Illinois State University

Institutional Biosafety Committee (IBC) Meeting Minutes

Date: 7/23/2025

Location: JH 228 & Zoom

Start time: 3:32 pm **End time:** 5:04 pm

Members Present: Adam McCrary, Harmony Kiley, Tom Hammond, Kathy Spence, Wolfgang Stein, Tom Anderson (joined at 3:48pm)

Members Absent: Amy Gilliland, Viktor Kirik, Riley Francis

Guests Present: None

Staff Present: Jessica Lowe, Zach Miner

I. Chair Reminder- Declare Conflicts of Interest for Protocol Reviews

a. Wolfgang Stein will recuse himself during protocol review IBC-2025-0000013

II. Review of 6/18/2025 IBC Meeting Minutes

a. No concerns were voiced.

Motion: KS motioned to approve, WS seconds

For: 5; **Against:** 0; **Abstain:** 0

III. Prior Business

a. NIH IBC Self-Assessment

i. Still in progress, has been put on hold due to Cayuse implementation. IBC Chair and BSO to schedule a time to finish the Self-Assessment. When assessment is complete, BSO and Chair will be reported back to IBC

b. June minutes will be the first to be posted on the EHS website for public accessibility

IV. Protocol Review

a. **Full Committee Review- New Applications**

i.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000001	Pirmin Nietlisbach	Deer Mouse Island Genomics	2	2	SLB

Project Overview:

Field work on North American deer mouse (Peromyscus maniculatus) and extraction of DNA:
Deer mice will be trapped in southwestern British Columbia, Canada. Traps will be set over night and animals will be released alive after the following procedures. The collection of tissue samples is required for genetic analysis from various deer mouse populations of different sizes. Tissue will be collected by clipping a small circle (2 mm diameter) from the edge of a mouse ear. This is the standard procedure for sampling tissue from mice and is needed to provide DNA for genetic analysis. In addition to tissue sampling for genetic analysis, deer mice on one small island (Mandarte Island) need to be individually marked with passive integrated transponder tags. This is required to individually recognize deer mice and thereby measure individual survival and, together with genetic parentage analysis, reproductive success. Tissue will be stored in 1 mL APS buffer with antimicrobial activity (buffer at pH 8 contains 10% Ethylenediamine Tetra acetic Acid (EDTA), 1% Sodium Fluoride (NaF), and a small amount of Thymol)

Trapped mice will also be weighed and measured and from a subset we will collect urine, feces, saliva swab samples, and ectoparasites. These samples will be shipped to collaborators. Behavioral

assessments will be conducted by videotaping a mouse in an arena for maximally 20 minutes. This will allow to assess mouse personality. For a subset of mice, feces will be collected if the mouse defecates during handling, and externally visible parasites from the fur of the mouse may be collected from a subset. A saliva swab sample will be collected to also test for diseases.

Back in the lab at Illinois State University, DNA will be extracted from tissue samples in a biosafety cabinet.

Risk Assessment/Discussion:
Medium (Exposure could cause health effects potentially requiring medical attention, but control measures will protect from exposure)

Training:
All personnel have completed CITI Hazard Communication Training and CITI Initial Biosafety Training.

NIH Guidelines Section:
N/A- No work subject to NIH Guidelines.

Occupational Health Representative review:
Personnel under this protocol are being provided with occupational health screenings at OSF Occupational Health as a part of the IACUC protocol. Personnel utilize N95 respirators and appropriate Personal Protective Equipment (PPE) to mitigate potential occupational exposures. DNA extractions are being performed in a Biosafety Cabinet (BSC).

Additional Comments: Autoclave room in SLB is indicated in the protocol. Room to be added to a data dictionary in Cayuse, but this does not affect the protocol.

Motion: Approve; TH motioned, AM seconds	For: 6	Recuse: 0	Against: 0	Abstain: 0	Absent: 3

ii.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000003	Ryan Paitz	Using chicken embryos to investigate the impact of maternal steroids on early development	1	2	SLB

Project Overview:
Fertile chicken eggs will be obtained from the University of Illinois Poultry Farm and transported back to Illinois State University for incubation. Eggs will typically be treated by injecting steroids into the yolk and then incubated for varied durations (Maximum of 10 days) to examine how steroids impact the early development of embryos and their extraembryonic membranes. To do this, egg contents (yolk, albumen, embryo, membranes) will be homogenized separately and used to quantify steroid content and/or gene expression. Egg shells and homogenates will be decontaminated and disposed of at the end of the experiments.

Risk Assessment/Discussion:
Low (Almost no chance of harm)

Training:
Ryan has completed CITI Hazard Communication Training and CITI Initial Biosafety Training.

NIH Guidelines Section:
N/A- No work with recombinant or synthetic nucleic acid molecules

Occupational Health Representative review:
This protocol does not require any medical screening. Appropriate controls are in place to mitigate injuries and lab acquired infections.

Additional Comments:
Salmonella is listed as an infectious material- remove salmonella from that list
"What will be exposed to this material (Cell Lines, Tissues)" change humans to N/A

Motion: Approve pending changes mentioned in Cayuse. Chair will confirm changes made. TH motioned, WS seconds	For: 6	Recuse: 0	Against: 0	Abstain: 0	Absent: 3

iii.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000005	Fernanda Duque Mendoza	Using Wild-caught and laboratory birds for training and research in the field and laboratory	2	2	SLB

Project Overview:
Drs. Duque and Rodríguez-Saltos use laboratory and field experiments to investigate vocal communication and social behavior in birds. Working with wild and laboratory animals in these different settings poses various challenges, and early and extensive training is essential to minimize the stress on the birds and to guarantee the appropriate implementation of experimental designs. Different IACUC protocols detail training procedures and targeted experiments in this context. Briefly, training sessions aim to 1) train students in preparation for the field season when bird collections and experiments with wild-caught birds will be conducted (separate IACUC protocols have been or will be submitted depending on the research project), 2) collect tissue samples to optimize procedures and train students on laboratory techniques for research, and 3) test behavioral setups and design to optimize experiments for research. For research, our aim is to 1) understand how signalers use different signal modalities to communicate with other individuals and how these signals have evolved, and 2) how the receiver detects and discriminates signals, as well as processes relevant information to decide about a response. Thus, proposed experiments will focus on investigating the neural mechanisms of multimodal communication, vocal learning, and preference for social audiovisual signals.

Our focal species are European starlings (Sturnus vulgaris) (EUST) and house sparrows (Passer domesticus) (HOSP) as the wild-caught species. Both species are introduced, and our intervention will not affect population numbers. And as laboratory animals, we will work with zebra finches (Taenopygia guttata) (ZF), which are bred and raised in captivity. We will buy them from approved

suppliers for training and research purposes. Potentially biohazardous conditions stemming from the use of wild-caught and laboratory birds include exposure to potential infectious agents that are known to occur in avian species. However, protocols for the collection, husbandry, and handling of wild-caught and laboratory birds are in place to minimize the risk to researchers and personnel and of cross-contamination between species.

Working with wild-caught and laboratory animals provides a powerful approach to investigate the mechanisms of vocal communication and social behavior in natural contexts and controlled conditions. Tissue samples collected from these birds will be used for training purposes and research using various techniques, including measuring hormone levels in blood, sexing individuals when the species is monomorphic, obtaining body measures to assess overall condition, and potential changes due to experimental treatments. Brains will be collected to investigate neural correlates of behavior and neural responses to experimental stimuli. Other body tissues will be collected to test procedures and answer questions related to social behavior and the effects of the environment on these processes. Feathers may also be collected to investigate long-term correlates of different conditions that may affect social behavior, such as chronic stress levels.

Risk Assessment/Discussion:
PI indicated low overall risk; however, a medium risk level is more appropriate.

Training:
All personnel have completed CITI Hazard Communication Training and CITI Initial Biosafety Training.

NIH Guidelines Section:
N/A- No work with recombinant or synthetic nucleic acid molecules

Occupational Health Representative review:
Personnel under this protocol are being provided with occupational health screenings at OSF Occupational Health as a part of the IACUC protocol. Personnel utilize appropriate engineering controls and PPE to mitigate potential occupational exposures.

Additional Comments:
Changes for PI to make:

- Provide approved suppliers for birds
- Remove all question marks that are due to copy and pasting
- Add SLB and FSA rooms to facilities location list
- Change final risk assessment to “medium”

Motion: Approve pending changes mentioned in Cayuse. Chair will confirm changes made. AM motioned, WS seconds	For: 6	Recuse: 0	Against: 0	Abstain: 0	Absent: 3

iv.

IBC Protocol #	PI	Title	BSL	Risk Group	Building

IBC-2025-0000009	Kara Andres	Analysis of environmental DNA and fish microbiomes	1	1	SLB

Project Overview:
The research in my lab integrates fieldwork, lab experiments, and molecular tools to better understand ecological dynamics and conservation biology in various environments. Proposed experiments include:

Environmental DNA (eDNA) from water and soil: We will collect environmental samples from various natural environments (water and soil) to isolate and amplify the DNA contained within. Laboratory techniques include DNA extraction, (q)PCR, and library preparation for next-generation sequencing. Recombinant DNA molecules will be constructed for next generation sequencing (as part of library preparation), but these molecules will not be intentionally introduced into live organisms for propagation. Environmental samples may contain potentially pathogenic organisms, but these will not be targeted in our work. This project may include sampling water from tanks containing laboratory-reared organisms (e.g., fish) held in the department's aquatic facility.
Gut microbiome experiments: We will conduct experiments to assess the gut and/or skin microbiome of various fish species, particularly invasive species. This research will involve sampling intestinal/fecal material from wild organisms (i.e., fish) in natural habitats or captive rearing facilities such as hatcheries or aquariums. This project may include sampling the microbiomes of laboratory-reared organisms held in the department's aquatic facility. Once collected, organisms will be dissected in the lab to extract gut contents for further analysis.
DNA extraction from tissue samples: We will conduct genetic experiments on wild organisms by assessing DNA extracted from tissue samples. Organisms will be sampled from the wild and DNA tissue samples (e.g., fin clips) will be extracted and amplified using similar techniques as described above.

Risk Assessment/Discussion:
Low (Almost no chance of harm)

Training:
Kara has completed CITI Hazard Communication Training, CITI Initial Biosafety Training, and Zoonosis and Working Safely with Animals Training.

NIH Guidelines Section:
N/A- No work with recombinant or synthetic nucleic acid molecules

Occupational Health Representative review:
This protocol does not require any medical screening. Appropriate controls are in place to mitigate injuries and lab acquired infections.

Additional Comments:
Changes for PI to make:

- Change room numbers in SLB
- Add room numbers for autoclaves

Motion: Approve pending changes mentioned in Cayuse. Chair will confirm	For: 6	Recuse: 0	Against: 0	Abstain: 0	Absent: 3

changes made. TH motioned, AM seconds					

v.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000010	Javier del Barco Trillo	Experimentation with wild-caught Peromyscus species in captivity	2	2	FSA

Project Overview:
Peromyscus individuals will be trapped regionally and transported to an animal facility in ISU. Different subsets of animals will be tested soon after arrival, after 2 months in captivity, and we will also raise up to 5 generations. These animals will be used for behavioral trials and euthanized to collect samples (mainly testis and sperm in males, brains in a small subset, and other tissues for future -omics studies, e.g. muscle and spleen.)

Risk Assessment/Discussion:
High (Significant risk of health effects from exposure, even with controls in place. Additional controls will be required to prevent exposure and may require department and/or college-level approval)

Training:
All personnel have completed CITI Hazard Communication Training and CITI Initial Biosafety Training.

NIH Guidelines Section:
N/A- No work with recombinant or synthetic nucleic acid molecules

Occupational Health Representative review:
Personnel under this protocol are being provided with occupational health screenings at OSF Occupational Health as a part of the IACUC protocol. Personnel utilize N95 respirators, engineering controls, and appropriate Personal Protective Equipment (PPE) to mitigate potential occupational exposures.

Additional Comments:

- IBC will not approve unless there is a medical screening process for the Peromyscus before coming into the vivarium
- Wild caught Peromyscus should not be brought back to the vivarium with the possibility of cross contamination and increased risk of hantavirus transmission
- When doing dissections, how is aerosol generation being minimized?
- Submit protocol how current Peromyscus will be handled

Motion: Deny protocol; WS motioned, TH seconds	For: 6	Recuse: 0	Against: 0	Abstain: 0	Absent: 3

b. **Emails sent 6/1/25 to PIs with Protocols Due for Renewal in September**
    i. EHS has sent out reminder emails to submit protocols in Cayuse Hazard Safety 90 days in advance to PIs with protocols due for renewal in October. The PIs that received the email were Hammond, Andres, Eldeeb, and Yang & Rhykerd.

V. New Business

a. Autoclave indicator strips
    i. EHS to start requiring per autoclave cycle for waste
    ii. 30 cents per strip
    iii. Already identified an insufficient autoclave cycle using an indicator strip which was confirmed to have passed the 2nd cycle
        1. IBC was in agreeance; none against
b. Schedule training with Riley Francis

VI. Review of Incidents

a. No incidents

VII. Inspections/Ongoing Oversight

a. No new lab inspection reports - all completed for summer
b. Kiley and McCrary attended autoclave training in FSA; will work on assessing autoclaves

VIII. IBC Training

a. No training was conducted for IBC members during the meeting.

IX. Public Comments

a. There were no public comments.

X. Open Discussion

a. There was discussion about the protocol review flow chart and routing.

XI. Next Scheduled Meeting Date

a. Thursday, August 21st from 1:00-2:00pm JH 228 and Zoom

XII. Adjournment

a. The IBC Chair (TH) moved to adjourn the meeting at 5:04PM.