

Illinois State University
Institutional Biosafety Committee (IBC) Meeting Minutes

Date: 10/16/2025

Location: JH 228 & Zoom

Start time: 1:03 PM **End time:** 2:08 PM

Members Present: Adam McCrary, Harmony Kiley, Tom Hammond, Kathy Spence, Wolfgang Stein (left at 1:57pm), Amy Gilliland, Riley Francis (left at 1:57pm), Tom Anderson

Members Absent: Viktor Kirik

Guests Present: None

Staff Present: Jessica Lowe, Zach Miner

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

- a. None

II. Review of 9/18/2025 IBC Meeting Minutes

- a. Motioned to approve minutes.

Motion: TH motioned to approve, AM seconds

For: 8; **Against:** 0; **Abstain:** 0

III. Prior Business

- a. NIH IBC Self-Assessment

- i. Still in progress. BSO and Chair to schedule a time to finish the Self-Assessment.

When assessment is complete, BSO and Chair will be reported back to IBC. IBC will go through once finalized to implement identified best practices and updates.

IV. Protocol Review

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

- i.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000012	Fernanda Duque	Investigating the evolution of communication signals and sensory systems with wild birds in Ecuador	2	2	SLB

Project Overview:

The proposed research focuses on investigating the diversity and evolution of communication signals that tropical birds exhibit, and that are often understudied. Investigating these behaviors has the potential to reveal previously undescribed behaviors and novel mechanisms for the production and modulation of vocal signals, as well as adaptations in sensory systems that facilitate communication in avian species. As such, our research in Ecuador currently has two main themes: 1) the evolution of high-frequency vocalizations in birds, and 2) the evolution and regulation of timing in birdsong.

To investigate the evolution of high-frequency vocalizations in birds, we will focus on conducting field and laboratory experiments with hummingbirds and other avian species that produce high-frequency vocalizations beyond the known hearing range of birds. Such experiments involve passive acoustic recordings in the field as well as playback experiments in the field and in captivity at field

sites to investigate the social function of these signals. We will also investigate the hearing sensitivity of these hummingbirds and other related species that are exposed to the high-frequency vocalizations of sympatric species. To achieve this, playback experiments will be conducted to assess behavioral responses, and brains collected to investigate patterns of neural activation across relevant brain regions involved in sensory processing and the regulation of vocal behavior. Current target species include the Ecuadorian hillstar (*Oreotrochilus chimborazo*), speckled hummingbird (*Adelomyia melanogenys*), buff-tailed hummingbird (*Boissonneaua flavescens*), white-necked jacobin (*Florisuga mellivora*), rufous-tailed hummingbird (*Amazilia tzacatl*), and other sympatric hummingbird species.

To investigate the evolution and regulation of timing in birdsong, two projects are currently undergoing. One focuses on investigating the remarkable song of the scaly-breasted wren (*Microcerculus marginatus*), which exhibits intervals that increase in 0.5-s steps with a precision comparable to that of experienced human musicians. Currently, this project involves conducting playback experiments and audio and video recordings in the field, as well as collecting blood samples to determine the sex and age of these birds. As we learn more about the natural history and social behavior of this species, we will propose additional experiments with this bird in the future.

The second project investigating the role of timing in birdsong involves studying the precise synchronization of duetting wrens using a comparative approach with two species, bay wren (*Cantorchilus nigricapillus*) and plain-tailed wren (*Pheogopedius euophrys*). In these species, males and females sing with such coordination that the duet sounds like a song produced by a single bird. We will conduct operant conditioning experiments to assess female preference for their duetting partner and the level of synchrony they can achieve when the timing in the duet is challenged. These experiments will involve conducting audio and video recordings in the field, operant conditioning experiments in captivity, and collecting blood samples for sexing birds.

All fieldwork will be conducted at different field sites in Ecuador. In experiments involving captive birds, husbandry procedures will be conducted by research personnel wearing appropriate PPE, including disposable gloves and face masks. Generally, these experiments last only for a few days to a couple of weeks. Because of the limited time in the field, birds will not be quarantined but will be monitored every day for any signs of pain or disease. Because all the projects here involve importing samples of wild birds into the United States, we currently hold a USDA import permit. This permit includes treatments to inactivate highly pathogenic Avian influenza (HPAI) and Newcastle disease (ND) in the collected samples, making it safer to work with them and preventing the introduction of these pathogens into the United States.

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 with recombinant or synthetic nucleic acid molecules

Occupational Health Representative review:

All personnel on this protocol have been medically screened through OSF. Appropriate controls are in place to mitigate injuries and lab acquired infections.

Additional Comments:

- Address question marks throughout the form.
- Select “yes” for local transport and state that samples are stored in a locked freezer then is transported to lab.
- In the personnel section, please clarify compensation for all personnel. Select yes if they are being paid by ISU (e.g., faculty, RA, TA, hourly).
- Upload CITI training completion certifications to “Attachments.”
- Check “injection” in the Safety Section as a potential route of exposure due to use of sharps.

Motion: Approve pending minor modifications listed above. AM motioned to approve, WS seconds	For: 8	Recuse: 0	Against: 0	Abstain: 0	Absent: 1
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ii.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000024	Suzanne Nolan	Neuroscience of adolescent learning and motivation	2	2	SLB

Project Overview:

Our lab studies the neural circuits of addiction and motivation. Neurons are a deeply interconnected web of cells, so the ability to disentangle their connections is paramount to studying the underpinnings of addiction and motivation. Viruses allow us the ability to more easily and selectively trace and manipulate those pathways to see their effects on behavior.

Risk Assessment/Discussion:

Extreme (due to use of acute biological toxin)

Training:

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

NIH Guidelines Section:

Section III-F8

Occupational Health Representative review:

IACUC and EHS will follow-up with researcher to determine whether medical screening is required under the OHSP.

Additional Comments:

- In the Overview, briefly describe how the biological toxins will be used in addition to the viral vectors.
- NIH Guidelines: Select Section III-E1
- NIH Guidelines: Deselect Section III-F8
- Vectors/Plasmids: Fill out Tropism for DJ9-CAG-GRAB

- Transport/Shipping: Check yes that biohazardous materials will be transported within the building or on campus. Please provide the plan for when transporting and how - Upload CITI Training Completion Certificates in Attachments section - Risk Assessment: Change Severity to Serious which will change Final Risk Assessment to Extreme - Safety Section: Replace “contamination” with “decontamination” - Safety Section: Replace “eye protein” typo with “eye protection” - Accidental Spill/Splash Response: Please add that all bleach waste shall be flushed with copious amounts of water (pH must be between 5-9)					
Motion: Motioned to approve pending minor modifications. TH motioned, WS seconded	For: 8	Recuse: 0	Against: 0	Abstain: 0	Absent: 1

iii.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000030	Craig Gatto	Expression of recombinant Na,K-ATPase subunits in E. coli and Mammalian Cells	2	1	SLB

Project Overview:

The proposed work will utilize recombinant DNA procedures to clone Na,K-ATPase subunits (alpha-, beta-, & gamma) into expression vectors, which will then be used to transform/transfect E. coli or Mammalian (HEK-293, MDCK) cells. Expression vectors will be utilized to express complete Na pump or its component parts. Proteins will be isolated, purified, and examined by enzymatic assays and microscopic examination. Both wild-type and site-directed mutants will be characterized. Mutations will be targeted at residues that alter ion- or ATP-binding, as well as locations deemed important for subunit-subunit interactions. All work will take place in SLB, which is designated BSL-2.

Risk Assessment/Discussion:

Low (Almost no chance of harm)

Training:

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

NIH Guidelines Section:

Section III-F3: This research involves recombinant or synthetic nucleic acids that consist solely of the exact recombinant or synthetic nucleic acid sequence from a single source that exists in nature.

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:

- Overview: Change room numbers in SLB

- Overview: Add frog oocytes to overview and title or remove frog oocytes from cell lines and tissues section
- NIH Guidelines: Select section III-E1; Deselect others F3-F5
- Cell Lines: Deselect humans from being exposed (cell lines and frog oocytes)
- Infectious Agents: Deselect humans from being exposed
- Room does not have a biosafety cabinet. Due to mammalian cell lines, a BSC is required.
- **EHS to look into Select Agents in Facilities section**
- Transport: provide more specific location of autoclave room
- Personnel: Change compensation to yes
- Upload CITI Training Completion Certificates to Attachments section
- Safety: Remove question mark in reusable equipment section
- Confirm with PI that no N95s are used
- Accidental Spill/Splash Response: Please add that all bleach waste shall be flushed with copious amounts of water (pH must be between 5-9)
- Accidental Spill/Splash Response: Insert help text for spills to include more information
- Accidental Spill: Confirm where the centrifuges are being used. If certain room, then the lab must be added to the protocol.

Motion: Motioned to approve pending minor modifications. TH motioned, WS seconded	For: 8	Recuse: 0	Against: 0	Abstain: 0	Absent: 1
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b. Amendments

i.

IBC Protocol #	PI	Title	BSL	Risk Group	Building
IBC-2025-0000011	Jeremy Langdon	Vivarium operations for wild-caught animals and vendor-supplied animals without a health certification	2	2	FSA

Project Overview:

Multiple approved research projects currently require the housing and husbandry of wild-caught and domestic birds, wild-caught house mice (*Mus musculus*), wild-caught deer mice (*Peromyscus maniculatus*), and wild-caught white-footed mice (*Peromyscus leucopus*). The goal of this protocol is to ensure that the animals, their caging, and their waste are handled properly to ensure the safety of all people involved in their use and care.

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:

All personnel on this protocol have been medically screened through OSF. Appropriate controls are in place to mitigate injuries and lab acquired infections.

Additional Comments:

- Safety: Change question mark to degree symbol

Motion: Motioned to approve pending minor modifications AM motioned, TH seconded	For: 6	Recuse: 0	Against: 0	Abstain: 0	Absent: 3
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ii.

c. Member Review- Upcoming for October Full Committee Review

- i. IBC-2025-0000020 – Biochemical and Molecular investigations of protein quality control and mitochondrial quality control – Mohamed Eldeeb

V. New Business

- a. Rodent Screening and Quarantine Process Discussion
 - i. Continuing discussion about creating quarantine process. Meetings are being held to create procedure.

VI. Review of Incidents

- a. No incidents

VII. Inspections/Ongoing Oversight

- a. Scheduled for Wednesday, October 22nd 1:30-4pm

VIII. IBC Training

- a. None

IX. Public Comments

- a. There were no public comments.

X. Open Discussion

- a. Discussion about having wording changed in NIH Guidelines section of Cayuse application. Considered to change wording on NIH Section III-E to state there shall be IBC approval before any research can be done. Conclusion was that no wording will change to stay consistent with NIH Guidelines.

XI. Next Scheduled Meeting Date

- a. Thursday, November 20th from 1:00-2:00pm JH 228 and Zoom

XII. Adjournment

- a. The BSO (AM) moved to adjourn the meeting at 2:10pm