TEXAS A&M UNIVERSITY
INSTITUTIONAL BIOSAFETY COMMITTEE - COLLEGE STATION
MEETING MINUTES

DATE: *07/23/2025*
TIME: *12:57 PM*
LOCATION: *Zoom*

The meeting for the Texas A&M University (TAMU) Institutional Biosafety Committee (IBC) - College Station was called to order by the Chair at 12:57 PM. This meeting was open to the public.

MEETING ATTENDANCE

Voting members present – 14
Voting members required for quorum – 10

Voting IBC Members Present

☒ Carlos Gonzalez, IBC Chair
☒ Kurt Zuelke, IBC Vice Chair
☒ Jessica Bourquin, BSO
☒ Lisa Auckland
☐ Noah Cohen
☐ Jason Gill
☒ Tennille Lamon
☐ Kevin Myles
☒ Sanjay Reddy
☒ Penny Riggs
☒ Christina Robertson
☒ Brian Shaw
☒ Joseph Sorg
☒ William Boyd
☒ Mark Burow
☒ Don Plitt
☒ Arthur Davila

Office of Biosafety (OBS) Staff Present:

☒ Merissa Bruns
☒ Cat Carey
☒ Athena Cherry
☒ Susan Gater
☒ Melissa Hinga
☒ Lauren Horton
☒ Jeffrey Lane
☒ Jeni Mathews
☒ Ruchira Mitra
☒ David Perez
☒ Grant Severson
☒ Megan Shoff
☒ Beatriz A Velez
☒ Jennifer Wier
☒ Todd Wisner
☒ Wendy Wright

Guests Present:
Principal Investigators (PIs) Kirchner and Bell-Pederson
Dr. Jennifer Fridley on behalf of PI Bagnato
Sreelakshmy Suresh on behalf of PI Jain
4 additional guests

I. ANNOUNCEMENTS

A. IBC CHAIR

i. *None.*

B. BIOSAFETY OFFICER

i. The next IBC Meeting has been rescheduled for 08/27/2025.

II. OLD BUSINESS

A. Clarification of required PPE

- IBC2025-027 (ASF) - PI Kurt Zulke, initially approved on 3/27/2024 under permit number IBC2022-025 (SA)
- PPE requirements included use of Powered Air Purifying Respirators (PAPR) at ABSL-3Ag, but did not specify respiratory protection requirements for *in vitro* work
- The PI requests that *in vitro* work with African Swine Fever Virus (ASFV) be performed at BSL-3 without the use of respiratory protection based on the following considerations:
  - ASFV is not a human pathogen.
  - All work with ASFV will be performed in biosafety cabinets or other primary containment devices.
  - No other agents requiring respiratory protection will be in use during these activities.
  - A 4-day quarantine from suseptible species is required of all personnel who enter spaces where ASFV is used.
- Respiratory protection (PAPRs) is still required for experiments performed at ABSL-3Ag

Approval of Modification

Motion to approve and seconded
12 ayes, 1 nay, 0 abstentions and 1 recusal (PI Zuelke)

III. NEW BUSINESS

A. *None.*

IV. REPORTS

A. Institutional Biosafety Program (IBSP):

The IBSP report was presented for committee review. Since the previous meeting for the TAMU IBC - College Station on 06/24/2025:

- 116 submissions were received by the Office of Biosafety for review by the IBC and
- 95 submissions were reviewed and processed by Biosafety Program Staff and approved by the IBC Chair on behalf of the IBC, including:
  - 1 termination and
  - 8 extensions.

These submissions could include any of the following: a simple amendment (room change, personnel, etc.), an initial or 3-year renewal application describing non-recombinant or exempt recombinant studies, administrative actions (including terminations and extensions), and annual reviews. Committee members are encouraged to review these submissions (not requiring full committee review) in iRIS.

B. Incident Reports

The incident involved a breach in PPE in a BSL-3Ag room.

- Reported: 07/21/2025
- Summary of Incident:
    - On 07/21/2025, an animal health technician was completing exit procedures from the BSL-3Ag room after cleaning pens that had housed bulls previously inoculated with non-recombinant, highly pathogenic avian influenza virus A (H5N1).
    - Upon entering the shower and removing their PAPR, the technician observed a small tear at the end of the lens cuff.
    - The tear appeared unrelated to any direct interaction with the animals, and likely occurred independently of the experimental activities.
- Office of Biosafety Response:
    - The individual was promptly referred to the Occupational Health Provider (OHP) for a post-exposure evaluation.
    - The OHP reviewed the circumstances surrounding the incident with the individual.
    - It was noted that the tear in the PAPR lens cuff was not visible or detectable while the unit was powered on and in use.
    - As a precaution, the individual was advised to immediately report any flu-like symptoms to initiate treatment with Tamiflu.
    - On 07/22/2025, the BSO consulted with the Associate Executive Director of the facility regarding the incident. Although the animals had been experimentally infected with highly pathogenic avian influenza virus A (H5N1) on 07/09/2025, they consistently tested negative for the virus by PCR. Additionally, the individual's PAPR remained positively pressurized at all times. The incident is currently under investigation to identify any additional contributing factors.

Approval of Reports

Motion to approve and seconded
12 ayes, 0 nays, and 2 abstentions

V. PROTOCOL REVIEWS

A. The committee reviewed the proposed research, including agent characteristics, experimental manipulations, recombinant or synthetic nucleic acid components, and the training and qualifications of the PI and lab personnel. Final approval is contingent upon confirmation by the IBC Chair or the Office of Biosafety, on behalf of the IBC, that all personnel have completed the required training, facilities meet containment standards, and all necessary modifications have been addressed. Any unresolved issues or significant changes will be brought before the full committee for further review.

B. The IBC Chair reminded all members present to identify any conflicts of interest prior to IBC registrations being reviewed.

Protocol #	IBC2025-038

<table>
<tr><td>Protocol Type</td><td>Initial</td></tr>
<tr><td>PI Name</td><td>Matthew Kirchner</td></tr>
<tr><td>Reviewer Summary</td><td>Dr. Kirchner submitted an initial application to work with recombinant adeno-associated viral vectors (AAV) to identify the precise cellular and signaling mechanisms in the brain that contribute to heart failure.</td></tr>
<tr><td>Section(s) of NIH Guidelines</td><td>III-F, III-D-4</td></tr>
<tr><td>Characteristics of Agent(s) or Material(s)</td><td>
<table>
<tr><th>#</th><th>Agent</th><th>BSL</th><th>In vivo</th><th>Recombinant</th></tr>
<tr><td>1</td><td>AAV</td><td>BSL-1, ABSL-1</td><td>Yes</td><td>Yes</td></tr>
</table>
</td></tr>
<tr><td>Recombinant Modifications</td><td>
<table>
<tr><th>Agent #</th><th>Category/Description</th><th>Source RG</th></tr>
<tr><td>1</td><td>All fluorophores (e.g., GFP, NPY-PHlorino, etc.)</td><td>1</td></tr>
<tr><td>1</td><td>Ion channels (e.g., channelrhodopsin, GCaMP6)</td><td>1</td></tr>
<tr><td>1</td><td>Cre recombinase</td><td>1</td></tr>
</table>
</td></tr>
<tr><td>Viral Vectors</td><td>AAV, replication incompetent</td></tr>
<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>

All AAVs will either be purchased or obtained from a collaborator and are ready to use.
AAVs will be used to deliver various genetic tools, including fluorescent reporters, biosensors like GCaMP and NPY-pHluorin, and optogenetic channels such as ChR2.
Cre-dependent AAVs (double-floxed inverted open reading frame - DIO) will be used for precise genetic targeting where the transgene is only expressed in cells that also express Cre recombinase. This allows for cell-type-specific or circuit-specific manipulation in transgenic animals.
All transgenes expressed in AAVs are designed not to interfere with normal cellular processes.
AAV injections will be performed stereotaxically under anesthesia, minimizing animal movements and thereby reducing the risk of researcher exposure to the viral vectors.
Universal sharps precautions will be followed at all times.

</td></tr>
<tr><td>Training and Expertise of Research Personnel</td><td>Dr. Matthew Kirchner has over a decade of experience in the field of neurophysiology, with multiple peer-reviewed publications related to this area of research. He earned his doctoral degree from the University of Tennessee Health Science Center in 2018 and completed several years of postdoctoral training in neurophysiology at Georgia State University. Dr. Kirchner also has more than 10 years of hands-on experience with the procedures and agents described in this application.</td></tr>
<tr><td>Biosafety Occupational Health</td><td>BOHP Annual Enrollment</td></tr>
</table>

Motion	*Motion to approve and seconded pending requirements* *Requirements: Pending laboratory certification*
14 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2025-050
Protocol Type	Initial
PI Name	Joshua Lillvis
Reviewer Summary	Dr. Lillvis submitted an application to investigate the neural mechanisms underlying behavior, with a focus on how variations in nervous system contribute to individual differences. The study will use genetically modified *Drosophilia* as a model to examine courtship song activity and compare the neural circuits responsible for song production across species. The research will involve two-photon imaging and electrophysiological recordings to study neuronal activity.
Section(s) of *NIH Guidelines*	III-D-4; III-F

Characteristics of Agent(s) or Material(s)

#	Agent	BSL	*In vivo*	Recombinant
1	*Escherichia coli* K12	BSL-1	No	Yes
2	*Drosophila* spp.	BSL-1	No	Yes

Recombinant Modifications

Agent #	Category/Description	Source RG
1-2	Fluorescent markers	1
1-2	Gal4 Transcription factor	1
1-2	Bioluminescent optogenetics/reporter genes	1
1-2	Epitope tags	1
1-2	Antibiotic resistance genes for selection	1
2	Cas9	1

Risk Assessment, Mitigations, and Work Practices

- Plasmid DNA is extracted from *E. coli* and injected into fly embryos.
- Injection of embryos will be outsourced, minimizing the risks of needle sticks.
- Microscopy will be performed on fixed tissue from recombinant flies and will be transported on slides in secondary containment.
- Recombinant *E. coli* will be treated with 10% bleach or autoclaved prior to disposal.
- All *Drosophila* that are not used in further experiments are collected in special traps or vials and euthanized using 70% ethanol or autoclaving prior to disposal. *Drosophila* housed in vials and bottles are decontaminated by freezing at -20°C for a minimum of 24 hours and then discarded as solid waste.
- The freezing process will be validated semi-annually by placing a fly vial filled with water in the center of a full bag/container to ensure the 24-hour freezing period is effective. Validation records will be maintained and stored with laboratory's biosafety manual.

Training and Expertise of	The PI has 10 years of research experience in recombinant DNA technology, *E. coli* and molecular cloning, as well as *Drosophila* genetics.

<table>
<tr><td>Research Personnel</td><td></td></tr>
<tr><td>Motion</td><td>Motion to approve and seconded.</td></tr>
<tr><td colspan="2">12 For 0 Against 2 Abstain 0 Recuse</td></tr>
</table>

<table>
<tr><td>Protocol #</td><td>IBC2019-078</td></tr>
<tr><td>Protocol Type</td><td>3-Year Renewal</td></tr>
<tr><td>PI Name</td><td>Deborah Bell-Pedersen</td></tr>
<tr><td>Reviewer Summary</td><td>Dr. Bell-Pedersen submitted a 3-year renewal application to continue her IBC-approved research. As part of the renewal, she is requesting approval to expand the scope of her work to include the cloning and expression of the gamma subunit of the Zymocin toxin from the dairy yeast Kluyveromyces lactis. The plasmid encoding the toxin will be propagated in K-12 strains of E. coli, which are already approved for use. Non-pathogenic Escherichia coli BL21 derivatives will be used for expression of the toxin subunit. The BL21 derivatives include strains with DE3 for inducible gene expression and LysS for inhibition of T7 RNA polymerase activity. The aim is to study how TRM9 from Neurospora crassa modifies the wobble position of tRNA.</td></tr>
<tr><td>Section(s) of NIH Guidelines</td><td>III-E, III-F</td></tr>
<tr><td>Characteristics of Agent(s) or Material(s)</td><td>
<table>
<tr><th>#</th><th>Agent</th><th>BSL</th><th>In vivo</th><th>Recombinant</th></tr>
<tr><td>1</td><td>E. coli (non-pathogenic)</td><td>BSL-1</td><td>No</td><td>Yes</td></tr>
</table>
</td></tr>
<tr><td>Recombinant Modifications</td><td>
<table>
<tr><th>Agent #</th><th>Category/Description</th><th>Source RG</th></tr>
<tr><td>1</td><td>Zymocin toxin (gamma subunit only)</td><td>1</td></tr>
<tr><td>1</td><td>Lactose metabolism-related genes</td><td>1</td></tr>
<tr><td>1</td><td>RNA polymerase inhibitors</td><td>1</td></tr>
</table>
</td></tr>
<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>

Zymocin is a protective toxin of yeast which allows them to compete and survive amongst other yeasts.

The toxin is made up of 3 subunits, alpha, beta and gamma. The alpha and beta are required for the toxin to bind and cleave the yeast cell wall of some fungi. The gamma subunit then enters the cytoplasm to find its intended substrate.
The gamma toxin cleaves a subset of tRNAs with a specific modification in their anticodon loop. This modification is responsible for the “wobble” position allowing for tRNAs to code for multiple amino acids.

Non-pathogenic E. coli will express the gamma toxin. tRNA will be extracted from N. crassa during a circadian time course. They will be combined to allow reactions to occur, and the gamma toxin cleavage events will be monitored by Northern blot analysis and qPCR.
Non-pathogenic E. coli derivatives are low risk, used for controlled, inducible expression of proteins.

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<tr><td>Motion</td><td>Motion to approve and seconded</td></tr>
<tr><td colspan="2">14 For 0 Against 0 Abstain 0 Recuse</td></tr>
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<tr><td>Protocol #</td><td>IBC2023-017</td></tr>
<tr><td>Protocol Type</td><td>Amendment</td></tr>
<tr><td>PI Name</td><td>Vanderlei Bagnato</td></tr>
<tr><td>Reviewer Summary</td><td>Dr. Bagnato submitted a request to modify the IBC’s PPE requirements for a previously approved pilot study involving a large animal model of pneumonia.</td></tr>
<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>
The proposed modifications are based on two primary considerations:

First, certain PPE requirements typically used in small animal studies present logistical challenges and may compromise safety when applied to large animal work.
Second, data from the pilot study demonstrated that no S. pneumoniae were cultured from transtracheal wash fluid obtained from experimentally infected animals.

Animals were inoculated with 30ml of 10^7 CFU/ml S. pneumoniae and developed clinical signs of pneumonia, confirmed by ultrasound.
In the pilot study the animals were treated with antibiotics for 10 days.

The study was initially approved with the following PPE requirements:

Respiratory protection (N95 or better)
Disposable gowns
Double gloves
Shoe covers
Hair bonnet/bouffant
Face shield or tight-fitting goggles

Going forward, PI is requesting PPE be modified to the following requirements:

During experimental infection of animals and when performing transtracheal wash procedures on infected animals:

Respiratory protection (N95 or better)
Disposable gown
Double gloves
Disinfectable boots
Hair bonnet/bouffant
Face shield or tight-fitting goggles

Following experimental infection, for all animal husbandry and veterinary care:

Respiratory protection (N95 or better)
Reusable outerwear such as lab coats or coveralls.

Will be autoclaved prior to laundering.
Autoclaving and laundering will occur at least weekly or sooner if contaminated.

Gloves
Disinfectable boots
Hair bonnet/bouffant

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</table>

	○ Face shield or tight-fitting goggles As an additional mitigation measure, an air scrubber equipped with UV-C technology will be placed in the ABSL-2 containment space for the duration of the study to enhance environmental safety. An air sampler will be used to get additional information on the risk of bacterial aerosolization at different time points throughout the study.
Biosafety Occupational Health	BOHP Annual Enrollment Respiratory Protection
Motion	*Motion to approve and seconded*
14 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2019-172
Protocol Type	Amendment
PI Name	Abhishek Jain
Reviewer Summary	Dr. Jain submitted an amendment to add work with SARS-CoV-2. The proposed study aims investigate the ability of various cell types to support SARS-CoV-2 infection using a microfluidic device.
Section(s) of *NIH Guidelines*	N/A
Characteristics of Agent(s) or Material(s)	see table below
Risk Assessment, Mitigations, and Work Practices	**Procedures involving live virus:** • Virus stock will be received from a collaborator and stored at -80°C prior to being diluted in cell culture media. Dilutions will be performed under a certified Class II biosafety cabinet (BSC). • Virus-spiked media will be introduced into a pre-labeled inlet reservoir consisting of a modified 50 mL centrifuge tube equipped with tubing. This setup connects to a syringe pump which gradually draws the media through the tubing and into the microfluidic channel over a 24h period. ○ *IBC discussed concerns regarding portions of the infusion apparatus being outside of primary containment. The OBS will work with the PI to find a solution to meet containment requirements.* • Tubing and fluidic connections are securely sealed to prevent leaks or spills and the device is in a container within the incubator. Infection of endothelialized microfluidic channels occurs within the incubator, in secondary containment. • SOP has been provided outlining work.

Characteristics of Agent(s) or Material(s):

#	Agent	BSL	*In vivo*	Recombinant
1	SARS-CoV-2 Washington 1	BSL-2+	No	No

	Potential for Exposure: Potential for leaks/spills from chamber/tubing during perfusion, though the system is designed to prevent leaks and spills. SOP has included a plastic containment device within the incubator to contain any leaks/spills. **Biosafety Level:** BSL-2+ containment is proposed for all activities. • N95 or better respiratory protection. • Access to the lab is restricted to only personnel wearing respiratory protection. • All work is performed inside the biosafety cabinet. No intentional aerosols are generated. • Reduction in containment from BSL-3 to BSL-2+ applies to Washington 1 isolate only. New variants of concern (VoCs) are not approved for work until they are characterized and the risks are assessed and are approved by the IBC. • Work with SARS-CoV-2 should be scheduled in advance and only those personnel be allowed in the lab while the work is happening (this can be done via a calendar and door signage – e.g. "SARS-CoV-2 work in progress – Do Not Enter"). When the work is finished and everything is deconned (the BSC and other touched surfaces), unless there was a spill outside of the BSC, then the respriratory protection requirement can be lifted. In this case, donning and doffing can be done inside the lab, before beginning work and after surface decon. • For the BSL-2 lab users that do not work with SARS-CoV-2 – will require annual respiratory protection clearance and fit test if they will be in the lab when SARS-CoV-2 is manipulated. • If there have been no spills/escapes from the BSC, then they may reuse their lab coats. • SARS-CoV-2 researchers should bag their consumables inside the BSC when they are finished and cleaning up the cabinet. That bag should be surface deconned and can be placed in the general BSL-2 laboratory waste. • When just visualizing infected cells and no primary containment is being opened, then no respiratory protection is required. • Eye protection is required when using the N95. • Double gloving is not required, but is recommended. • Infected flasks etc. must be contained in a secondary container, even if the lid has to be removed once it's placed in the incubator.
Biosafety Occupational Health	BOHP Annual Enrollment Respiratory Protection Program, annual enrollment
Motion	*Motion to approve and seconded pending requirements* *Requirements: Biosafety approval of containment system for microfluidic device apparatus.*
11 For 2 Against 1 Abstain 0 Recuse	

Protocol #	IBC2018-152
Protocol Type	Amendment
PI Name	Michael Thomson

<table>
<tr><td>Reviewer Summary</td><td>Dr. Thomson submitted an amendment to add a virulence helper plasmid derived from Agrobacterium tumefaciens to be used with previously approved CRISPR/Cas 9 and morphogenic development inserts in order to obtain improved rates of genetic modification in their previously approved agents A. tumefaciens, E. coli K-12, and crop plants.</td></tr>
<tr><td>Section(s) of NIH Guidelines</td><td>III-E, III-E-2a, III-F</td></tr>
<tr><td>Recombinant Modifications</td><td><table><tr><th>Category/Description</th><th>Source RG</th></tr><tr><td>A. tumefaciens virulence gene</td><td>1</td></tr></table></td></tr>
<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>The helper plasmid includes virulence genes from the binary vector Ti plasmid of A. tumefaciens and a helper plasmid from E. coli for improved replication in Agrobacterium.
Combining the helper plasmid with morphogenic genes improves recovery of genetically modified plants.</td></tr>
<tr><td>Motion</td><td>Motion to approve and seconded.</td></tr>
<tr><td colspan="2">14 For 0 Against 0 Abstain 0 Recuse</td></tr>
</table>

VI. MAJOR MOTIONS OR POINTS OF ORDER

None.

VII. MEETING ADJOURMENT

The IBC meeting was adjourned at 2:25 PM.