University of Nebraska – Lincoln Institutional Biosafety Committee

Minutes of Regular IBC Meeting

Date: August 11, 2025

Location: Remote via Zoom
Call to Order: D. Loy called the meeting to order at 2:31 PM
Members Present: H. Blair (BSO), T. George (Community Member), K. Heath (Animal SME), A. Hilske (Plant SME), D. Loy (Chair), A. Mitra (Plant SME), M. Wiebe (Member), D. Zinniel (Lab Rep)
Members Absent: K. O'Neill (Community Member), W. Niu (Member), D. Petrik (Community Member), N. Sexton (Member)
Quorum Met: Yes
Ex-Officio Advisors: D. Hamernik, B. Osthus
Others: S. Alvarez, R. Cederberg, L. Crawford, L. Gregurek, A. Jungck, L. Pingault, E. Schulz, E. Weaver, B. Vander Ley
Review of Minutes from 7/14/2025 Meeting:
Motion to approve minutes made by H. Blair, 2nd by A. Mitra
Minutes approved unanimously as written.
For: 8
Against: 0
Abstained: 0

I. PUBLIC SESSION

A. Old Business:

1. Tabled Protocol registrations: None

2. Protocols with Contingencies Met:

NuRamp ID:	1293
Form ID:	**26055**
TITLE:	**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**
PI:	**Tomas Helikar**
DEPT:	Biochemistry
Project Biosafety Level:	**BSL-2, ABSL-2 (Animal)**
NIH Guidelines reference:	N/A
Date of IBC Review:	**7/14/2025**
IBC MOTION:	Approve with the following contingencies:

	• Dr. Helikar be made the PI on the protocol, all training requirements are met, and IACP provide updates at monthly meeting regarding status.
IBC ACTION:	***Adopted by voice vote***

PROTOCOL NOTES:	
Date of PI Response:	**7/16/2025**
PI Response:	PI changed from Dr. Abdollahi to Dr. Helikar, as requested by the committee. Biosafety training requirements met
Additional Comments:	IACP will provide status reports during IBC meetings.

NuRamp ID:	1500
Form ID:	**25943**
TITLE:	**Field Parasitology Teaching and Research**
PI:	**Scott Gardner**
DEPT:	School of Biological Sciences
Project Biosafety Level:	BSL-2
NIH Guidelines reference:	N/A
Date of IBC Review:	**6/9/2025**
IBC MOTION:	Approve with the following contingencies: • All lab personnel complete required training
IBC ACTION:	***Adopted by voice vote***

PROTOCOL NOTES:	
Date of PI Response:	**7/15/2025**
PI Response:	All required training has been completed.
Additional Comments:	None.

B. New Business:

1. New Protocol Registrations:

NuRamp ID:	1515
Form ID:	**26015**
TITLE:	**Molecular Biotechnology for Arthropod Pests Management**
PI:	**Lise Pingault**
DEPT:	Entomology
REVIEWED BY:	Full IBC Committee
Project Biosafety Level:	BSL-1, ACL-1
NIH *Guidelines* reference:	III-E, III-D-4-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
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 PI provided an overview of the protocol and the IBC Chair opened discussion to the committee.
Summary of Project(s):	Our research focuses on how biological mechanisms like methylation affect insecticide resistance and cuticle- related genes in mosquitoes.
Risk Assessment Considerations:	
Genetic Material:	RNAi
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	Mosquito
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:	N/A
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.
Date/Result of Pre-approval Safety Survey:	7/21/2025 — **Findings**: All findings addressed.
IBC Discussion:	The Committee clarified the RNAi delivery method and containment methods for adult mosquitos with the PI.

2. Protocol Amendments:

NuRamp ID:	**1338**
Form ID:	**26099**
TITLE:	**Viral Control of Cell Fate**
PI:	**Lindsey Crawford**
DEPT:	Biochemistry
REVIEWED BY:	Full IBC Committee
Protocol Biosafety Level:	**BSL-2, ABSL-2 (Animal)**

NIH Guidelines reference:	III-F-1, III-F-3, III-F-8, C-II, C-VII, III-E-1, III-D-1-a, III-D-2-a, III-D-3-a, III-D-4, III-D-4-b (new)
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	M. Wiebe
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):	Our main focus is on the human betaherpesviruses - common, chronic infections that cause disease during pregnancy and in immunocompromised individuals. We also study how these viruses interact with other infectious agents and health conditions to contribute to changes in the whole host.
Changes to the Protocol:	This IBC amendment request covers: administrative details, addition of plasmids to established projects, addition of genes to established projects, and details for a new collaborative project to understand the role of an additional DNA virus (human adenovirus) in stem cell (and their progeny) differentiation and function to understand how this common pathogen contributes to chronic disease and immune modulation.
Risk Assessment Considerations:	
Genetic Material:	TERT, Luciferase
Vector system:	N/A
Microbiological agents:	Adenovirus
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:	N/A
Administrative issues:	
Current safety training for staff:	Yes.

Current equipment certification:	Yes.	
Date/Result of last EHS Survey:	Annual	**Findings:**
	2/18/2025	All findings addressed.
IBC Discussion:	The Committee had no concerns and felt this was a natural progression of the PI's existing work.	

NuRamp ID:	**950**
Form ID:	**26128**
TITLE:	**Metabolomics Core Facility**
PI:	**Sophie Alvarez Y Albala**
DEPT:	Center for Biotechnology
REVIEWED BY:	Full IBC Committee
Protocol Biosafety Level:	**BSL-2**
NIH Guidelines reference:	III-F-8, C-I, C-VII
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	D. Zinniel
Seconded by:	M. Wiebe
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):	The group analyzes proteins and metabolites from a wide range of samples using mass spectrometry-based approaches.
Changes to the Protocol:	Added cell pellets of Germline stem cells.
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	N/A
OTCC:	Germline stem 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:	Hepatitis B vaccine
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	Annual / **Findings:**
	4/28/2025 / No findings.
IBC Discussion:	IBC discussed the source of the germline cells with PI.

NuRamp ID:	**1336**
Form ID:	**26111**
TITLE:	**BVDV challenge of CD46-edited calves**
PI:	**Brian Vander Ley**
DEPT:	IANR
REVIEWED BY:	Full IBC Committee
Protocol Biosafety Level:	**ABSL-1 (Animal)**
NIH Guidelines reference:	III-D-4-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	K. Heath
Seconded by:	D. Loy
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 IBC Chair opened discussion to the committee.
Summary of Project(s):	Bovine viral diarrhea virus primarily affects cattle and has infection features, notably pre-partum infections that persist the entire lifetime of the animal. We propose using assisted reproduction techniques in cattle to produce new heterozygous calves that can be evaluated for susceptibility.
Changes to the Protocol:	Added details for two experiments, developing heterozygous edited animals and an in-utero challenge study with edited embryos in BVDV naïve recipients.Added details about new housing and facilities for the studies
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	N/A
Organisms:	Cattle
OTCC:	Bovine embryos, fetal primary cell lines

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:	N/A — **Findings:** Inspected by USDA
IBC Discussion:	The Committee had questions about bovine containment outdoors. The attending veterinarian has been working closely with the PI and USDA on these projects.

NuRamp ID:	**1235**
Form ID:	**26132**
TITLE:	**Enhanced Biocontainment for Vaccine Development**
PI:	**Eric Weaver**
DEPT:	Nebraska Center for Virology
REVIEWED BY:	Full IBC Committee
Protocol Biosafety Level:	**BSL-3, ABSL-3 (Animal)**
NIH Guidelines reference:	III-F-1, III-D-1-a, III-D-2-a, III-D-3-a, III-D-4-b (new), III-D-7, III-D-7-a, III-D-7-b (new)
IBC MOTION:	Approve with the following contingencies:
Contingencies/Issues:	• Approval from FSAP to conduct select agent portion of the work, all lab members complete BSL-3 and Select Agent training, and clarification in the protocol that viral work has at least 60 min separation period and appropriate containment for influenza subtypes.
Made by:	M. Wiebe
Seconded by:	K. Heath
IBC ACTION:	***Adopted by voice vote***
For:	7
Against:	0
Abstained:	1
PROTOCOL NOTES:	

Review of Protocol:	The PI provided an overview of the protocol and IBC Chair opened discussion to the committee.
Summary of Project(s):	Our research explores the design and testing of universal influenza vaccine candidates that aim to provide broad protection across multiple flu types. These new vaccines differ from traditional ones by focusing on shared elements of flu viruses, enabling protection even when the specific strain is unknown.
Changes to the Protocol:	These amendments are to add the use of HPAI virus for use in vaccine and therapeutic research studies. This research will involve the amplification of viruses in eggs and tissue-culture. The viruses will be used to evaluate protective immune responses of vaccines and therapeutic effects of antibiotics. Animal models will be used for the challenge.
Risk Assessment Considerations:	
Genetic Material:	N/A
Vector system:	N/A
Microbiological agents:	Influenza A
Organisms:	Chicken, ferret, mouse
OTCC:	Tissue samples from challenged animals
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, Seasonal Influenza
Administrative issues:	
Current safety training for staff:	Lab members need to complete BSL-3 and Select Agent training.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	Annual: 12/19/2024 — **Findings:** All findings addressed.
IBC Discussion:	The Committee had questions about the separation and cleaning times listed in protocol when working with multiple strains of influenza and instructed the PI to make it clear in protocol that only one subtype will be tested at a time.

NuRamp ID:	**1463**
Form ID:	**26142**
TITLE:	**Understanding cell structure assembly and intercellular communication**
PI:	**Qing Tang**
DEPT:	Biochemistry
REVIEWED BY:	Full IBC Committee
Protocol Biosafety Level:	**BSL-2**
NIH Guidelines reference:	III-F-8, C-I, C-II, III-E, III-D-3-a
IBC MOTION:	Approve as written.
Contingencies/Issues:	• None
Made by:	H. Blair
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):	Mapping the biochemical activities of proteins involved in distinct aspects of branched actin regulation. These proteins will be imaged by expressing Halo-tagged protein fusion constructs in mammalian cells.
Changes to the Protocol:	We are adding a protein/plasmid category in our IBC protocol, small GTPases, that directly regulate cytoskeletal protein assembly dynamics at cell membrane. We use plasmids that express the enzymes to stimulate actin assembly in mammalian cell lines to study downstream actin binding proteins.
Risk Assessment Considerations:	
Genetic Material:	2 new GTPases
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:	Hepatitis B
Administrative issues:	
Current safety training for staff:	Yes.
Current equipment certification:	Yes.
Date/Result of last EHS Survey:	Annual: 5/30/2025 — **Findings:** No findings.
IBC Discussion:	The Committee had no concerns with the proposed amendment.

3. Notice of NIH Exempt Protocol Approvals: None

4. Notice of Administratively Approved Amendments:

NuRamp ID:	**1405**
Form ID:	**26098**
TITLE:	**Improving crop N use efficiency through biotechnology**
PI:	**Jinliang Yang**
DEPT:	Agronomy and Horticulture
Project Biosafety Level:	BSL-1, BSL-1P (Plant)
NIH Guidelines reference:	III-F-2, III-F-3, III-F-5, III-F-7, III-F-8, C-II, III-E, III-E-2, III-E-2-a, III-D-2-a
PROTOCOL NOTES:	
IRB protocol:	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol:	☐Yes ☑No
Objective of Study:	This research project aims to address the inefficient utilization of nitrogen (N) fertilizer in crop production using gene-editing, phenotyping, genomics, and plant breeding methods.
Changes to the Protocol:	New plasmid kit for gene editing experiments. No new projects have been added. Removed co-PI.
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:	**1387**
TITLE:	**The DTRA Detection of Toxins via Electrochemical Sensors (DTECS)**
PI:	**Rebecca Lai**
DEPT:	Chemistry
Project Biosafety Level:	**BSL-2**
Project Termination Date:	7/29/2025
PROTOCOL NOTES:	
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☐Yes ☑No
Disposition of rDNA and agents:	All remaining toxins associated with this project have been destroyed.

NuRamp ID:	**116**
TITLE:	**Switchgrass genes and proteins**
PI:	**Gautam Sarath**
DEPT:	Agronomy and Horticulture
Project Biosafety Level:	**BSL-1**
Project Termination Date:	7/29/2025
PROTOCOL NOTES:	
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☐Yes ☑No
Disposition of rDNA and agents:	Dr. Scott Sattler took over the materials described in this protocol.

NuRamp ID:	**1303**
TITLE:	**Investigating the pathogenesis and treatment of SARS-CoV-2 and Mycobacterium Tuberculosis (Mtb) as well as the coinfection of HIV-1 and Mtb using small animal models**
PI:	**Qingsheng Li**
DEPT:	Nebraska Center for Virology
Project Biosafety Level:	**ABSL-3 (Animal)**
Project Termination Date:	7/29/2025
PROTOCOL NOTES:	
IRB protocol(s):	☐Yes ☑No **SROC protocol:** ☐Yes ☑No
IACUC Protocol(s):	☑Yes ☐No
Disposition of rDNA and agents:	All materials destroyed via autoclave.

NuRamp ID:	**173**
TITLE:	**The Early Events in Simian Immunodeficiency Virus Rectal Transmission**
PI:	**Qingsheng Li**
DEPT:	Nebraska Center for Virology
Project Biosafety Level:	**BSL-2**

Project Termination Date:	7/29/2025				
PROTOCOL NOTES:					
IRB protocol(s):	☐Yes	☑No	**SROC protocol:**	☐Yes	☑No
IACUC Protocol(s):	☑Yes	☐No			
Disposition of rDNA and agents:	All materials destroyed via autoclave.				

C. Other Business:

1. EHS Report

II. ADJOURN

Motion: D. Zinniel
2nd: H. Blair
Time Adjourned: 3:46

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-00026139	UNL-00001483	7/23/2025	The Impact of Cancer Treatment on Lymphatic Vessel Regeneration and Remodeling	Approved	Approved	Mohammad Razavi	Personnel
UNL-00026122	UNL-00001078	7/9/2025	Improving the Microbiological Safety of Foods and the Food Processing Environment	Approved	Approved	Byron Chaves-Elizondo	Personnel
UNL-00026120	UNL-00001375	7/9/2025	The molecular interaction between corn and common rust	Approved	Approved	Saet-Byul Kim	Personnel and disinfectants

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-00026144	7/24/2025	UNL-00000110	Veterinary Systemic Pathology (VMED 672) Teaching Laboratory	Approved	Approved	Sarah Sillman	**No**
UNL-00026141	7/23/2025	UNL-00000177	Mechanistic insights into metal ion metabolism	Approved	Approved	Jaekwon Lee	**No**
UNL-00026136	7/23/2025	UNL-00000181	Ecology of ticks and tick-borne microorganisms in Nebraska	Approved	Approved	Roberto Cortinas	**No**
UNL-00026135	7/23/2025	UNL-00000730	Molecular studies on co-infections of Mycobacterium tuberculosis (Mtb) and human immunodeficiency virus (HIV) and interventions	Approved	Approved	Shi-Hua Xiang	**No**
UNL-00026134	7/23/2025	UNL-00001105	Understanding plant resistance to insects	Approved	Approved	Joe Louis	**No**
UNL-00026133	7/23/2025	UNL-00001309	Rural Drug Addiction Research (RDAR) Center	Approved	Approved	Rick Bevins	**No**
UNL-00026131	7/18/2025	UNL-00000049	Gene Delivery for Tissue Engineering and Therapeutic Applications	Approved	Approved	Angie Pannier	**No**
UNL-00026129	7/16/2025	UNL-00000312	Use of Cell Culture and DNA Transfection in Biological Systems Engineering Teaching Lab	Approved	Approved	Angie Pannier	**No**

EHS/Biosafety Officer Report for IBC meeting on 8/11/2025

Biosafety Recurring Audits Since last meeting:

Departments visited included Entomology, Engineering, School of Biological Sciences

BSL-2	BSL-1
• 5 labs	• 4 labs

Pre-approval Audits:

- None

Most cited deficiencies

Deficiency	EHS Checklist Code	Number of Deficiencies	Number Corrected
Disinfectants are expired or containers not appropriately dated	BIO01	4	1
Biohazardous spill kit issue	BIO03	1	0
Required training has not been completed (Chemical Safety)	OTH02	2	0

BSL-3 Lab Updates

- Final report for the Select Agent (SA) Renewal Inspection with USDA was released and we have sent our response.
- SA Amendment still under review.

Post approval Monitoring since Last IBC meeting:

- None