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

***DATE**: 08/27/2025*
***TIME**: 12:48PM*
***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 12:48 PM. This meeting was open to the public.

MEETING ATTENDANCE

Voting members present – 15
Voting members required for quorum -- 9

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
☒ Joseph Sorg
☒ William Boyd, Community Member
☒ Mark Burow, Community Member
☒ Arthur Davila, Community Member
☒ Don Plitt, Community Member

Office of Biosafety (OBS) Staff Present:

☒ Merissa Bruns
☒ Cat Carey
☒ Athena Cherry
☒ Susan Gater
☒ Melissa Hinga
☒ 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) Moulton, Nock, Monroe, and McKnight
Dr. Yufei Huang on behalf of PI Wang
3 additional guests

I. ANNOUNCEMENTS

A. IBC CHAIR

i. None

B. BIOSAFETY OFFICER

i. Welcome for Dr. Dennis Nkaleke, Community Member
ii. Dr. Shaw is stepping down from the committee.
iii. USDA APHIS Plant Protection and Quarantine Division inspection

II. OLD BUSINESS

A. IBC Investigative Subcommittee Update
B. Dr. Kurouski's amendment, approved on 06/24/2025 pending certification of a separate prion laboratory, was revised to designate the recombinant mouse prion protein (PrPC) for storage only.
Approval of Amendment Update

Motion to approve and seconded
14 ayes, **0** nays, and 0 abstentions

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 07/24/2025:

- 145 submissions were received by the Office of Biosafety for review by the IBC and
- 132 submissions were reviewed and processed by Biosafety Program Staff and approved by the IBC Chair on behalf of the IBC, including:
  - 3 terminations and
  - 2 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

Incident 1: The near miss occurred in a BSL-3Ag laboratory at the conclusion of a study.

- Reported 07/25/25
- Summary of Incident:
  - At the conclusion of the high-pathogenic influenza study, an animal health technician was cleaning a room previously housing bulls. After returning a bull to its pen, the technician attempted to hang the halter on the wall. During this process, the halter became entangled with the power cord of the technician's Powered Air-Purifying Respirator (PAPR), causing the PAPR to momentarily dislodge. The unit did not contact the floor, and the technician immediately repositioned the PAPR and reported the incident to their supervisor. The supervisor promptly notified the Office of Biosafety (OBS).

- OBS Response:
    - In accordance with established exposure-response protocols, the technician was referred to Occupational Health for evaluation. Based on the following factors, the provider determined negligible risk of exposure:
        - All bulls tested negative for influenza throughout the study.
        - Environmental monitoring data indicated no detectable viral nucleic acid in air samples or exhaust pre-filters during the study.
    - No antiviral prophylaxis was prescribed. The technician was advised to monitor for symptoms and report any health concerns.
    - Follow-Up and Verification:
        - Post-incident review confirmed that all air samples and exhaust pre-filters tested negative for influenza viral nucleic acid by PCR. The study concluded without evidence of environmental contamination.
        - Animal care training staff reviewed and reinforced proper halter-handling procedures to minimize equipment entanglement risks.
        - OBS emphasized the importance of immediate reporting and precautionary evaluation, even when exposure risk appears minimal.
    - Negligible risk of exposure. No further medical intervention required.

Incident 2: The incident occurred in an ABSL-2 surgical suite during the use of a risk group 2 pathogen.

- Reported 7/18/2025
- Summary of Incident:
    - On 7/18/2025, the Office of Biosafety (OBS) received a report from Vet Med Park (VMP) staff regarding deviations from standard microbiological practices and written SOPs by a research group. The incident occurred during a surgical procedure involving the experimental infection of a pig using an infusion pump system.
    - Key deviations reported included:
        - Failure to wear appropriate personal protective equipment (PPE) during the procedure.
        - Wearing inappropriate PPE outside of the laboratory environment.
- Office of Biosafety Response
    - On 7/22/2025, OBS staff met with VMP leadership to discuss the reported concerns. VMP personnel were offered referrals for personal health consultations with the Occupational Health Provider.
    - On 8/12/2025, OBS staff and an IBC representative met with the Principal Investigator (PI) and research staff to review the SOP and discuss the reported deviations.
        - The investigators shared materials being developed for retraining and improving communication to ensure adherence to all standard and special microbiological practices during periods when pigs are infectious.
        - A mock pig surgery and infusion day will be scheduled. This session will be attended by research staff, OBS, VMP, and Animal Welfare Office (AWO) representatives. The purpose is to:
            - Retrain staff.
            - Identify any biosafety or animal health concerns.
            - Address any issues prior to approving modifications to the SOP.
    - Recommendation that VMP conduct a pre-meeting with the research team before all new projects to:

- Review researchers' project activities, safety precautions, expectations of VMP staff
- Outline all VMP expectations and requirements

Incident 3: The incident occurred in a BSL-2 laboratory and involved potential exposure to a recombinant risk group 2 pathogen.

- Reported 07/30/2025
- Summary of Incident:
  - On 07/30/2025, a researcher experienced a needlestick injury potentially contaminated with a recombinantly modified strain of *Borrelia hermsii.* At the time of the incident, the researcher was working alone, collecting organs and tissues from a euthanized mouse that had been inoculated with an attenuated strain of *B. hermsii* (Δ*fbpB1*Δ*fbpC*).
    - The removal of these genes significantly diminishes the strain's infectivity in the mouse model employed in the laboratory.
  - To facilitate dissection, the researcher used needles to pin the animal's paws. During removal of one of the needles, the researcher accidentally punctured her thumb with a needle that had been in contact with the infected animal's paw.
  - The researcher immediately washed her hands and applied antibiotic ointment.
  - The researcher reported the incident to OBS promptly on 07/30/2025.
- OBS Response:
  - On 07/30/2025, Biosafety Occupational Health Program staff referred the individual to the Occupational Health Provider (OHP) who prescribed a 7-day course of doxycycline and instructed the researcher to monitor for signs and symptoms of illness.
    - The researcher has not reported any signs of illness or infection resulting from the injury.
  - OBS staff also reviewed the incident with the Principal Investigator (PI). The researcher has experience performing mouse necropsies, acknowledged the need to remain vigilant and avoid complacency during routine procedures. The incident appears to have resulted from a moment of impatience. To help prevent recurrence, biosafety staff emphasized the importance of working slowly and deliberately, even during familiar tasks. Additionally, the use of forceps was recommended for removing pins after necropsy to reduce the risk of injury.
    - The PI agreed with these recommendations and is incorporating them into the lab's training protocols.
    - All personnel will be required to document the completion of this updated laboratory-specific training.
  - On 7/31/2025, the BSO submitted an immediate notification per Appendix G-II-B-2-K of the *NIH Guidelines* to NIH-Office of Science Policy. The final report will be due within 30 days.

15 ayes, **0** nays, and 0 abstentions

V. APPROVAL OF PREVIOUS MEETING MINUTES

TAMU IBC - College Station minutes from the meeting on 06/24/2025 were provided to the committee for review.

Motion to approve as written and seconded
14 ayes, **0** nays, and 1 abstentions

TAMU IBC - College Station minutes from the meeting on 07/23/2025 were provided to the committee for review.

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Motion to approve as corrected and seconded
15 ayes, **0** nays, and 0 abstentions

VI. 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 #	IBC2025-043
Protocol Type	Initial
PI Name	Mary Beth Monroe
Reviewer Summary	Dr. Monroe submitted an initial application to work with a range of risk group 2 (RG2) bacteria, recombinant materials, and human/animal materials in order to study the interactions between cells, blood, and biomaterials. The goal of the research is to develop polymer-based scaffolds that can be used in medical devices to promote wound healing and control bleeding. The project includes *in vitro* and *in vivo* assessments of cytocompatibility, blood compatibility, and antimicrobial properties.
Section(s) of *NIH Guidelines*	III-D-1, III-D-4 III-E, III-F
Characteristics of Agent(s) or Material(s)	

#	Agent	BSL	In vivo	Recombinant
1	Human cell lines	BSL-2	Yes	No
2	*E. coli* K-12 strains	BSL-1	No	Yes
3	*E. coli,* non pathogenic strains	BSL-1	No	Yes
4	*Staphylococcus aureus* (MRSA)	BSL-2	Yes	Yes
5	*S. epidermidis* (MDR)	BSL-2	Yes	No
6	*Pseudomonas aeruginosa*	BSL-2	Yes	Yes

Recombinant Modifications

Agent #	Category/Description	Source RG
2,3,5	Fluorescent and colorimetric markers	1
5	Transposable element containing sequences allowing lacZ-α complementation	1

Risk Assessment, Mitigations, and Work Practices	• All RG2 agents will be handled according to standard BSL-2 and ABSL-2 practices using Class II biosafety cabinets.
	  ○ *P. aeruginosa* PAO1 is a well-characterized laboratory strain that serves as a model for studying virulence and antibiotic resistance.
	  ○ *S. aureus*, ATCC 43300 (a MRSA strain) is resistant to common antibiotics like methicillin and oxacillin, but is susceptible to several other antibiotics (chloramphenicol, trimethoprim-sulfamethoxazole, teicoplanin, vancomycin, etc.)
	  ○ *S. epidermidis*, ATCC 700566 is multi-drug resistant, but is susceptible to other antibiotics (daptomycin, tetracycline, vancomycin, clindamycin, erythromycin, gentamycin, etc.)
	• Aerosol-generating procedures (pipetting, centrifugation, sonication) will be conducted inside biosafety cabinets or utilizing containment equipment (e.g., centrifuge safety cups).
	• All transport of biohazardous materials will occur in sealed secondary containers labeled with biohazard symbols.
	• Animals will be anesthetized during procedures.
	• All surfaces will be decontaminated daily and after spills using 1:10 bleach solution.
	• Autoclaving and chemical disinfection protocols are in place for waste and reusable items.
	• Strict adherence to sharps precautions, and limiting use of glassware, will be followed.

Training and Expertise of Research Personnel	Dr. Monroe has over 15 years of experience in cell culture and blood studies, including 7 years as PI of a research lab using these protocols. No safety incidents have occurred under her supervision. All personnel will receive agent-specific training documented via SOPs and competency assessments.
Biosafety Occupational Health	BOHP Annual Enrollment BBP Annual training
Motion	*Motion to approve and seconded*
15 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2025-009 (RG3)
Protocol Type	Initial
PI Name	Adam Nock
Reviewer Summary	Dr. Nock submitted an application to study the methods used by *Rickettsia rickettsii* to successfully navigate the transitions between ticks and vertebrate hosts by sensing and responding to environmental changes.
Section(s) of *NIH Guidelines*	III-D-1, III-D-4
Characteristics of Agent(s) or Material(s)	

#	Agent	BSL	*In vivo*	Recombinant
1	*R. rickettsii*	BSL-3, ACL-3, ABSL-3	Yes	Yes
2	*R. typhi*	BSL-3	No	Yes

	3	Pathogenic *Rickettsia* spp. (excluding select agents)	BSL-3	No	Yes

Recombinant Modifications

Agent #	Category/Description	Source RG
1 – 3	Selectable marker (arr-2 - rifampin)	1
1 – 3	Reporter Genes-all fluorescent, luminescent, colorimetric	1
1 – 3	Cas9	1
1 – 3	Epitope tagged native proteins from RG 1-3 *Rickettsia*	1 – 3

Risk Assessment, Mitigations, and Work Practices

- *Rickettsia* spp. are obligate intracellular bacteria
  - *R. rickettsii* is the causative agent of Rocky Mountain Spotted Fever (RMSF)
    - Transmitted by ticks
  - *R. typhi* is the causative agent of murine typhus
    - Transmitted by lice and fleas
      - No work with lice or fleas proposed
      - No animal work with *R. typhi* proposed
- Standard microbiological techniques are used:
  - Growth in tissue culture, plaque assays, recombinant modifications, knock-outs and completmentation, etc. performed in BSC
  - Centrifugation using aerosol-tight rotors/cups opened and closed in BSC
    - Ultracentrifuge has HEPA filter on vacuum; annual mainteance performed during annual laboratory shutdown
  - Other small equipment (electroporator, bead-beater) used inside BSC
- Selectable markers do not include resistance to antibiotics that are effective in the treatment of rickettsial diseases.
- Plate reader for live cell imaging uses covered plates transported in secondary containment.
- Flow cytometry/cell sorting/microscopy - Flow cytometry will be used to analyze and sort infected macrophages and other immune cell subsets from the lungs of infected mice.
  - The cell sorter is housed in the BSL-3 suite.
  - It is fully integrated into a biosafety cabinet and utilizes an aerosol. management system that evacuates aerosols from the sort chamber in the event of a clog or other incident.
  - SOPs are in place for safe operation, decontamination, and incident response.
- Facility SOPs are in place for all standard procedures, including entry/exit, waste management, use of decontaminants, etc. Agent-specific SOPs are in place for all procedures.
- PPE for *in vitro* work includes facility clothing and shoes, closed-front gown, head cover, shoe covers, double gloves and N95 respirator and eye protection or PAPR.
- Solid waste, carcasses, and leftover liquid cultures are autoclaved using validated cycle parameters. Cell sorter waste and rinse waste are treated with at least 10% bleach, left to sit overnight (at least six hours) and disposed of in the sanitary sewer followed by copious water. Surfaces, including equipment and reusable PPE are decontaminated using effective disinfectants. *Rickettsia* are susceptible to 1% bleach, 70% ethanol, glutaraldehyde, and quaternary ammonias.

Work with ticks infected with *R. rickettsii:*

- Ticks are natural vectors for RMSF and their use is essential to the study of disease transmission.

	• Ticks are logged and strict counts are maintained of infected ticks. • Ticks feed on guinea pigs within feeding capsules that contain the ticks during attachment. • Sticky mats/tape is used around the desiccator and at room perimeter. • Ticks are worked with one at a time and are chilled to reduce movement. • PPE for tick work includes facility clothing/footwear, white coveralls with hood, integrated or separate shoe covers, double gloves taped to coverall sleeves, respiratory protection, and eye protection • If a tick is missing and cannot be located, the whole room is treated with insecticide and special exit procedures are followed • Detailed SOPs for handling infected ticks have been provided. An additional project includes harvesting wild ticks in an effort to identify and isolate circulating strains of *Rickettsia* of multiple species to compare with lab strains for genetic drift. USDA permits are in place for work with ticks.
Training and Expertise of Research Personnel	The PI has 20 years of experience working directly in the laboratory environment. He completed his postdoctoral training at Rocky Mountain Laboratories, NIAID, resulting in four first author publications relating to *R. rickettsii*. This work also involved using infected guinea pigs as an animal model for pathogenic rickettsia. During this time, he also developed protocols for working with ticks and had BSL-3 protocols approved by the RML Institutional Biosafety Committee. He also participated in field work relating to ticks, including outreach to medical professionals to provide guidance on effective methods for tick collection in the field.
Biosafety Occupational Health	BOHP Annual Enrollment Annual medical clearance; annual respiratory protection clearance Annual BSL-3 training
Motion	*Motion to approve and seconded*
15 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2019-116
Protocol Type	3-Year/Amendment
PI Name	Jun Wang
Reviewer Summary	Dr. Wang submitted a 3-Year renewal to continue their IBC approved research and is requesting approval to utilize a fragment of the tetanus toxin along with a reporter gene in their adeno-associated viral vector (AAV). The infusion of this vector into targeted regions of the murine brain is intended to selectively silence specific neurons and enable visualization through the reporter.
Section(s) of *NIH Guidelines*	III-D-4
Recombinant Modifications	

Category/Description	Source RG
Tetanus toxin light chain	2

Risk Assessment, Mitigations, and Work Practices	• Lab personnel are already approved for work with other AAVs and are proficient with safety protocols. • The AAV is purchased ready to use. No viral production, packaging, or amplification will occur. • All virus handling will be done in a certified BSC with all appropriate PPE including double gloves and N95 respirator during injections. • Viral containers and surgical surfaces will be disinfected with 10% bleach with a minimum of 10 minute contact time followed by a water rinse or 70% ethanol wipe. • The AAV insert is dependent on the presence of Cre recombinase for the correct orientation and expression, so any human exposure is a minimal risk. The tetanus light chain toxin is unable to enter cells without the heavy chain and will be contained in the neurons the AAV infected. • Post surgery, animals will be placed in clearly labeled cages and housed separately from non-injected animals and handled with caution to prevent bites or exposure. Bedding will be autoclaved for the first 48-72 hours. Post study, carcasses will be disposed of as pathological waste in red biohazard bags.
Biosafety Occupational Health	Respiratory Protection BOHP Annual Enrollment
Motion	*Motion to approve and seconded*
15 For 0 Against 0 Abstain 0 Recuse	

Dr. Kevin Myles left at 1:42 PM.

Protocol #	IBC2020-150
Protocol Type	Amendment
PI Name	Thomas McKnight
Reviewer Summary	Dr. McKnight submitted an amendment to use the CRISPR expressing plasmid, pKSE401, to generate knockout mutant tomato and *Solanum pennellii* (wild tomato) using *Agrobacterium* mediated transformation.
Section(s) of *NIH Guidelines*	III-F, III-E, III-E-2a, Appendix L
Characteristics of Agent(s) or Material(s)	

#	Agent	BSL	*In vivo*	Recombinant
1	Transgenic tomato	BSL-1, BSL-1P	No	Yes
2	Transgenic *S. pennellii*	BSL-1, BSL-1P	No	Yes

Recombinant Modifications

Agent #	Category/Description	Source RG
1-2	Cas 9 nuclease	1
1-2	CRISPR guide RNA (gRNA) targeting transcription factors and genes in the acylsugar pathway	1

Risk Assessment, Mitigations, and Work Practices	• Plasmids will be engineered to contain gRNA sequences designed to target either the LEAFLESS transcription factor or genes in the acylsugar pathway. • Plasmids expressing the CRISPR Cas9 constructs will be cloned into *E. coli* K12 and then electroporated into the *Agrobacterium* vector. • LEAFLESS transcription factor and/or genes in the acylsugar pathway will be silenced in tomato and *S. pennellii* using *Agrobacterium tumefaciens* to transform plants. • For stable transformation, T-DNA containing plasmid components will integrate into the plant's genome and be inherited during subsequent generations. • The plants will initially be cultivated in growth chambers, particularly during the transformation and tissue culture stages, and as well as during the first one to two weeks following transplantation into soil. • Subsequently, once the plants outgrow the growth chamber, they will be relocated to the rooftop greenhouse. • Protocols for work with transgenic plants in growth chambers and greenhouse have been developed previously and will be followed.
Motion	*Motion to approve and seconded*
14 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2024-129
Protocol Type	Amendment
PI Name	Matt Moulton
Reviewer Summary	Dr. Moulton submitted an amendment to add a tau microtubule binding protein insert to his previously approved *Drosophila melanogaster* for the purpose of modifying sleep patterns.
Section(s) of *NIH Guidelines*	III-D-4
Recombinant Modifications	**Category/Description** | **Source RG** Native and mutated Tau proteins | 1
Risk Assessment, Mitigations, and Work Practices	• The modified *Drosophila* will be commercially sourced and used for teaching a Course-based Undergraduate Research Experience (CURE). • Tau protein phosphorylation is affected during circadian cycles. • The teaching laboratory has proper containment for work with modified *Drosophila* at BSL-1. • The *Drosophila* will be disposed of by either soaking in 70% EtOH or freezing for a minimum 24 hours at -20C or freezing for minimum 8 hours at -80C.
Motion	*Motion to approve and seconded*
14 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2019-137
Protocol Type	Amendment
PI Name	Jean-Philippe Pellois

<table>
<tr><td>Reviewer Summary</td><td>Dr. Pellois submitted an amendment to add cloning and protein expression in non-pathogenic and K-12 E. coli to aid in his broader goal to study protein delivery and live-cell imaging.</td></tr>
<tr><td>Section(s) of NIH Guidelines</td><td>III-E, and III-F</td></tr>
<tr><td>Recombinant Modifications</td><td>
<table>
<tr><th>Category/Description</th><th>Source RG</th></tr>
<tr><td>Bacterial expression plasmids</td><td>1</td></tr>
<tr><td>Proteases for protein purification</td><td>1</td></tr>
<tr><td>B19 capsid protein</td><td>2</td></tr>
<tr><td>Inhibitor of apoptosis proteins (IAPs)</td><td>1</td></tr>
<tr><td>Anti-apoptotic proteins</td><td>1</td></tr>
<tr><td>Protein tag for labeling and imaging</td><td>1</td></tr>
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<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>

Non-pathogenic E.coli strains will be used for protein expression and work conducted at BSL-1. Work with mammalian cells will performed in a certified BSC.
The IAPs Bcl-XL and Survivin are potentially oncogenic due to their roles in inhibiting apoptosis, however, the associated risk is minimal when appropriate PPE and standard laboratory practices are consistently implemented.
pFGET_Ulp1, HaloTag, and VP1u inserts do not increase the risk profile.
Decontamination of surfaces is with 70% ethanol or freshly prepared 10% bleach for 10 minutes. Biohazardous waste is autoclaved.

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<tr><td>Biosafety Occupational Health</td><td>BOHP Annual Enrollment
Blood Borne Pathogens</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>

<table>
<tr><td>Protocol #</td><td>IBC2025-038</td></tr>
<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 vector (AAV) in rats in order 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>Genetically encoded fluorescent biosensors (GRAB)</td><td>1</td></tr>
<tr><td>1</td><td>Transcriptional promoters</td><td>1</td></tr>
</table>
</td></tr>
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Viral Vectors	AAV, replication incompetent
Risk Assessment, Mitigations, and Work Practices	• All AAVs will be obtained ready to use. • GRAB calcium sensors for oxytocin (OT) and vasopressin (VP) with cre-dependent and independent expression options will be used under possible promoters (CAG, DIO or EF1a). • Cre-dependent, targeted expression of AAV-DIO-CAG-GRABOT and AAV-DIO-EF1a-GRABOT restrict GRABOT expression to only those cells that also express Cre recombinase. This allows for highly specific targeting of cell populations based on Cre-expression patterns. • AAV injections will be done stereotaxically under anesthesia. This reduces the movement of the rats which in turn reduces the risk of researcher exposure to the AAV. • Transgenes expressed in AAVs do not interfere with normal cellular processes. • Personnel will be trained on sharps handling and safe disposal.
Motion	*Motion to approve and seconded*
13 For 0 Against 1 Abstain 0 Recuse	

Protocol #	IBC2025-045
Protocol Type	Initial
PI Name	Coran Watanabe
Reviewer Summary	Dr. Watanabe submitted an application to work with non-pathogenic and K-12 strains of *Escherichia coli* modified to overexpress DERA for sugar synthesis, express beta-lactamase gene for developing probes, and knock-out biotin synthesis.
Section(s) of *NIH Guidelines*	III-E, III-F
Characteristics of Agent(s) or Material(s)	

#	Agent	BSL	*In vivo*	Recombinant
1	*E. coli*, non-pathogenic	BSL-1	No	Yes
2	*E. coli*, K-12	BSL-1	No	Yes

Recombinant Modifications

Agent #	Category/Description	Source RG
1	Beta-lactamase gene (antibiotic resistance)	1
1	8-amino-7oxononanoate synthase knockout	1
2	Sugar synthesis genes	1
2	All fluorescent, luminescent, and colorimetric markers	1

Risk Assessment, Mitigations, and Work Practices	• These agents and inserts are for use in a graduate-level laboratory course in Biological Methods for students in the chemistry program. • The *E. coli* strains being used are non-pathogenic and standard laboratory strains. • Use of fluorescent markers and antibiotic resistance does not increase the risk profile of the agents. • The teaching laboratory has been prepared for BSL-1 work and the PPE (laboratory coats, gloves and safety glasses) are available.

Training and Expertise of Research Personnel	Dr. Watanabe previously taught this course for more than a decade and has more than 20 years of experience in biosynthesis and mode of action of natural products.
Motion	*Motion to approve and seconded*
14 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2020-159
Protocol Type	Amendment
PI Name	Jianxun "Jim" Song
Reviewer Summary	Dr. Song submitted an amendment to include adeno-associated viral vectors (AAV), adenoviral vectors (AV), and additional genetic inserts expressing the Sleeping Beauty (SB) transposon system and human MYC transcription factor. The newly added work will be conducted both *in vitro* and *in vivo* to further the study of innovative immunomodulatory strategies in cancer treatment and cancer immunotherapy.
Section(s) of *NIH Guidelines*	III-D-3, III-D-4, III-F
Characteristics of Agent(s) or Material(s)	

#	Agent	BSL	*In vivo*	Recombinant
1	AAV	BSL-2; ABSL-2	Yes	Yes
2	AV	BSL-2; ABSL-2	Yes	Yes

Recombinant Modifications

Agent #	Category/Description	Source RG
1, 2	DNA transposase enzyme	1
1, 2	MYC	1

Viral Vectors	AAV, replication incompetent; AV, replication incompetent

Risk Assessment, Mitigations, and Work Practices	• AAV and adenoviral vectors will express human MYC, OVA, Cas9/gRNA with fluorescent reporter genes and will be used to transduce murine cell lines.
	• The Sleeping Beauty (SB) transposon system will be transfected into murine cells to create stable tumor cell lines expressing human MYC, OVA, and luciferase.
	• These transfected murine cell lines will then be further introduced into mice via IV, intratumorally, or via tissue specific injections.
	• All personnel are trained and informed about the risks of working with oncogenes and viral vectors.
	  o All work will be conducted in a certified BSC.
	  o Mice administered AAV vectors expressing oncogenes will be housed at ABSL-2 for 72 hours and moved to ABSL-1 housing conditions thereafter.
	  o Personnel will follow safe injection practices and follow sharps precautions
	  o Best practices for handling and restraining mice will be followed.

Biosafety Occupational Health	BOHP Annual Enrollment BBP Annual Training
Motion	*Motion to approve and seconded*
14 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2019-093
Protocol Type	Amendment
PI Name	Keerti Rathore
Reviewer Summary	Dr. Rathore submitted an amendment to add and modify genes in cotton plants as part of his broader efforts to understand and make plants more resistant to microbes and arthopods.
Section(s) of *NIH Guidelines*	III-E, III-E-2a, Appendix L
Recombinant Modifications	<table><tr><th>Category/Description</th><th>Source RG</th></tr><tr><td>Lipid metabolism-related proteins</td><td>1</td></tr><tr><td>Colorimetric reporters</td><td>1</td></tr></table>
Risk Assessment, Mitigations, and Work Practices	• The genes being modified (GhBADC, GhSDP1, GhHYDRA1) are already found in cotton plants and the study aims to downregulate or knockout the genes altogether. Downregulating the first two is expected to increase oil content and the third will negatively affect the development of insects that feed on the plants. • The plants will be started in College Station, but transported under appropriate enclosures to greenhouses in Weslaco for growth. Greenhouses are certified for transgenic plants • Transgenic plants will be autoclaved prior to disposal
Motion	*Motion to approve and seconded*
14 For 0 Against 0 Abstain 0 Recuse	

Protocol #	IBC2020-137
Protocol Type	Amendment
PI Name	Dzmitry Kurouski
Reviewer Summary	Dr. Kurouski submitted an amendment to his permit to add work with human cell lines transfected with portions of a lentiviral vector (LVV) transfer plasmid for a chimeric antigen receptor to obtain the gene regulatory elements CD8a and CD28 for the purpose of studying their ability to reduce inflamation in microglia. Additionally, he will be using a LVV transfer plamid expressing RtTA3 for Tet-On and TFEB to model expression of a transcriptional repressor TDP43 in human cells.

<table>
<tr><td>Section(s) of NIH Guidelines</td><td>III-D-3</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>Human cell lines, transfected</td><td>BSL-2</td><td>No</td><td>Yes</td></tr>
<tr><td>2</td><td>LVV</td><td>BSL-2</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>1,2</td><td>T cell activation molecules</td><td>2</td></tr>
<tr><td>1,2</td><td>Tet inducible promoter</td><td>2</td></tr>
<tr><td>1,2</td><td>Transcription factors</td><td>2</td></tr>
<tr><td>1,2</td><td>Antibiotic selection markers</td><td>1</td></tr>
</table>
</td></tr>
<tr><td>Viral Vectors</td><td>LVV, 3rd generation, replication incompetent</td></tr>
<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>

LVV transfer plasmids will be used solely as sources for the gene of interest (GOI). Stable transfection of human cells will be performed by electroporation using the Neon System. The use of third-generation lentiviral systems minimizes the risk of replication-competent lentivirus formation.
The antibiotic selection markers (puromycin, ampicillin, zeocin) are used for cloning purposes only and do not change the risk profile.
CD8a and CD28 are gene regulatory components of a chimeric antigen receptor involved in T cell signaling.
RtTA3 is an advanced tetracycline inducible promoter that has improved induction of the GOI.
TFEB is a transcription factor EB involved in regulation of autophagy and lysosomes.
An SOP for work with the LVV transfer plasmid has been developed. Personnel are trained and informed of the risks of working with viral vectors.

</td></tr>
<tr><td>Biosafety Occupational Health</td><td>BOHP Annual Enrollment
BBP annual training</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>

Protocol #	IBC2024-039
Protocol Type	Amendment
PI Name	Michelle Hook
Reviewer Summary	Dr. Hook submitted an amendment to include work with recombinant human cell lines *in vivo* to continue the study of spinal cord injury complications, including poor neurological recovery with opioid use, depression and cognitive decline, and severe bone loss, through uncovering their molecular and physiological mechanisms to guide safer treatments and improved patient outcomes.
Section(s) of *NIH Guidelines*	III-F, III-D-4

<table>
<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>Human cell lines (transfected)</td><td>BSL-2; ABSL-2</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>Insulin-like growth factor 1</td><td>1</td></tr>
</table>
</td></tr>
<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>

Human cell lines expressing IGF-1 will be purchased ready to use.

Rats will receive a single intraperitoneal injection of the cells in BSL-2 rooms inside a biosafety cabinet.

After injection, rats will be housed in ABSL-2 designated rooms.
All personnel will be trained on the use of human cell lines, sharps precautions, and proper rat handling.

</td></tr>
<tr><td>Biosafety Occupational Health</td><td>BOHP Annual Enrollment
BBP Annual Training</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>

Dr. Noah Cohen left at 2:20 PM.

<table>
<tr><td>Protocol #</td><td>IBC2019-104</td></tr>
<tr><td>Protocol Type</td><td>Amendment</td></tr>
<tr><td>PI Name</td><td>Arum Han</td></tr>
<tr><td>Reviewer Summary</td><td>Dr. Han submitted an amendment to include the use of lentiviral vectors (LVV) expressing various coronavirus spike proteins. These vectors will be used in a microfluidic device designed to identify cell populations that permit spike protein-mediated viral entry within a larger population of non-permissive cells. The Han lab is also adding additional non-recombinant RG1 and RG2 agents for use with the previously approved uSTASIS project.</td></tr>
<tr><td>Section(s) of NIH Guidelines</td><td>III-D-3</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>LVV</td><td>BSL-2</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>Spike proteins
synthetic, SARS-CoV-2, bat coronaviruses</td><td>2</td></tr>
</table>
</td></tr>
<tr><td>Viral Vectors</td><td>LVV, 2nd generation, replication incompetent.</td></tr>
<tr><td>Risk Assessment, Mitigations, and Work Practices</td><td>

LVV is provided ready to use from collaborator; previously approved on the collaborators IBC at BSL-2.

No inserts are from select agent coronaviruses

</td></tr>
</table>

	• LVV is only utilized within the microfluidic device within the BSC. • Personnel are trained on agent-specific risks and all sharps precautions are strictly followed.
Biosafety Occupational Health	BOHP Annual Enrollment
Motion	*Motion to table and seconded* *Clarification on specific coronavirus spike proteins being provided from collaborator is requested.*
13 For 0 Against 0 Abstain 0 Recuse	

VII. MAJOR MOTIONS OR POINTS OF ORDER

None

VIII. MEETING ADJOURMENT

The IBC meeting was adjourned at 2:30 PM.