Iowa State University
Institutional Biosafety Committee Meeting for projects covered by the NIH Guidelines
July 8, 2025
Via Webex

-	Whitham, Steve (Chair and Plant expert	X	Kaptur, Jean (Animal expert)	X	Sahin, Orhan (Member)
X	Cho, Michael (Member)	X	Matos, Betsy (BSO)	X	Schmidt, Clarice Lauer (Member)
X	Hall, Katie (alt. Matos/BSO)	-	McGill, Jodi (Member)	X	Unruh, Daniel (Member)
-	Halverson, Larry (alt. Vollbrecht/Plant expert)	-	Pineyro-Pineiro, Pablo (alt Sahin)	X	Visek, Callie (Local non-affiliated member)
X	Jurenka, Russell (Member)	X	Reilly, Sharon (Local non-affiliated member)	X	Vollbrecht. Erik (Plant expert)
				X	Ziegenfuss, Steve (alt. Matos/BSO)

Key: X = present; - = absent

CALL TO ORDER:

O. Sahin (Vice-chair) called the meeting to order at 2:18 PM. A quorum was present at all times. The meeting was held via Webex. All committee members were provided with all documents prior to the meeting.

Other attendees: S. Kaatz (Office of Research Ethics (ORE)), S. Zamzow (ORE)

The minutes from the June meeting were reviewed. There was a motion to approve the minutes as written.

10 total votes:	9	For	0	Against	1	Abstain

PROJECTS FOR DISCUSSION:

The following matters, addressed in protocol review forms, will be considered for all reviewed projects:

- Verification that the PI and laboratory staff performing the research have been appropriately trained in the safe conduct of research – all required IBC trainings must be completed before an application is reviewed at the full committee meeting
- Agent characteristics (e.g., virulence, pathogenicity, environmental stability) – this information is included in the submitted application
- Types of manipulations planned – this information is included in the submitted application
- Source(s) of the inserted DNA sequences (e.g., species) – this information is included in the submitted application
- Nature of the inserted DNA sequences (e.g., structural gene, oncogene) – this information is included in the submitted application
- Host(s) and vector(s) to be used – this information is included in the submitted application
- Whether an attempt will be made to obtain expression of a foreign gene, and if so, the protein that will be produced – this information is included in the submitted application
- Containment conditions to be implemented – this information is included in the submitted application

- Applicable section of the *NIH Guidelines* (e.g., Section III-D-1, Section III-E-1, etc.) – this information is included in the submitted application

1) (Amendment – Espin Palazon) *Danio rerio* experimental procedures (IBC-23-009)

Overview:

- The goal of this project is to identify and characterize new molecular regulators of blood formation.
- The currently approved biosafety containment levels for this project are rDNA Biosafety Level 1 (BL1) and Biosafety Level 2 (BSL-2).
- The currently applicable NIH Guidelines are III-D-4-a.

Committee Discussion:

- Prior to the meeting, the PI was sent a question on funding. It was determined that as this question does not apply to the IBC, the PI does not need to address this question.

Review:

- The approved biosafety containment levels for this project are rDNA Biosafety Level 1 (BL1) and Biosafety Level 2 (BSL-2).
- The applicable NIH Guidelines are III-D-4-a.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

2) (Annual review - Kreuder) Kreuder Laboratory General Operations Protocol (IBC-24-060)

Overview:

- The objectives of this proposal are to provide basic approval for routine culture, maintenance and research on a variety of bacterial pathogens studied by the PI's laboratory.
- The currently approved biosafety containment levels for this project are rDNA Biosafety Level 2 (BL2), Biosafety Level 1 (BSL-1) and Biosafety Level 2 (BSL-2).
- The currently applicable NIH Guidelines are III-D-1-a and III-D-2-a.

Committee Discussion:

- Prior to the meeting, the PI updated the IBC application addressing the preliminary question. Based on this updated application, there were no additional controverted issues.

Review:

- The approved biosafety containment levels for this project are rDNA Biosafety Level 2 (BL2), Biosafety Level 1 (BSL-1) and Biosafety Level 2 (BSL-2).
- The applicable NIH Guidelines are III-D-1-a and III-D-2-a.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

3) (Annual review - Valenzuela) EDGE FGT: Development of fibroblasts and organoids as tools for functional genomics in turtles, applicable to other non-mammalian vertebrates (IBC-24-064)

Overview:

- The goal of this project is to develop in vitro protocols from animal fibroblasts and organoids, to edit the sequence of genes, and to turn genes on and off at will, so that gene function can be studied without the need for live animals.
- The currently approved biosafety containment level for this project is rDNA Biosafety Level 1 (BL1).
- The currently applicable NIH Guidelines are III-E-1.

Committee Discussion:

- There were no controverted issues regarding this application.

Review:

- The approved biosafety containment level for this project is rDNA Biosafety Level 1 (BL1).
- The applicable NIH Guidelines are III-E-1.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

4) (Amendment - Caceres) Research on Influenza and coronaviruses (IBC-24-112)

Overview:

- The goal of this study is to contribute to developing novel, more efficacious therapeutics against these pathogens by leading to the development of novel vaccine platforms and antiviral targets related to the viral agents or host-targeted antivirals.
- The currently approved biosafety containment levels for this project are rDNA Biosafety Level 1 (BL1), rDNA Biosafety Level 2 (BL2), rDNA Biosafety Level 3 (BL3), Biosafety Level 2 (BSL-2) and Biosafety Level 3 (BSL-3). A previous amendment added rDNA Animal Biosafety Level 1 (BL1-N), rDNA Animal Biosafety Level 2 (BL2-N), Animal Biosafety Level 1 (ABSL-1) and Animal Biosafety Level 2 (ABSL-2). This amendment removes rDNA Biosafety Level 3 (BL3) and Biosafety Level 3 (BSL-3).
- The currently applicable NIH Guidelines are III-D-1-a, III-D-1-b, III-D-2-a, III-D-2-b, III-D-3-b, III-D-4-a and III-D-7-b. This amendment removes III-D-7-b.

Committee Discussion:

- Prior to the meeting, the PI updated the IBC application addressing the preliminary questions. Based on this updated application, there were no additional controverted issues.

Review:

- The approved biosafety containments levels for this project are rDNA Biosafety Level 1 (BL1), rDNA Biosafety Level 2 (BL2), Biosafety Level 2 (BSL-2), rDNA Animal Biosafety Level 1 (BL1-N), rDNA Animal Biosafety Level 2 (BL2-N), Animal Biosafety Level 1 (ABSL-1) and Animal Biosafety Level 2 (ABSL-2).
- The applicable NIH Guidelines are III-D-1-a, III-D-1-b, III-D-2-a, III-D-2-b, III-D-3-b and III-D-4-a.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

5) (Reviewed at the June Meeting – Olmedo Valarde) SOP for Biosafety (plant pathogens, recombinant organisms) (IBC-25-006)

Overview:

- The goals of this study are to: 1) understand the interactions between hemipteran insect vectors with their plant hosts and the pathogens they transmit; and 2) characterize the microbe populations associated with hemipteran insects, such as leafhoppers and aphids.
- The originally approved containment levels were rDNA Biosafety Level 1 (BL1) and Biosafety Level 1 (BSL-1). The PI has not proposed changes to the containment levels.
- The originally approved NIH Guidelines were III-E. The PI has now proposed that section III-D-4 of the NIH Guidelines also apply.

Committee Discussion:

- The PI addressed the questions from the June IBC meeting. Based on the clarification and updated application noting that a greenhouse will be used, it was noted that the floor of the greenhouse was listed incorrectly. [redacted]

Review:

- The approved biosafety containment levels for this project are rDNA Biosafety Level 1 (BL1) and Biosafety Level 1 (BSL-1).
- The applicable NIH Guidelines are III-E and III-D-4.
- There was a motion to approve this application with the following change:
    - On the “Experimental Design” tab, the reference to the greenhouse [redacted] will be changed [redacted].

10 total votes:	10	For	0	Against	0	Abstain

6) (New - Johansen) Drosophila Breeding (IBC-25-051)

Overview:

- The goal of this protocol is to have a breeding colony for *Drosophila melanogaster* with multiple genetic mutations.
- The proposed biosafety containment level for this project is rDNA Biosafety Level 1 (BL1).
- The proposed NIH Guidelines are III-D-4-a.

Committee Discussion:

- Prior to the meeting, the PI updated the IBC application addressing the preliminary IBC question. Based on this updated application, there were no additional controverted issues.

Review:

- The approved biosafety containment level for this project is rDNA Biosafety Level 1 (BL1).
- The applicable NIH Guidelines are III-D-4-a.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

7) (New - Caceres) Research on Porcine Reproductive and Respiratory Virus (PRRSV) (IBC-25-056)

Overview:

- The goal of this study is to generate information to develop novel vaccine platforms and antiviral targets related to the viral agent or host-targeted antivirals.
- The proposed biosafety containment levels for this project are rDNA Biosafety Level 2 (BL2) and Biosafety Level 2 (BSL-2).
- The proposed NIH Guidelines are III-D.

Committee Discussion:

- Prior to the meeting, the PI updated the IBC application addressing the preliminary question. Based on this updated application, there were no additional controverted issues.

Review:

- The approved biosafety containment levels for this project are rDNA Biosafety Level 2 (BL2) and Biosafety Level 2 (BSL-2).
- The proposed NIH Guidelines are III-D.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

8) (New - Caceres) Development of cell lines from tissues of avian species (IBC-25-059)

Overview:

- The goal of this study is to generate information to develop novel vaccine platforms and antiviral targets related to the viral agent or host-targeted antivirals.
- The proposed biosafety containment levels for this project are rDNA Biosafety Level 1 (BL1), rDNA Biosafety Level 2 (BL2), Animal Biosafety Level 1 (ABSL-1) and Biosafety Level 2 (BSL-2).
- The proposed NIH Guidelines are III-D, III-D-1-a, III-D-2-a and III-D-2-b.

Committee Discussion:

- Prior to the meeting, the PI updated the IBC application addressing the preliminary questions. Based on this updated application, there were no additional controverted issues.

Review:

- The approved biosafety containment levels for this project are rDNA Biosafety Level 1 (BL1), rDNA Biosafety Level 2 (BL2), Animal Biosafety Level 1 (ABSL-1) and Biosafety Level 2 (BSL-2).
- The proposed NIH Guidelines are III-D, III-D-1-a, III-D-2-a and III-D-2-b.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

9) (New - Verhoeven) Testing of mRNA vaccines for efficacy against viral pathogens in vivo (IBC-25-061)

Overview:

- The goal of this study is to develop new mRNA vaccines for equine herpes virus-1 and test the efficacy of those vaccines in vivo prior to a future study.

- The proposed biosafety containment levels for this project are rDNA Biosafety Level 2 (BL2), Animal Biosafety Level 2 (ABSL-2) and Biosafety Level 2 (BSL-2).
- The proposed NIH Guidelines are III-D-2-a, III-D-3-a and III-E-1.

Committee Discussion:

- Prior to the meeting, the PI updated the IBC application addressing the preliminary question. Based on this updated application, there were no additional controverted issues.

Review:

- The approved biosafety containment levels for this project are rDNA Biosafety Level 2 (BL2), Animal Biosafety Level 2 (ABSL-2) and Biosafety Level 2 (BSL-2).
- The proposed NIH Guidelines are III-D-2-a III-D-3-a and III-E-1.
- There was a motion to approve this application.

10 total votes:	10	For	0	Against	0	Abstain

OLD BUSINESS:

i. None at this time.

NEW BUSINESS:

i. Introduction of new committee members – Two new committee members have joined the committee. One new member is a local non-affiliated member and the other new member is from the Animal Science department.

FOR THE GOOD OF THE ORDER:

Meeting dates are proposed for August 12, 2025 and September 9, 2025. Meetings will be held via Webex. Meetings begin after the non-NIH meeting has concluded.

ADJOURNMENT:

The meeting was adjourned at 2:40 PM.

Recorded by: Sarah Zamzow, IACUC/IBC Administrator