBC Review:	**5/11/2026**
IBC MOTION:	Approve with following contingencies: Required training is completed and a satisfactory walkthrough for containment is completed.
IBC ACTION:	***Adopted by vote***
PROTOCOL NOTES:	
Date of PI Response:	**6/26/2026**
PI Response:	Training has been completed.
Additional Comments:	Biosafety team completed a walkthrough, and all findings are being resolved.

B. New Business:

1. New Protocol Registrations: None

2. Protocol Amendments:

NuRamp ID:	1515
Form ID:	26519
TITLE:	Molecular Biotechnology for Arthropod Pests Management
PI:	Lise Pingault
DEPT:	Department of Entomology
Protocol Biosafety Level:	BSL-1, ACL-1 (Arthropod)
NIH Guidelines reference:	III-E, III-D-4
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	K. Heath
Seconded by:	D. Zinniel
IBC ACTION:	***Adopted by 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):	Investigating how changes in gene regulation - such as differences in DNA methylation (e.g., expression of the DNMT2 enzyme), post-translational histone modifications, and the activity of long non-coding RNAs - contribute to insecticide resistance and cuticle development. This work aims to uncover new molecular targets that could help manage pest populations and reduce disease transmission.
Changes to the Protocol:	Section I: Updated personnel.

	Section II edits: Project 1 The delivery methods for the dsRNA using chitosan for methylation and histone post-translational modifications has been updated in Section II. Project 2 added, Regulation of histone post-translational modification in mosquito resistance to insecticide. Project 3 added, DNA Tag as molecular markers for mosquitoes and flies. Section V: Two fly species have been added Section VI: The list of targeted genes for RNAi experiments and the sequence for the DNA Tag have been updated. Section XI: Two references for the chitosan and DNA tag projects have been added.
Risk Assessment Considerations:	
Genetic Material:	Histone associated enzymes
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	Cochliomyia macellaria (secondary screwworm), Stomoxys calcitrans (stable fly)
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: 2/27/2026 — **Findings:** No findings.
IBC Discussion:	The Committee asked the PI about the difference between new world primary screwworms versus secondary screwworms and how they were acquired. The committee asked about the CAFE feeding system

NuRamp ID:	1126
Form ID:	26538
TITLE:	Molecular characterization of common animal viral pathogens
PI:	Hiep Vu

DEPT:	Department of Animal Science
Protocol Biosafety Level:	BSL-2, ABSL-2 (Animal)
NIH Guidelines reference:	III-F-6, III-E, III-E-1, III-D-1-a, III-D-2-a, III-D-3-a, III-D-4-a III-D-7
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	H. Blair
Seconded by:	K. Heath
IBC ACTION:	***Adopted by 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):	Develop efficacious vaccines against important viral pathogens such as porcine reproductive and respiratory syndrome virus (PRRSV), influenza A virus (IAV), and African swine fever virus (ASFV). Viruses can only reproduce themselves once they enter a living cell. Therefore, one objective my research is to identify the mechanisms that the viruses (particularly PRRSV) uses to enter susceptible cells.
Changes to the Protocol:	1. Update the Excel spreadsheet pathogen inventory by adding low pathogenic avian influenza virus. The LPAIV strains listed on a different IBC protocol. 2. Revise the descriptions of bullet points 2.4 and 2.8 for accuracy. 3. Edit the text for Project #10, adding that we will grow Cordyceps militaris in the lab. 4. Section III (Microorganisms) Edit the microorganisms entries. In the original entries, I used the general term Influenza A viruses. Now, I refer to them as swine-origin influenza A virus and human-origin influenza A virus for clarity. I also specify that the human influenza A viruses are mouse-adapted. They had been adapted by another laboratory and transferred to me. I do not conduct any experiments to adapt the virus to mice. 5. Section III (Microorganism) Add new recombinant LPAIV and Bacterial Phage entries. 6. Section VI, attach updated gene target spreadsheet, new genes include H5 from LPAIV and N1 from H1N1pdm09 (rows 9-10). Created viral vector entries for Baculovirus and Phages.
Risk Assessment Considerations:	
Genetic Material:	H5 from H5N3 LPAIV, N1 from H1N1-pdm09
Vector system:	Bacteriophage
Microbiological agents:	Recombinant low pathogenic avian influenza virus (LPAIV), Bacterial phages, Cordyceps militaris
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:	Seasonal influenza vaccine
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.

Date/Result of last EHS Survey:	Annual	**Findings:**
	2/27/2026	No findings.

IBC Discussion:	The Committee asked the PI if they had plans to sequence the cordyceps genome, the PI confirmed they did.

NuRamp ID:	982
Form ID:	26539
TITLE:	Safe Handling of pathogenic bacteria, including Clostridium difficile and Acinetobacter
PI:	Kurt Piepenbrink
DEPT:	Department of Food Science and Technology
Protocol Biosafety Level:	BSL-2
NIH Guidelines reference:	III-F-8, C-II, III-E, III-D-1-a, III-D-2-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	D. Loy
Seconded by:	D. Zinniel
IBC ACTION:	***Adopted by 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):	Understand the extent to which an extra-cellular bacterial appendage, the type IV pilus, alter the behavior and capabilities of the bacterium *Clostridium difficile*. This involves measuring the ability of *C. difficile* to form in vitro biofilms as well as measuring surface motility.

Changes to the Protocol:	Adding experiments to measure the effects of cell wall proteins in mucosal binding. Section II new experiment described Section III E. coli entry updated to include CA434 strain for conjugation method Section VI Cell wall proteins gene entry and plasmid spreadsheet updated Section I/II Additional detail on mucosal binding and microscopy Section X Added Hu et al, Anaerobe 2024 describing fixation for microscopy
Risk Assessment Considerations:	
Genetic Material:	Cd Cell wall proteins
Vector system:	N/A
Microbiological agents:	*E. coli, C. difficile*
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: 3/26/2026 — **Findings:** No findings.
IBC Discussion:	The Committee had no concerns about the proposed amendment and appreciated the PI's explanation about anticipated outcomes.

NuRamp ID:	15
Form ID:	26535
TITLE:	Regulation of autoimmunity
PI:	Jay Reddy
DEPT:	School of Veterinary Medicine and Biomedical Sciences
Protocol Biosafety Level:	BSL-2, ABSL-2 (Animal)
NIH Guidelines reference:	III-F-8, C-I, C-II, C-VII, III-E, III-E-3, III-D-1-a, III-D-2-a, III-D-3-a, III-D-4-a, III-D-4-b

IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	K. Heath
Seconded by:	W. Niu
IBC ACTION:	***Adopted by vote***
For:	6
Against:	0
Abstained:	2

PROTOCOL NOTES:	
Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	Study the immune system activation leading to the development of autoimmunity and these studies involve the use of animal models. Specifically, we will investigate the mechanisms by which T cell tolerance to self-antigens is broken leading to the development of autoimmune responses
Changes to the Protocol:	Section I – Updated personnel Section II - mouse study Information pertaining to Group A Stroptococcus pyogenes bacteria has been updated. Section III - Group A Streptococcus pyogenes (4 isolates) added Section IV - HL60 cells for the Opsonophagocytic Killing Assay
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	Group A Streptococcus pyogenes (serotypes M1T1 and M3)
Organisms:	N/A
OTCC:	HL-60 cell line
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:	Hepatitis B vaccine
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	Annual **Findings:**

	10/14/2025	Disinfectants not labeled, spill kit not stocked, biohazardous waste not labeled.
IBC Discussion:	The Committee confirmed with the biosafety team that the findings from the last EHS survey have been resolved.	

NuRamp ID:	08
Form ID:	26494
TITLE:	Center for Advanced Biofuel Systems
PI:	Edgar Cahoon
DEPT:	Center for Plant Science Innovation
Protocol Biosafety Level:	BSL-1-P (Plant)
NIH Guidelines reference:	III-F-8, C-I, C-II, C-III, III-E, III-E-2, III-E-2-a, III-D-2-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	D. Zinniel
Seconded by:	S. Tatineni
IBC ACTION:	***Adopted by vote***
For:	7
Against:	0
Abstained:	1

PROTOCOL NOTES:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	To increase the efficiency of select plant and algal-based reduced carbon (oil and specialty fuel) production systems using rational metabolic engineering approaches grounded in modern systems biology.
Changes to the Protocol:	Cas12a added to protocol In Section II, Project 8 was updated to include Cas12a and new Project 13 was added In Section VI, a new plasmid was added to the plasmid spreadsheet, a new gene was also added to the gene section
Risk Assessment Considerations:	
Genetic Material:	LbCas12a
Vector system:	pYPQ233 (dLbCpf1-SRDX)
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 3/25/2026 — **Findings:** No findings.
IBC Discussion:	IBC clarified which model Cas12a would be used in and viewed it as a straightforward continuation of the PI's previous work.

NuRamp ID:	237
Form ID:	26530
TITLE:	Role of the protein quality control in mitochondrial homeostasis and stress response
PI:	Oleh Khalimonchuk
DEPT:	Department of Biochemistry
Protocol Biosafety Level:	BSL-2
NIH Guidelines reference:	III-F-1, III-F-4, III-F-5, III-F-8, C-I, C-II, C-III, III-E, III-E-1, III-D-2-a, III-D-3-a, III-D-4-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	D. Loy
Seconded by:	H. Blair
IBC ACTION:	***Adopted by vote***
For:	7
Against:	0
Abstained:	1

PROTOCOL NOTES:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	To determine how evolutionary conserved mitochondrial quality control modules function to maintain cell survival, and how these functions can be manipulated to achieve clinical benefits. Focused on providing a better understanding of multilayered processes that mediate mitochondrial biogenesis, function and integrity.
Changes to the Protocol:	We are adding two new mammalian genes of interest related to iron-sulfur cluster and oxidative homeostasis. We plan on using ACP synthase in expression/overexpression experiments. For

	the PRDX3 we will use both overexpression and gene depletion studies.
Risk Assessment Considerations:	
Genetic Material:	2 genes related to iron-sulfur cluster and oxidative homeostasis
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	N/A
OTCC:	N/A
Toxins:	None
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: 3/16/2026 — **Findings:** No findings.
IBC Discussion:	The Committee had no concerns about this continuation of the PI's previous work.

NuRamp ID:	273
Form ID:	26530
TITLE:	Stress tolerance in rice and wheat
PI:	Harkamal Walia
DEPT:	Department of Agronomy and Horticulture
Protocol Biosafety Level:	BSL-1, BSL-1-P (Plant)
NIH Guidelines reference:	III-F-8, C-II, C-III, III-E, III-E-2, III-E-2-a, III-D-2-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	S. Tatineni
Seconded by:	D. Zinniel
IBC ACTION:	***Adopted by vote***
For:	6
Against:	0
Abstained:	1
PROTOCOL NOTES:	

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	Generation of transgenic rice plants for stress tolerance research. Testing of soybeans and maize transgenic plants generated by UNL Core Transformation Facility using the DNA sequence/genes from the corresponding species for testing of heat, drought and salinity tolerance.
Changes to the Protocol:	Section V: Added new plant species to the protocol (Sugarbeet). Section VIII: Section Added new location for growth of the these plants. Section II: Added description of the experimental set up for these plants
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	Beta vulgaris (Sugar beet)
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: 11/11/2025 — **Findings:** All findings addressed.
IBC Discussion:	The Committee had no concerns about the proposed amendment.

NuRamp ID:	1121
Form ID:	26520
TITLE:	Examining the role of the healthy gastrointestinal microbiome in preventing infection with antibiotic resistant pathogens
PI:	Jennifer Auchtung
DEPT:	Department of Food Science and Technology
Protocol Biosafety Level:	BSL-2, ABSL-2 (Animal)
NIH Guidelines reference:	III-F-4, III-F-8, C-II, C-V, III-D-1-a, III-D-2-a

IBC MOTION:	Approve with the following contingencies:
Contingencies/Issues:	• Figure referenced is viewable in protocol.
Made by:	D. Loy
Seconded by:	D. Zinniel
IBC ACTION:	***Adopted by vote***
For:	6
Against:	0
Abstained:	1

PROTOCOL NOTES:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	Understanding interactions between the host, dietary compounds, the microbiota, and pathogens (Clostridioides difficile, Clostridium perfringens, Enterococcus faecalis) to understand susceptibility to disease and how to increase resistance to infections. Most studies are completed using in vitro models that incorporate different parts of these interactions. A subset of studies are performed in mice, when interactions must be studied in the context of a complete organism. In addition to these studies on microbiota-pathogen interactions, the PI also investigates questions related to healthy microbiota assembly and interactions with host diet to improve health.
Changes to the Protocol:	Updated personnel Revised research description in section II; Added name Limousia sp. ET540 to entry for Anaeromassilibacillus sp AN 172 to section III; Added new genes (scaffoldin and mucin degrading enzymes) to recombinant DNA section VI; Section XI, added plasmid maps as attachments; added table 3 with functions of Limousia genes to be cloned as attachment.
Risk Assessment Considerations:	
Genetic Material:	Scaffoldin, mucin degrading enzymes
Vector system:	N/A
Microbiological agents:	N/A → renamed Limousia sp. ET540
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:**
	2/17/2026	All findings addressed.
IBC Discussion:	The Committee wanted to see a figure the PI referenced in their research section as supplemental information to describe methods.	

NuRamp ID:	176
Form ID:	26547
TITLE:	Cell Based Assays and Quality Control Microbiology
PI:	Scott Johnson
DEPT:	Biological Process Development Facility
Protocol Biosafety Level:	BSL-2
NIH Guidelines reference:	III-F-1, III-F-6, III-F-8, III-E
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	H. Blair
Seconded by:	W. Niu
IBC ACTION:	***Adopted by vote***
For:	7
Against:	0
Abstained:	1

PROTOCOL NOTES:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	The QC Micro lab performs routine microbiology such as gram stain, identity testing and growth promotion through plating, isolation of colonies and identification of organisms. This group also performs cell-based assays for specific clients where the product activity can be measured using an existing cell-based assay. Typically, these assays are developed by the client and are technology transferred into the QC laboratory. Common tests performed in this lab include, characterization of Master and Working Cell banks, analysis of Environmental Monitoring samples from controlled cleanroom areas, and identification of organisms isolated from water and steam testing, process intermediate and bulk drug substance samples.
Changes to the Protocol:	Section I - update title to reflect cell-based assays associated with contracts will also be included on this protocol Section I - checked III-E for recombinant cell line Section II - Research description updated to include cell-based activity assay

	Section IV - add RAW 264.7 cells Section VI - removed gene targets from completed projects Section VIII - add room for the cell culture work Section XI - updated SOPs to current versions
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	N/A
OTCC:	RAW 264.7 cells
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: 1/14/2026 — **Findings:** All findings addressed.
IBC Discussion:	The Committee had a question regarding the newly added space and how the space fits with their large scale work

NuRamp ID:	627
Form ID:	26500
TITLE:	Chromatin modulation in the Pseudomonas /Arabidopsis pathosystem
PI:	Karin van Dijk
DEPT:	Department of Biochemistry
Protocol Biosafety Level:	BSL-1, BSL-1-P
NIH Guidelines reference:	III-F-6, III-F-8, C-II, III-E-2, III-E-2-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	D. Zinniel
Seconded by:	W. Niu
IBC ACTION:	***Adopted by vote***
For:	7
Against:	0

Abstained:	1
PROTOCOL NOTES:	
Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	Studies how the plant pathogen *Pseudomonas syringae* interacts with plants. Much of the work uses the model plant *Arabidopsis thaliana,* but some experiments also use tobacco, specifically *Nicotiana tabacum*, to evaluate the hypersensitive response. The hypersensitive response is a rapid localized plant defense response that can occur when a plant recognizes a bacterial pathogen or bacterial effector protein.
Changes to the Protocol:	Section I: Updated personnel, pathogen inventory, and biosketch Section II: A Research Summary and Rationale has been added. The Technical Description of Proposed Research has been updated to: (1) follow the requested format, (2) include a project focused on bacterial protein regulation, and (3) add tobacco (*Nicotiana tabacum*) plants for use in hypersensitive response assays. Section III: The Microorganism and Infectious Agent Information is updated. No new microbes added. Section V: The Research Organism Information now also includes Nicotiana tabacum Section VI: Updated VI. Recombinant and/or Synthetic Nucleic Acid Information - added genes related to bacterial protein regulation Section IX: Updated Specialized Equipment Information to include vacuum infiltration apparatus
Risk Assessment Considerations:	
Genetic Material:	Genes for bacterial protein regulation
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	Nicotiana tabacum
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:**
	5/29/2026	No findings.
IBC Discussion:	The Committee confirmed this was in line with the PI's previous work and had no concerns about the proposed amendment.	

NuRamp ID:	1441
Form ID:	26549
TITLE:	Two-Year Duration of Immunity Study in Cats to Demonstrate the Efficacy of a Feline Leukemia Vaccine, Killed Virus
PI:	Paige Crumley
DEPT:	Vice Chancellor for Research and Innovation
Protocol Biosafety Level:	ABSL-2
NIH Guidelines reference:	N/A
IBC MOTION:	Approve with the following contingencies:
Contingencies/Issues:	• BSO does a walkthrough to ensure animal spaces are adequate for the proposed work
Made by:	D. Zinniel
Seconded by:	D. Loy
IBC ACTION:	***Adopted by vote***
For:	7
Against:	0
Abstained:	1

PROTOCOL NOTES:

Review of Protocol:	The IBC Chair provided an overview of the protocol and opened discussion to the committee.
Summary of Project(s):	Investigating the Feline Leukemia Vaccine, Killed Virus in the United States and conducting additional studies in order to license the vaccine for use in China. The purpose of this study is to demonstrate the two year duration of immunity of one serial dose of FeLV Vaccine, killed virus.
Changes to the Protocol:	Update to the Protocol Attributes section in Section I to reflect that the challenge strain being used in this study is a recombinant strain, not wild type. NIH Guideline III-D-4-b selected. Update Section II to reflect the prior change to a two-year duration of immunity study from a one-year study. Section III: FeLV entry updated with strain 61E information. Section XI: publication describing the strain attached.
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	FeLV strain 61E
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 the Committee requested that the BSO complete a walk through to determine if the facilities to be used were still appropriate for the work.
Safety Concerns:	None.
Facility Concerns:	None.
Vaccines/Medical Surveillance:	None.
Administrative issues:	
Current safety training for staff:	Lab members need to complete BIO100, BIO101, BIO201.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	N/A **Findings:** Spaces audited under animal care program.
IBC Discussion:	The training was discussed; PI informed biosafety that the person identified as needing training is not needed on the protocol. Because the spaces are not audited under EHS, the Committee requested the BSO complete a walkthrough.

3. Notice of NIH Exempt Protocol Approvals: None.

4. Notice of Administratively Approved Amendments:

NuRamp ID:	52
Form ID:	**26471**
TITLE:	**Mechanisms of Viral host interactions in autoimmune diseases, cancer development, and anti-viral therapy development**
PI:	**Luwen Zhang**
DEPT:	School of Biological Sciences
Project Biosafety Level:	BSl-2, ABSL-2 (Animal)
NIH Guidelines reference:	III-F-2, III-F-6, III-F-8, C-VII, III-D-1-a, III-D-2-a, III-D-3-a, III-D-4-a
PROTOCOL NOTES:	
IRB protocol:	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol:	☑Yes ☐No
Objective of Study:	We plan to use an mRNA vaccine targeting the Epstein-Barr virus (EBV) protein LMP1 to potentially prevent or treat multiple sclerosis (MS). It is known that EBV infection is linked to MS, and the vaccine aims to induce T cells that attack LMP1-expressing cells, reducing the EBV burden and halting MS progression. This approach differs from

	current EBV vaccine trials and focuses on T cell immunity against LMP1, potentially benefiting not only MS patients but also individuals with other EBV-related diseases. A specific mouse strain will be used for testing.
Changes to the Protocol:	Scope Reductions: All references to the SARS-CoV-2 genome splitting and the BSL-3 project work plans have been removed. Vaccination Updates: References to both the SARS-CoV-2 and Rabies vaccines have been deleted from the document - only bat carcasses that are negative for these 2 pathogens will be used for generating cell lines. Waste Management: A detailed description of liquid waste treatment protocols has been added. Removed some personnel.
Review comments:	None.

NuRamp ID:	1375
Form ID:	**26478**
TITLE:	**The molecular interaction between corn and common rust**
PI:	**Saet-Byul Kim**
DEPT:	IANR
Project Biosafety Level:	BSL-2, BSL-2-P (Plant)
NIH Guidelines reference:	III-F-1, III-F-5, III-F-8, C-I, C-II, III-E, III-E-1, III-E-2, III-E-2-a, III-E-2-b-(4)
PROTOCOL NOTES:	
IRB protocol:	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol:	☐Yes ☑No
Objective of Study:	Our lab focuses on how common rust and southern corn rust cause disease in maize and identifying resistance genes from corn against other fungal diseases. To understand the mechanism of disease development, we study functions of fungal genes using molecular techniques such as in planta assay and microscopy. To identify resistance genes from maize, we make F2 population for fine mapping. Once we have candidate genes, we clone the genes and transiently express them in maize using virus system. Then we use *Nicotiana benthamiana* as a model plant to study the molecular interactions between maize resistance gene and fungal gene.
Changes to the Protocol:	My lab plans to work on southern corn rust, caused by *Puccinia polysora*, collected from Lincoln. We are inoculating hundreds of corn lines with southern corn rust in the greenhouse. We will also clone the fungal genes from southern corn rust to identify those associated with virulence. To investigate it, I want to add southern corn rust in this protocol. The proposed work with *Puccinia polysora* is the same as previously described with *Puccinia sorghi*.

Review comments:	None.

NuRamp ID:	615
Form ID:	**26391**
TITLE:	**Metabolic Engineering and Synthetic Biology**
PI:	**Wei Niu**
DEPT:	Chemical and Biomolecular Engineering
Project Biosafety Level:	BSL-2
NIH Guidelines reference:	III-F-1, III-F-2, III-F-3, III-F-4, III-F-8, C-II, C-III, III-E, III-D-2-a
PROTOCOL NOTES:	
IRB protocol:	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol:	☐Yes ☑No
Objective of Study:	Research focuses on changing the metabolic traits of non-pathogenic bacterial and yeast strains by deleting or inserting genetic materials into the strain's genome. The modified strain is cultured and studied for changes in metabolite secretion. The results guide the design of subsequent genetic changes in order to optimize the strain's performance in metabolite accumulation.
Changes to the Protocol:	Two Addgene plasmids are included as gene sources for extending our molecular toolbox. The addition does not change the scope of existing project.
Review comments:	None.

NuRamp ID:	1264
Form ID:	**26484**
TITLE:	**Approaches to understand cell-cell signaling**
PI:	**James Checco**
DEPT:	Chemistry
Project Biosafety Level:	BSL-2
NIH Guidelines reference:	III-F-8, C-I, C-II, III-E
PROTOCOL NOTES:	
IRB protocol:	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol:	☑Yes ☐No
Objective of Study:	Our lab aims to understand the chemical components and interactions that facilitate cell-to-cell communication. To accomplish this goal, we will take model cell lines or various tissues and extract their chemical components for analysis using several analytical methods (primarily liquid chromatography and mass spectrometry). We also study activation of cell surface receptors using biochemical assays. Other projects involve developing and evaluating molecules to bind to particular proteins of interest.
Changes to the Protocol:	Updated funding, updated personnel, updated genes (GPCR receptor, HA tag and GFP), updated cell lines (HEK293 OXTR-GFP, immortalized

	human myometrial), updated tissues (pig samples from collaborator), updated liquid waste disposal procedures and added Neutral Q disinfectant

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:

NuRamp ID:	**162**				
TITLE:	**Regulation of eukaryotic gene expression**				
PI:	**Audrey Atkin**				
DEPT:	School of Biological Sciences				
Project Biosafety Level:	**BSL-2**				
Project Termination Date:	6/10/2026				
PROTOCOL NOTES:					
IRB protocol(s):	☐Yes	☑No	**SROC protocol:**	☐Yes	☑No
IACUC Protocol(s):	☐Yes	☑No			
Disposition of rDNA and agents:	Destroyed or transferred to other UNL faculty.				

C. Other Business:

1. EHS Report

2. Non-Compliance Reports

II. ADJOURN

Motion: D. Loy
2nd: H. Blair
Time Adjourned: 3:56 PM

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-00026165	7/1/2026	UNL-00000177	Mechanistic insights into metal ion metabolism	Approved	Approved	Jaekwon Lee	**No**
UNL-00026537	6/30/2026	UNL-00001500	Field Parasitology Teaching and Research	Approved	Approved	Scott Gardner	**No**
UNL-00026536	6/30/2026	UNL-00001336	BVDV challenge of CD46-edited calves	Approved	Approved	Brian Vander Ley	**No**
UNL-00026522	6/16/2026	UNL-00000221	Engineering commensal bacteria and viruses for therapeutic application Research	Approved	Approved	Shi-Hua Xiang	**No**

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-00026550	UNL-00001450	7/14/2026	Understanding the Cognitive and Brain Health in Relation to Diet and Dietary Interventions	Submitted to Biosafety	Approved	Doug Schultz	Personnel
UNL-00026533	UNL-00001332	6/16/2026	Research on African Swine Fever virus	Submitted to Biosafety	Approved	Hiep Vu	Personnel
UNL-00026528	UNL-00000788	6/15/2026	Role of noncoding RNAs, protein coding genes, and protein neddylation in cardiovascular and metabolic diseases	Approved	Approved	Xinghui Sun	Personnel
UNL-00026527	UNL-00000025	6/16/2026	Molecular Genetic Analysis of Mycobacterium tuberculosis	Approved	Approved	Raul Barletta	Personnel
UNL-00026525	UNL-00001364	6/9/2026	Molecular and cellular interactions between plants and plant pathogenic bacteria	Approved	Approved	Clemencia Rojas	Lab Space
UNL-00026524	UNL-00001150	6/9/2026	Analysis of immune and endocrine biomarkers from human vaginal fluid, saliva, and blood	Approved	Approved	Tierney Lorenz	Personnel