University of Kentucky (UK)
Institutional Biosafety Committee (IBC)

Date: 03SEP2025
Time: 12:02 PM – 1:30 PM
Location: Virtual Meeting via Zoom - https://uky.zoom.us/j/86347546672

Minutes

Call to Order

The meeting was called to order by Doug Harrison at 12:02PM.

Attendance

IBC Members Present

Maria Landron (Local, Non-Affiliated Member)
Thomas Chambers (Local, Non-Affiliated Member)
Doug Harrison (Chairperson)
Cheryl Haughton (Animal Containment Expert)
Delphine Malherbe (Laboratory Staff Representative)
Delena Mazzetti (Biological Safety Officer)
Brandy Nelson (Institutional Member)
Jan Smalle (Plant Containment Expert)
Carol Pickett (Local, Non-Affiliated Member)
Amelia Pinto (Institutional Member)
Carrie Shaffer (Institutional Member)
Arthur Hunt (Plant Containment Expert)
Yadi Wu (Institutional Member)

Regrets

Michael Mendenhall (Local, Non-Affiliated Member)

Guests

Elizabeth Brooks (Administrative Support Associate I)
Robert Hayman (Assistant Biological Safety Officer)
Jeff Howell (IBC Administrative Professional II)
Audra Strahl (IBC Administrative Professional II)
Melissa Hollifield (Animal Compliance Manager)
Ilhem Messaoudi (Professor and Chair in the Department of Microbiology, Immunology and Molecular Genetics & Acting Vice President for Research)

Quorum

Per the University of Kentucky Institutional Biosafety Committee By-Laws, at least 6 voting members shall constitute a quorum.

Approval of Previous Month's Meeting Minutes

2025.08.06 IBC Meeting Minutes - DRAFT.pdf

Thomas Chambers initiated a motion to approve the meeting minutes from the August 6th, 2025, IBC meeting. Cheryl Haughton seconded the motion. All IBC members present (12) voted in favor of the motion. Jan Smalle arrived late and was not present to vote.

Old Business

None.

New Business

Doug Harrison introduced Dr. Ilhem Messaoudi, Acting Vice President for Research, to the IBC. Dr. Messaoudi thanked IBC members for their service to the University and encouraged members to reach out to the Office of the Vice President for Research with feedback.

Protocol Review

IBC approval is granted only when biosafety containment and procedures are reviewed and found to be adequate for the research being undertaken and when all biosafety laboratory inspection and training requirements are satisfactorily met. All biosafety laboratory inspection and training requirements are verified by the UK Biological Safety Officer (BSO) or designee prior to final approval. Current UK Biosafety training requirements are available online HERE. Current UK Biosafety Laboratory Inspection Program requirements are available online HERE.

Resubmissions

None.
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Amendments

PI: Erin Garcia

IBC Protocol Number: IBC-24-25
Protocol Title: B22-4130-M: Mechanisms of Competition and Cooperation in Burkholderia species
Protocol Type: Amendment
Amendment To: Organisms used in research, Personnel
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-1, NIH Guidelines Section III-D-2, NIH Guidelines Section III-F-3, NIH Guidelines Section III-F-4, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9
Maximum Containment Level: Biological Safety Level 2 (BSL2)
Primary Reviewers: C. Shaffer, D. Malherbe, C. Pickett

Brief Project Overview:

Our work focuses on understanding the ways that bacteria interact with each other through cooperation and competition. Specifically, we use Burkholderia bacteria that are found in the soil and that can cause lung infections in people with cystic fibrosis. These bacteria produce proteins on their surface that, depending on their context, can kill other bacteria (competition) or mediate bacterial adherence (cooperation). Since these proteins are naturally antibacterial and could be useful for developing therapeutics to treat human infections, we would like to better understand how they work.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Bacterial culture, DNA/RNA isolation/purification, Genetics, PCR/qRT-PCR, Cell culture, Use of Infectious Agents, Propagation of Infectious Agents, Imaging/Microscopy, Proteomics, Transformation, Animal work (breeding, surgeries, etc.)
Transport: Yes
Materials Transported: Biohazardous Materials, Animals
Infectious Agent(s)/Natural Host(s): Burkholderia cepacia (RG1-bacteria)/Human; Burkholderia multivorans (RG2-bacteria)/Human; Burkholderia dolosa (RG2-bacteria)/Humans; Burkholderia thailandensis (RG1-bacteria)/Human; Animal, Burkholderia cenocepacia (RG1-bacteria)/Human; Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: mCherry/commercial/tracking/reporter/B. multivorans, B. dolosa, B. thailandensis/pUC18-miniTn7-kan/; gfp/commercial/tracking/reporter/B. thailandensis, B. multivorans, B. dolosa/pUC18-miniTn7-kan /; lacZ/E. coli/enzymatic protein/reporter/B. thailandensis, B. multivorans, B. dolosa/pUC18-miniTn7-kan, pEGZH3T /; cdiA (fragment, bcpA homolog)/E. coli, Photorhabdus luminescens/membrane protein (antibacterial)/generate chimeric bcpA-cdiA/B. multivorans, B. dolosa, B. thailandensis/pEXKm5/; cdiI (bcpI homolog)/E. coli, P. luminescens/cytoplasmic protein/expression/B. multivorans, B. dolosa, B. thailandensis/pUC18-miniTn7-kan/; bcpAIOB/B. thailandensis, B. multivorans, B. dolosa, B. cepacia, B. cenocepacia/structural, membrane proteins, enzymatic proteins/expression, complementation, knock-out/B. thailandensis, B. multivorans, B. dolosa/pUC18-miniT7-kan, pEXKm5, pSchraB2, pET28, pJET2.1/; gltIJKL/B. multivorans, Escherichia coli/enzymatic proteins, membrane proteins/expression, complementation, knock-out/B. multivorans/pUC18-miniTn7-kan, pEXKm5/; various lipopolysaccharide (LPS) biosynthesis genes/B. multivorans, B. dolosa/enzymatic proteins, membrane proteins/expression, complementation, knock-out/B. multivorans, B. dolosa/pUC18-miniTn7-kan, pEXKm5/; bacterial regulatory proteins (to be identified)/B. multivorans, B. dolosa/regulatory proteins/expression, complementation, knock-out/B. multivorans, B. dolosa/pUC18-miniTn7-kan, pEXKm5, pET28, pJET2.1 /; bacterial outer membrane proteins/B. multivorans, B. dolosa, B. thailandensis, E. coli/membrane proteins/expression, complementation, knock-out/B. multivorans, B. dolosa, B. thailandensis/pUC18-miniTn7-kan, pEXKm5/; bacterial metabolic proteins/B. multivorans, B. dolosa, B. thailandensis/enzymatic proteins/expression, complementation, knock-out/B. multivorans, B. dolosa, B. thailandensis/pUC18-miniTn7-kan, pEXKm5/; bacterial promoters/B. multivorans, B. dolosa/regulatory DNA elements/reporter, cloning, expression/B. multivorans, B. dolosa/pUC18-miniTn7-kan, pEGZH3T, pCR2.1-TOPO
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pEGZH3/; Plasmid/pET28/; Plasmid/pUC18T-miniTn7/; Plasmid/pScRhaB2/; Plasmid/pFlpe4/; Plasmid/pEXKm5/; Plasmid/pUT-miniTn5-kan/; Plasmid/pTNS3/; Plasmid/pJET1.2/; Plasmid/pCR2.1 - TOPO TA
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/CFBE41o-
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Invertebrate - Non-Insect/Non-Arthropod/Burkholderia dolosa (RG2-

bacteria)/oral/N/A/ABSL2/gloves, lab coat, eye proteciton/ABSL2/No//; Invertebrate - Non-Insect/Non-Arthropod/Burkholderia cepacia (RG1-bacteria)/oral/N/A/ABSL2/gloves, lab coat, eye protection/ABSL2/No//; Invertebrate - Non-Insect/Non-Arthropod/Burkholderia multivorans (RG2-bacteria)/oral/N/A/ABSL2/gloves, lab coat, eye protection/ABSL2/No//; Invertebrate - Non-Insect/Non-Arthropod/Burkholderia thailandensis (RG1-bacteria)/oral/N/A/ABSL2/gloves, lab coat, eye protection/ABSL2/No

Risk Assessment/Discussion:

Dr. Garcia has submitted an IBC amendment to her currently approved protocol, IBC-24-25, entitled *Mechanisms of Competition and Cooperation in Burkholderia species*. In this amendment, Dr. Garcia has updated personnel, gene targets, and added a project utilizing an infection model in C. elegans. Wild type and mutant strains of *B. dolosa, B. multivorans, B. cepacia, B. cenocepacia*, and *B. thailandensis* will be plated on agar plates to generate bacterial lawns. Alternatively, bacterial suspensions will be inoculated into liquid medium in 6-well plates. C. elegans will be transferred to seeded plates and incubated for up to 5 days. Worms will be monitored for mortality and fluorescence of ingested bacteria via microscopy. All infections, handling, culture, etc. is completed in the BSC. Microscopy will be done using a dissecting microscope located in the Garcia lab on the lab bench. At the conclusion of experiment, solid materials will be disposed of in a biohazard autoclave bag for autoclaving and disposal. When necessary to transport C. elegans within the laboratory (ex. From BSC to incubators, to/from microscope, etc.), worms will be placed in primary containers within secure secondary containers. She has also clarified gene targets, including addition of a CDI system for bcpA-cdiA chimeric genes. PPE for the new procedures remain the same as previously approved – lab coat, disposable gloves, and eye protection. This amended work will be completed at BSL2 containment and does not significantly alter the biohazardous risks compared to Dr. Garcia's currently approved IBC protocol.

IBC Discussion & Vote:

The amendment to IBC-24-25 (v.21.0) was approved pending minor modifications as listed below:
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SCIENTIFIC SUMMARY:

1. When describing the vortexing of bacterial suspensions, please clarify that the samples will be in sealed tubes.
2. Expand on the procedures associated with testing mortality in *C. elegans*. Will these tests be performed under a microscope? If done on the open bench, describe spill risk and mitigation associated with tapping liquid plates.
3. Describe how waste generated from *C. elegans* experiments is decontaminated. Will the plates be autoclaved or will liquid materials be treated with bleach?

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Carol Pickett initiated the motion. Delphine Malherbe seconded the motion. All IBC members present (12) voted in favor of the motion. Jan Smalle arrived late and was not present to vote.
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Conflicts of Interest: None
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PI: Chintan Kikani

IBC Protocol Number: IBC-24-27
Protocol Title: Epigenetic control of muscle stem cell function by PASK-Wdr5 signaling
Protocol Type: Amendment

Amendment To: Manipulations planned, Genetic constructs
Applicable Guidelines & Regulations: OSHA 29 CFR 1910.1030, OSHA Act of 1970 Clause 5(a)(1), UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section III-F-6, NIH Guidelines Section III-F-5, NIH Guidelines Section IV-B-7, NIH Guidelines Section III-D-1, NIH Guidelines Section III-E-3, NIH Guidelines Section III-F-1, NIH Guidelines Section III-F-2, NIH Guidelines Section III-F-3, NIH Guidelines Section III-F, NIH Guidelines Section III-F-4
Maximum Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 1 (ABSL1)
Primary Reviewers: C. Haughton, T. Chambers, B. Nelson

Brief Project Overview:

My laboratory investigates how stem cells communicate with their surrounding tissues. We are working on a hypothesis that stem cell function in the tissue context is governed by signaling cues that regulate transcriptional activities within the stem cells. As the quality and quantity of the signaling cues changes due to various factors, stem cell functions are also adjusted to maintain a proper tissue function.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Bacterial culture, Cell culture, Immunohistochemistry, Histology, Flow Cytometry/Cell Sorting, Proteomics, Imaging/Microscopy, Genetics, DNA/RNA isolation/purification, Transfection, Transformation, PCR/qRT-PCR, Use of Viral Vectors, Creation of Viral Vectors, Animal work (breeding, surgeries, etc.), Use of Human Source Material(s)
Transport: Yes
Materials Transported: Animals, Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: PASK/Human/Metabolic Enzyme, Cell Cycle/Expression/Human or Mouse Cells/Retroviral, Lentiviral/; GFP/A.victorius/tracking gene/tracking/human or mouse cells/retrovirus, Lentiviral/; Slc25a39/human, mouse/metabolic enzyme/expression/human or mouse cells/retrovirus/; Slc25a39/Synthesized/Metabolic enzyme/Targeted knock-down of Slc25a39 during muscle regeneration in mice. /mouse/siRNA-based delivery/
Vector(s) [Vector Category/Vector Technical Name]: Naked nucleic acid/siRNA duplex; Retrovirus/pBabe-Puro; Retrovirus/pQCXIP; Lentivirus/p-Lenti-Blast; Lentovirus/p-Lenti-Puro
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HEK293T; Animal/C2C12; Animal/Muscle Stem Cells; Human/HCT119; Animal/MEF; Human/A431; Human/HepG2
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse/Naked Nucleic Acid-r/sDNA/Intramuscular/Anesthesia/ABSL1/Gloves, Lab Coat, Eye Protection/ABSL1/No

Risk Assessment/Discussion:

Dr. Kikani has submitted an amendment to IBC-24-27, entitled *Epigenetic control of muscle stem cell function by PASK-Wdr5 signaling*. In this amendment, Dr. Kikani has updated some administrative information, lab personnel, and added a project to deliver siRNA to mice for knockdown of Slc25a39 in mice. siRNA targeting Slc25a39 and non-targeting controls will be obtained from a commercial vendor for intramuscular injection into mice that have undergone muscle injury. Mice will be anesthetized during siRNA injections, which greatly reduces the potential for accidental needlestick during injections. 5-days after injection, mice will be euthanized and muscle tissue harvested for qRT-PCR, western blotting, histological analysis, and regeneration assays. All animal work will be conducted at ABSL1 containment, and downstream manipulations involving harvested animal tissues will be performed using BSL1 containment. The siRNAs utilized are designed to target mouse genes and are non-replicative. The primary exposure risk is the potential for needlestick during injections of mice which is greatly reduced by ensuring animals are anesthetized prior to injections. This new work does not increase the biohazardous risk compared to Dr. Kikani's previously approved work. There is an IBC hold on corresponding IACUC protocol 2019-3317.

IBC Discussion & Vote:

The amendment to IBC-24-27 (version 16.0) was approved.

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Thomas Chambers initiated the motion. Brandy Nelson seconded the motion. All IBC members present (12) voted in favor of the motion. Jan Smalle arrived late and was not present to vote.

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Conflicts of Interest: None

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PI: Wangxia Wang

IBC Protocol Number: IBC-24-63
Protocol Title: Mitochondrial Function and microRNA Regulation in Traumatic Brain Injury and Alzheimer's Disease
Protocol Type: Amendment
Amendment To: Cells or tissues used in research, Genetic constructs, Laboratory Location(s), Personnel
Applicable Guidelines & Regulations: UK Administrative Regulation 6.9, UK Administrative Regulation 6.3, OSHA 29 CFR 1910.1030, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section IV-B-7, NIH Guidelines Section III-F-1, NIH Guidelines Section III-D-4
Maximum Containment Level: Biological Safety Level 2 (BSL2), Animal Biological Safety Level 1 (ABSL1)
Primary Reviewers: C. Haughton, T. Chambers, D. Malherbe

Brief Project Overview:

Traumatic brain injury (TBI) is a major cause of death and disability that affects an estimated 1.7 million people a year in the US alone, with an estimated annual financial burden of over $75 billion in direct medical costs and indirect costs. To date, there are no effective treatments due, in part, to an incomplete understanding of the pervasive and destructive events that occur at early time points following the initial injury. Alzheimer's disease (AD) is the most prevalent form of dementia, currently affecting millions of Americans. It is most commonly characterized by memory loss and general cognitive deterioration in older people. Unfortunately, there is still no effective treatment or prevention for AD. Evidently, TBI is a major risk factor for developing Alzheimer's disease and related dementia (AD/ADRD). Our lab is trying to better understand the molecular mechanisms of TBI and AD, specifically the role of microRNAs (miRNAs, a group of small, non-coding, regulatory RNAs) in secondary injury of TBI and the pathogenesis of AD/ADRD, and to seek novel strategies in TBI and AD/ADRD diagnosis, prevention,

and/or treatment. The scope of our research will involve in studying the mechanisms of secondary injuries following initial TBI, and how TBI and other risk factors affect the pathogenesis of AD/ADRD. Our research will also explore therapeutic intervention for TBI and AD/ADRD by delivering small molecules (e.g. miRNAs) to the injured rodent brain that turn off genes that contribute to destructive events following TBI and pathways leading to AD/ADRD.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Cell culture, PCR/qRT-PCR, Transfection, Bacterial culture, DNA/RNA isolation/purification, Immunohistochemistry, Imaging/Microscopy, Use of Human Source Material(s), Use of infectious agents
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: EGFP/jellyfish/Tracking/Expression/mammalian cells/bacteria/Plasmid/; GFP/jellyfish/Tracking/Expression/mammalian cells/bacteria/Plasmid/; mCherry /Discosoma/Tracking/ Expression /mammalian cells/bacteria/Plasmid/; YFP/jellyfish/Tracking/Expression/mammalian cells/bacteria/Plasmid/; RFP/Discosoma/Tracking/Expression/mammalian cells/bacteria/Plasmid/; CFP/jellyfish/ Tracking/Expression/ mammalian cells/bacteria/Plasmid/; Turquoise/jellyfish/Tracking/Expression/mammalian cells/bacteria/Plasmid/; Kiema/Montipora/Tracking/Expression/mammalian cells/bacteria/Plasmid/; LC3/Human/Autophagy/Expression/mammalian cells/bacteria/Plasmid/; P62/Human/ Autophagy/Expression/mammalian cells/ bacteria/Plasmid/; UB K63/Human/Ubiquitin/Expression/mammalian cells/bacteria/Plasmid/; TRIM32/Human/E3 ligaase/Expression/mammalian cells/bacteria/Plasmid/; TFEB/Human/ Autophagy/Expression/ mammalian cells/bacteria/Plasmid/; LAMP1/Human/ Autophagy/Expression/ mammalian cells/bacteria/Plasmid/; P54/Human/RNA helicase/Expression/ mammalian cells/bacteria/Plasmid/; huPSS-1/Human/Lipid synthase/signaling/Expression/mammalian cells/bacteria/Plasmid/; FIS/Human/Mitochondrial fission/Expression/mammalian cells/bacteria/Plasmid/; UB/Human/Ubiquitin/Expression/mammalian cells/bacteria/Plasmid/; miR-146a/Synthetic/Regulatory/ Interference /mammalian cells/rats/mice/N/A/; miR-223/Synthetic/Regulatory/Interference/mammalian cells/rats/mice/N/A/; miR-155/Synthetic/Regulatory/Interference/mammalian cells/rats/mice/N/A/; miR-124a/Synthetic/Regulatory/Interference/mammalian cells/rats/mice/N/A/; miR-142-3p/Synthetic/Regulatory/ Interference/mammalian cells/rats/mice/N/A/; miR-142-5p/Synthetic/Regulatory/Interference/mammalian cells/rats/mice/N/A/; miR-107/Synthetic/Regulatory/Interference/mammalian cells/rats/mice/N/A/; miR-150/Synthetic/Regulatory/Interference/mammalian cells/rats/mice/N/A/; Scrambled miRNA control (also called scrambled control, or RNA scrambled control nucleic acids, or scramble)/Synthetic/N/A/N/A/mammalian cells/rats/mice/N/A/; IRAK1/Human, mouse/Inflammatory signaling/Expression/Mammalian cells/bacteria/plasmid/; TRAF6/Human/mouse/Inflammatory signaling/Expression/Mammalian cells/bacteria//; NLRP3/Human/mouse/Inflammasome component/Expression/Mammalian cells/bacteria//; CEBPb/Human/mouse/Inflammatory transcription factor /Expression/Mammalian cells/bacteria//; miR-132/human/mouse/regulatory/expression/mammalian cells/rats/mice/pCDNA 3.1/; GRN/human/mouse/anti-inflammatory/lysosomal/expression/mammalian cells/mouse/pCDNA 3.1/; ARC/human/rat/mouse/RNA

carrier/expression/Mammalian cells/mouse/plasmids/; SOD2/human/mouse/antioxidant/expression/mammalian cells/mouse/pCDNA 3.1
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pEGFP-LC3/; Plasmid/pDEST-mCherry-LC3/; Plasmid/pDEST-mCherry-EGFP-LC3/; Plasmid/mCherry-mito-7/; Plasmid/pDsRed2-MitoTimer/; Plasmid/paGFP-MT/; Plasmid/pEGFP-p62/; Plasmid/mCherry-p62/; Plasmid/YFP-p62/; Plasmid/pDsRed2-mito-RFP/; Plasmid/pECFP-mito/; Plasmid/pcDNA-HA-UB K63/; Plasmid/pmTurquoise2-Mito/; Plasmid/pCGN-HA-TRIM32/; Plasmid/pAc.GFP1-N1-TRIM32/; Plasmid/pEGFP-N1-TFEB/; Plasmid/pmCherry-LAMP1/; Plasmid/pIND(SP1)-Mito-Kiema/; Plasmid/RFP-P54-3UTR/; Plasmid/pEF-Tak-mCherry-huPSS-1/; Plasmid/pBaBe hygro-mCherry-GFP-FIS/; Plasmid/mCherry2-C1 (Control mCherry) /; Plasmid/pcDNA3.1(+)-hA5U.hGRN/; Plasmid/pcDNA3.1(+)-hA5U.hMIR132/; Plasmid/pcDNA3.1(+)-hA5U.hSOD2/; Plasmid/pET21a+RVG-hARC-StrepII/; Plasmid/pET21 a+Bl.hTFR1-hARC-Strepll-TAT-HIS/; Plasmid/pcDNA3.1(+)-hA5U.EGFP/; Plasmid/RFP-UB
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Animal/BV-2/; Human/HeLa/; Human/PDZD8-KO-HeLa/; Human/SH-SY5Y/; Human/HEK293T/; Human/H4/; Human/SH-SY5Y-mito-CFP/; Human/SH-SY5Y-mito-RFP/; Human/hBMECs /; Human/hCMEC/D3/; Human/SH-SY5Y-HA-Ub
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse/Naked Nucleic Acid-r/sDNAretro-orbital or intracerebroventricular injections/anesthesia/ABSL1/Lab coat, gloves, eye protection, surgical mask, head cover, surgical gown/ABSL1/No/ N/A

Risk Assessment/Discussion:

Dr. Wang has submitted an amendment to her IBC protocol entitled *Mitochondrial Function and microRNA Regulation in Traumatic Brain Injury and Alzheimer's Disease*. In this amendment, Dr. Wang has updated personnel, laboratory locations, genetic constructs, cells in use, and added a project utilizing mice. They will purchase several plasmids that will be utilized to produce miR-132 and mRNA constructs for modeling the blood brain barrier in vitro (two added endothelial cell lines) and in vivo. CCI mice will be administered miR-132, scrambled control, SOD2 mRNA, miR-132/SOD2 mRNA via retro-orbital injection 6 hours after brain injury. This work will be done at ABSL1 containment with lab personnel wearing lab coat, gloves, eye protection, surgical mask, head cover, and surgical gown. The plasmids and constructs in this project are non-replicating. This amended work is very similar to previously approved work in Dr. Wang's IBC protocol and does not significantly alter the biohazardous risks associated with this IBC protocol. There is an IBC hold on corresponding IACUC protocol 2019-3223.

Jan Smalle arrived at 12:20pm during discussion of Dr. Wang's IBC amendment

IBC Discussion & Vote:

The amendment to IBC-24-63 (version 37.0) was approved pending minor modifications as listed below:
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SCIENTIFIC SUMMARY:

1. Please add an explanation of why sonication is listed in the chemical fume hood while the homogenization is performed in the biosafety cabinet.

2. Add a description of the in vitro determination of testing efficiency for the nanocarrier crossing the blood-brain barrier.
3. Include the volume(s) being used during retro-orbital injections.

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Tom Chambers initiated the motion. Delphine Malherbe seconded the motion. All IBC members present (13) voted in favor of the motion.

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Conflicts of Interest: None

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PI: Saurabh Chattopadhyay

IBC Protocol Number: IBC-24-108
Protocol Title: Innate immune responses to virus infection
Protocol Type: Amendment
Amendment To: Administrative Information
Applicable Guidelines & Regulations: NIH Guidelines Section IV-B-7, NIH Guidelines Section III-D 1, OSHA 29 CFR 1910.1030, OSHA Act of 1970 Clause 5(a)(1), UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section III-D-3, NIH Guidelines Section III-F-1, NIH Guidelines Section III-D-2
Maximum Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, A. Pinto, D. Malherbe

Brief Project Overview:

Our lab focuses on studying how our body fights against viruses using our immune system. Our goal is to investigate anti-viral genes and proteins that are important to limit virus replication and prevent the onset of disease. Similarly, we also study cellular pathways that viruses use to block the immune responses to promote their replication. Different viruses can induce very distinct sets of genes, so one gene may be critical for defense against one virus but is unimportant against another. As such, we utilize viruses from different families that elicit unique subsets of anti-viral genes (e.g., TDRD7 and IRF3) and can be useful to study both specific and general anti-viral pathways. In this protocol, we will investigate the role of innate immune responses to viral infections, particularly the members of the paramyxo, pneumo, orthomyxo, rhabdo, cardio, herpes, and coronavirus families that cause diseases in humans. We will perform in vitro and in vivo experiments to study the interaction of viruses with our immune system.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Cell culture, Creation of Viral Vectors, DNA/RNA isolation/purification, Flow Cytometry/Cell Sorting, PCR/qRT-PCR, Transfection, Use of Viral Vectors, Use of Human Source Material(s)
Transport: Yes
Materials Transported: Animals, Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Sendai Virus (RG1-virus)/Mouse/; Respiratory Syncytial Virus (RSV) (RG2-virus)/Human/; Human Parainfluenza Virus (HPIV) (RG2-virus)/Human/; Vesicular Stomatitis Virus (VSV) (RG2-virus)/Mouse/; Herpes Simplex Virus-1 (HSV-1) (RG2-virus)/Human/; Encephalomyocarditis Virus (EMCV) M Strain (RG2-virus)/Mouse/; Influenza A Virus (RG2-virus)/Human/;Human Coronavirus - HCoV-OC43 (RG2-virus)/Human/; Murine Coronavirus A59 (RG1-virus)/Mouse/; Cytomegalovirus (CMV) (RG2-virus)/Human/; Murine Hepatitis Virus (MHV) (RG2-virus)/Mouse/; Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human/; Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human/; Human

metapneumovirus (hMPV) (RG2-virus)/Human/
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: IRF3 and mutants/Human and Mouse/Antiviral/Expression, Silencing /E.coli, HEK293, HT1080, MEFs /pLVX-IRES-puro and pcDNA3.1/; TDRD7 and Mutants/Human and Mouse/Metabolic/Expression, Silencing /E.coli, HEK293, HT1080, MEFs /pLVX-IRES-puro and pcDNA3.1/; Ubiquitin and Mutants/Human and Mouse/Other/Expression/E.coli, HEK293, HT1080/pLVX-IRES-puro and pcDNA3.1/; AMPK/Human and Mouse/Metabolic/Expression, Silencing /E.coli, HEK293, HT1080, MEFs, L929/pLVX-IRES-puro and pcDNA3.1/; TRIM/Human and Mouse/Antiviral /Expression, Silencing /E.coli, HEK293, HT1080, MEFs, L929/pLVX-IRES-puro and pcDNA3.1/; NF-kB/Human and Mouse/Antiviral, Inflammatory /Expression, Silencing /E.coli, HEK293, HT1080/pLVX-IRES-puro and pcDNA3.1/; NUB1/Human and Mouse/Other/Expression, Silencing /E.coli, HEK293, HT1080, L929/pLVX-IRES-puro and pcDNA3.1/; IRF7 and Mutants/Human and Mouse/Antiviral /Expression, Silencing /E.coli, HEK293, HT1080, Macrophages, Let1/pLVX-IRES-puro and pcDNA3.1/; Protein Deubiquitinase (DUBs)/Human and Mouse/Deubiquitination /Expression, Silencing /E.coli, HEK293, HT1080, A549, Let1, RAW264.7/pLVX-IRES-puro and pcDNA3.1/; Protein Phosphatase (PP)/Human and Mouse/Dephosphorylation /Expression, Silencing /E.coli, HEK293, HT1080, Let1, RAW264.7/pLVX-IRES-puro and pcDNA3.1/; TBK1/Human and Mouse/Kinase/Expression, Silencing /E.coli, HEK293, HT1080/pLVX-IRES-puro and pcDNA3.1/; RIG-1/Human and Mouse/Antiviral/Expression, Silencing /E.coli, HEK293, HT1080, MEFs/pLVX-IRES-puro and pcDNA3.1/; STING/Human and Mouse/Antiviral/Expression, Silencing /E.coli, HEK293, HT1080, MEFs/pLVX-IRES-puro and pcDNA3.1/; Cas9/S. pyogenes /Enzyme /Silencing /HEK293, HT1080/CRISPR/Cas9 Plasmid (SCBT)/
Vector(s) [Vector Category/Vector Technical Name]: Lentivirus/pLVX-IRES-puro; Plasmid/pcDNA3.1; Plasmid/CRISPR/Cas9
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HEK292/; Human/HT1080/; Human/A549/; Human/HeLa/; Animal/L929/; Animal/MEFs/; Animal/RAW264.7/; Animal/Veero/; Animal/LLCMK2/; Animal/Let1/; Animal/Macrophages/; Animal/Macrophages
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse/Sendai Virus (RG1-virus)/Intranasally or i.p/Anesthetized with Isoflurane/ABSL2/Gloves, Lab Coat, Eye Protection/ABSL2/Yes/Appropriate ABSL2 protocols are followed, including PPEs, which will be strictly used in the ABSL2 facility to avoid any spread. The cages with infected mice are autoclaved following the protocols designed by DLAR./; Mouse/Influenza A Virus (PR8 strain) (RG2-virus)/Intranasally or i.p/Anesthetized with Isoflurane/ABSL2/Gloves, Lab Coat, Eye Protection/ABSL2/Yes/Appropriate ABSL2 protocols are followed, including PPEs, which will be strictly used in the ABSL2 facility to avoid any spread. The cages with infected mice are autoclaved following the protocols designed by DLAR./; Mouse/Mouse Hepatitis Virus (mHV) (RG2-virus)/Intranasally or i.p/Anesthetized with Isoflurane/ABSL2/Gloves, Lab Coat, Eye Protection/ABSL2/Yes/Appropriate ABSL2 protocols are followed, including PPEs, which will be strictly used in the ABSL2 facility to avoid any spread. The cages with infected mice are autoclaved following the protocols designed by DLAR./; Mouse/Vesicular Stomatitis Virus (VSV) (RG2-virus)/Intranasally or i.p/Anesthetized with Isoflurane/ABSL2/Gloves, Lab Coat, Eye Protection/ABSL2/No/Appropriate ABSL2 protocols are followed, including PPEs, which will be strictly used in the ABSL2 facility to avoid any spread. The cages with infected mice are autoclaved following the protocols designed by DLAR./; Mouse/Encephalomyocarditis Virus (EMCV) M Strain (RG2-virus)/Intranasally or i.p/Anesthetized with Isoflurane/ABSL2/Gloves, Lab Coat, Eye Protection/ABSL2/No/Appropriate ABSL2 protocols are followed, including PPEs, which will be strictly used in the ABSL2 facility to avoid any spread. The cages with infected mice are autoclaved following the protocols designed by DLAR./; Mouse/Herpes Simplex virus 1 (HSV-1) (RG2-

virus)/Intranasally or i.p/Anesthetized with Isoflurane/ABSL2/Gloves, Lab Coat, Eye Protection/ABSL2/No/Appropriate ABSL2 protocols are followed, including PPEs, which will be strictly used in the ABSL2 facility to avoid any spread. The cages with infected mice are autoclaved following the protocols designed by DLAR./; Mouse/Human metapneumovirus (hMPV) (RG2-virus)/Intranasally or i.p/Anesthetized with Isoflurane/ABSL2/Gloves, Lab Coat, Eye Protection/ABSL2/No/Appropriate ABSL2 protocols are followed, including PPEs, which will be strictly used in the ABSL2 facility to avoid any spread. The cages with infected mice are autoclaved following the protocols designed by DLAR.

Risk Assessment/Discussion:

Dr. Chattopadhyay has submitted an amendment to his IBC protocol entitled *Innate immune responses to virus infection* to add a new viral agent – human metapneumovirus (hMPV). hMPV is a RG2 viral pathogen of humans. Symptoms of infection with hPMV include respiratory symptoms, fever, runny nose, cough, sneezing, sore throat and may also include body aches, headache, and fatigue. There is potential for infection to lead to more serious illness including bronchitis and pneumonia. Dr. Chattopadhyay will obtain hMPV from a UK collaborator, Dr. Rebbeca Dutch. They plan to use hMPV in the same manner as described and approved for other viral pathogens on their IBC protocol. Previously approved work for other viral pathogens includes *in vitro*, *ex vivo*, and *in vivo* work. Laboratory work with hMPV will be completed at BSL2 in a BSC by trained lab personnel wearing lab coat, gloves, and eye protection. Animal work will be completed at ABSL2 wearing the same PPE. Anesthetized mice will be administered hMPV intranasally or via IP injection in a BSC. Downstream assays and manipulations remain the same as previously approved. The addition of hMPV does not significantly alter the biohazardous risk associated with Dr. Chattopadhyay's previously approved work.

IBC Discussion & Vote:

The amendment to IBC-24-108 (version 47.0) was approved pending minor modifications as listed below:
*
ANIMAL RESEARCH – Animals with Biohazards Table: Please change the response in the “Will the agent be shed?” column for Human metapneumovirus to “Yes.”

INFECTIOUS AGENTS – Infectious Agents Table: The amount of virus produced is noted to be greater than 50ml (>50ml). Is this a typo? Should this be <50ml? Please correct.

SCIENTIFIC SUMMARY:

1. Please describe the transportation and storage of virus from the Dutch Lab to the Chattopadhyay Lab in greater detail.
2. Make note that the infection of cells means that hMPV is being propagated.
3. Include a disclosure that, during intra-nasal administrations, there is a risk of the animal sneezing the agent back into the environment. Presumably, this procedure is being completed within a Biological Safety Cabinet (BSC). Please specify that a BSC is used for intranasal inoculation of animals.

*
Delphine Malherbe initiated the motion. Amelia Pinto seconded the motion. All IBC members present (13) voted in favor of the motion.
*
Conflicts of Interest: None

*

PI: Stephen Randal Voss
IBC Protocol Number: IBC-24-441
Protocol Title: B21-3795-M2: Salamander Genome Project
Protocol Type: Amendment
Amendment To: Administrative Information, Genetic constructs, Manipulations planned
Applicable Guidelines & Regulations: UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section III-D-4, NIH Guidelines Section III-F-1
Maximum Containment Level: Biological Safety Level 1 (BSL1)
Primary Reviewers: C. Haughton, A. Hunt, T. Chambers

Brief Project Overview:

Salamanders are important models in biological research and are widely used in studies of vertebrate development and regeneration. We are developing research resources in support of scientists that use salamanders. We also maintain a laboratory population of axolotl salamanders in the Ambystoma Genetic Stock Center and distribute these, including transgenic salamanders, to researchers upon request. The transgenic axolotl lines express fluorescent proteins either ubiquitously or in specific cell populations. We accept transgenic/knockout axolotls into the Ambystoma Genetic Stock Center that are created by our lab and members of the axolotl research community.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), DNA/RNA isolation/purification, Genetics, Imaging/Microscopy, Histology, Immunohistochemistry, PCR/qRT-PCR, Transformation
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): N/A
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: ltk/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target ltk/Axolotl/naked nucleic acids/; mmp13/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target mmp13/Axolotl/naked nucleic acids/; grhl3/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target grhl3/Axolotl/naked nucleic acids/; prod1/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target prod1/A. mexicanum embryo/naked nucleic acids/; Slc2a5/Ambystoma mexicanum/CRISPR-CAS9 Knockout/gRNAs designed to target Slc2a5/A. mexicanum embryo/Naked nucleic acid /; c16orf89/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target c16orf89/A. mexicanum embryo/naked nucleic acids/; mitf/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target mitf /A. mexicanum embryo/naked nucleic acids/; sox10/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target sox10/A. mexicanum embryo/naked nucleic acids/; mir-214/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target mir-214 /A. mexicanum embryo/naked nucleic acids/; ptn/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target ptn/A. mexicanum embryo/naked nucleic acids/; flrt3/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target flrt3/A. mexicanum embryo/naked nucleic acids/; snca1/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target scna1/A. mexicanum embryo/naked nucleic acids/; cited2/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target cited2/A. mexicanum embryo/naked nucleic acids/; slc2a1/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAS designed to target slc2a1/A. mexicanum embryo/naked nucleic acids/; lep/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target lep/A. mexicanum

embryo/naked nucleic acids/; adgrl2/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target adgrl2/A. mexicanum embryo/naked nucleic acids/; csfr1/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target csfr1/A. mexicanum embryo/naked nucleic acids/; tyrp1/Ambystoma mexicanum/CRISPR-CAS9 Knockout/gRNAs designed to target Tyrp1/A. mexicanum embryo/Naked nucleic acid /; hif1a/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target hif1a/A. mexicanum embryo/naked nucleic acids/; hif3a/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target hif3a/A. mexicanum embryo/naked nucleic acids/; hif2a/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target hif2a/A. mexicanum embryo/naked nucleic acids/; zeb1/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target zeb1/A. mexicanum embryo/naked nucleic acids/; zeb2/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target zeb2/A. mexicanum embryo/naked nucleic acids/; thbs2/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target thbs2/A. mexicanum embryo/naked nucleic acids/; atria/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target atria/A. mexicanum embryo/naked nucleic acids/; tenm4/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target tenm4/A. mexicanum embryo/naked nucleic acids/; gli3/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target gli3/A. mexicanum embryo/naked nucleic acids/; gphn/Ambystoma mexicanum/CRISPR-Cas9 Knockout/gRNAs designed to target gphn/A. mexicanum embryo/naked nucleic acids/; Socs3 Enhancer Element/Ambystoma mexicanum (axolotl)/Tol2 plasmid/Integration of axolotl enhancer fluorescent reporter /Ambystoma mexicanum (axolotl) embryo/pTol2[Exp]-{Xho1/EcoR1/F1_Mex_pq/EcoR1//; /Xho1:mouse beta-globin minimal promoter}>EGFP/
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pTol2[Exp]-{Xho1/EcoR1/F1_Mex_pq/EcoR1/ Xho1:mouse beta-globin minimal promoter}>EGFP/; Naked nucleic acid/NEB® PCR Cloning Kit/
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: N/A
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Salamander/Naked Nucleic Acid-r/sDNA/Embryo microinjection/Embryo anesthesia/ABSL1/Gloves, lab coat, eyeware /ABSL1/No//

Risk Assessment/Discussion:

Dr. Voss has submitted an amendment to his currently approved IBC protocol entitled *Salamander Genome Project*. In this amendment, Dr. Voss has updated lab personnel and genetic constructs utilized axolotl embryos. Specifically, Dr. Voss' lab seeks to use Tol2 plasmid and Tol2 transposase mRNA to introduce a fluorescent reporter construct into axolotl embryos to validate reporter expression in response to embryo tail amputation. This work will be done at ABSL1 container with lab personnel wearing lab coat, gloves, and protective eyewear. Dr. Voss' laboratory has many years of experience in the housing, rearing, and manipulation of axolotls. This amendment does not significantly alter the biohazardous risk associated with previously approved work.

IBC Discussion & Vote:

The amendment to IBC-24-441 (version 19.0) was approved.
*
Tom Chambers initiated the motion. Arthur Hunt seconded the motion. All IBC members present (13) voted in favor of the motion.
*
Conflicts of Interest: None
*

PI: Brandon Logeman
IBC Protocol Number: IBC-25-99
Protocol Title: Sex and physiological State dependent molecular characterization of circuits gov
Protocol Type: Amendment
Amendment To: Genetic constructs, Manipulations planned, Biological Safety Level (BSL)
Applicable Guidelines & Regulations: NIH Guidelines Section III-F-1, NIH Guidelines Section III-F, NIH Guidelines Section III-F-3, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9
Maximum Containment Level: Biological Safety Level 2 (BSL2), Animal Biological Safety Level 1 (ABSL1)
Primary Reviewers: C. Haughton, B. Nelson, Y. Wu

Brief Project Overview:

This project seeks to understand how differences in brain gene expression and protein composition influence innate behaviors.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Bacterial culture, Cell culture, DNA/RNA isolation/purification, Imaging/Microscopy, Genetics, Transfection, Use of Human Source Material(s), Use of viral vectors
Transport: No
Materials Transported:
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: GFP/Aequorea victoria/fluorescent protein/transfection/human and mouse cells/pCMV-GFP /; GCaMP8s/Aequorea victoria/fluorescent Ca2+ sensor/neural activity monitor/mouse cells/pAAV-hSyn-jGCaMP8s
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pCMV-GFP; AAV-hSyn-jGCaMP8s
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HEK293; Animal/Neuro-2a
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse/Viral Vector - Adeno-Associated Virus (AAV)/intracranial/stereotaxic/ABSL1/disposable gown, gloves, eye protection, surgical mask/ABSL1/No/All procedures involving recombinant AAV will be conducted using BSL-2 practices and PPE. Personnel will wear a disposable lab coat or surgical gown, double gloves, and eye/face protection (safety glasses or face shield). Masks will be worn during injection and craniotomy procedures to reduce splash or aerosol exposure. Outer gloves will be changed immediately if contaminated and prior to leaving the procedure area.

Risk Assessment/Discussion:

Dr. Logeman has submitted an amendment to his IBC protocol entitled *Sex and physiological State dependent molecular characterization of circuits gov*. In this amendment, Dr. Logeman has added a project utilizing AAV expressing GCaMP8s in mice. AAV will be purchased from a 3rd party vendor, loaded into syringes within a BSC in DLAR, and administered to anesthetized animals via stereotaxic injection. Mice administered AAV will undergo imaging studies to assess neuronal activity. Wild type AAV is a RG1 agent, and the transgene (GCaMP8s) encodes a fluorescent calcium indicator, and is not oncogenic or otherwise hazardous. Animal work will be done at ABSL1

containment wearing lab coat or gown, double gloves, and protective eyewear or face shield. Biohazardous waste and animal carcasses will be disposed of according to UK Research Safety guidance. There is an IBC hold on corresponding IACUC protocol 2025-4655.

IBC Discussion & Vote:

The amendment to IBC-25-99 (version 22.0) was approved pending minor modifications as listed below:
*
PERSONNEL – Contact Information: Please update the contact information.

LOCATIONS – Research Locations Table: Is the lab space still pending? Please update if lab space(s) has been assigned. Please also include DLAR location information for animal experiments.

DISINFECTANTS, EMERGENCY RESPONSE, TRANSPORT, WASTE – Biohazardous Materials Transport Description: Please include transport details for receiving and aliquoting AAVs, and the transport of viral vectors and tissues to and from DLAR.

SCIENTIFIC SUMMARY: Please update the use of sharps description in the summary due to the inclusion of animal injections.

*
Brandy Nelson initiated the motion. Yadi Wu seconded the motion. All IBC members present (13) voted in favor of the motion.
*
Conflicts of Interest: None
*

New Protocols

PI: Diego Lucero

IBC Protocol Number: IBC-25-97
Protocol Title: New Modulators of Lipoprotein Metabolism: From the liver to the vascular wall.
Protocol Type: New Protocol
Amendment To: N/A
Applicable Guidelines & Regulations: NIH Guidelines Section III-E, NIH Guidelines Section III-F-1, NIH Guidelines Section III-F-2, OSHA Act of 1970 Clause 5(a)(1), OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section IV-B-7, NIH Guidelines Section III-F-8, NIH Guidelines Section III-D-1, NIH Guidelines Section III-E-1, NIH Guidelines Section III-D-2
Maximum Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, D. Harrison, C. Pickett

Brief Project Overview:

Heart disease is the leading cause of death in the United States and is driven by high levels of fats like cholesterol and triglycerides in the blood. These fats are transported through the bloodstream into particles called lipoproteins. When the systems for processing lipoproteins (metabolism) do not function properly, fats accumulate in blood, increasing the risk of heart disease.

Notably, evidence reveals that our knowledge of the regulation of lipoprotein metabolism is incomplete. For instance, the genetic cause cannot be identified in nearly half of the individuals with strong signs of inherited

elevations of fats in the blood, limiting their access to early treatments to reduce their high risk for heart disease. Furthermore, a large proportion of patients with elevated blood lipoproteins either do not respond to current therapies or cannot tolerate them. Identifying new genes and proteins that control lipoprotein metabolism will improve the diagnosis of inherited disorders and uncover alternative therapeutic targets to reduce fats in the blood.

This project will identify and characterize new regulators of lipoprotein metabolism and understand how they contribute to the build-up of fat in the arteries. To achieve this goal, this project will combine cell-based assays (in vitro) and animal (in vivo) approaches, using tools like plasmids and lentiviruses. In addition, high-resolution imaging, lipid measurements, and the assessment of RNA and protein expression will be implemented.

Summary of Biohazard Materials & Manipulations:
Manipulations Planned: Animal work (breeding, surgeries, etc.), Bacterial culture, Cell culture, DNA/RNA isolation/purification, Flow cytometry/Cell sorting, Genetics, Histology, Imaging/Microscopy, Immunohistochemistry, PCR/qRT-PCR, Transfection, Use of Human Source Material(s), Use of infectious agents, Use of viral vectors, Transformation
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: sgRNA (LDLR)/human/Lipoprotein receptor (sgRNA)/knockout/human cells/Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (TAGLN) /human/actin-binding protein (sgRNA) /knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (MYLIP)/human/ubiquitinase (sgRNA) /knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (SYNRG) /human/adaptor protein (sgRNA) /knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (non-targeting) /human/Control (sgRNA)/knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (CLTB)/human/clathrin (sgRNA)/knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (CLTA)/human/clathrin (sgRNA) /knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (PACSIN3) /human/kinase substrate (sgRNA)/knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; sgRNA (HUNK) /human/kinase (sgRNA) /knockout /human cells /Non-viral vector, plasmid (pNV-sgRNA-GFP)/; 2 sgRNA (LDLR) /human/lipoprotein receptor (sgRNA)/knockout /human cells /Non-viral vector, plasmid (pRP[2gRNA]-EGFP-U6>hLDLR[gRNA1]-U6>hLDLR[gRNA2])/; 2 sgRNA (LCP1)/human/actin-binding protein (sgRNA)/knockout /human cells /Non-viral vector, plasmid (pRP[2gRNA]-EGFP-U6>hLCP1[gRNA1]-U6>hLCP1[gRNA2])/; 2 sgRNA (CFL1)/human/actin-binding protein (sgRNA)/knockout /human cells /Non-viral vector, plasmid (pRP[2gRNA]-EGFP-U6>hCFL1[gRNA1]-U6>hCFL1[gRNA2])/; 2 sgRNA (FCGRT)/human/immunoglobulin receptor (sgRNA) /knockout /human cells /Non-viral vector, plasmid (pRP[2gRNA]-EGFP-U6>hFCGRT[gRNA1]-U6>hFCGRT[gRNA2])/; sgRNA (Tagln) /mouse/actin-binding protein (sgRNA) /knockout /murine cells /Non-viral vector, plasmid (pRP[CRISPR]-EGFP-hCas9-U6>mTagln[gRNA])/;

mCherry/human/reporter(mCherry)/overexpression of fluorescently tagged proteins/human cells/Non-viral, plasmid: pRP[Exp]-CMV+intron>EGFP/hLDLR[NM_000527.5](ns):P2A:mCherry/hCLTB[NM_007097.5]/; LIPG/human/lipase/overexpression of catalitically inactive form/human cells/non-viral vector, plasmid: pRP[Exp]-Neo-CMV>{hLIPG[NM_006033.4]*S169A}/; LIPG/human/lipase/overproduction of active enzyme/human cells/Non-viral vector, plasmid (pCMV6-Entry)/; empty/human/empty/negative control/human cells/Non-viral vector, plasmid (pCMV6-Entry)/; LDLR/human/lipoprotein receptor/express fluorescently tagger protein/human cells/non-viral vector, plasmid. /; Clta/mouse/clathrin/express fluorescently tagger protein/human cells/non-viral vector, plasmid. /; CLTB/human/clathrin/express fluorescently tagger protein/human cells/non-viral vector, plasmid. /; FCGRT/human/FCGRT: immunoglobulin receptor./overexpress FcRn/human cells /3rd generation lentivirus/; LIPG/human/lipase/overexpress endothelial lipase/human cells/3rd generation lentivirus/; shRNA (CD36)/human/cluster of differentiation 36/knockdown expression of CD36/human cells/3rd generation lentivirus/; shRNA (FCGRT)/human/immunoglobulin receptor/knockdown FCGRT expression/human cells/3rd generation lentivirus/; shRNA (SREBF2)/human/cholesterol sensor protein/knockdown SREBF2 expression/human cells/3rd generation lentivirus/; GFP/human/Reporter (GFP)/knockout/human cells/Non-viral vector, plasmid (pNV-sgRNA-GFP)/; Cas9 /Bacterial (Cas9)/nuclease (Cas9)/knockout /murine cells /Non-viral vector, plasmid (pRP[CRISPR]-EGFP-hCas9-U6>mTagln[gRNA])/; LDLR /human/lipoprotein receptor(LDLR)/overexpression of fluorescently tagged proteins/human cells/Non-viral, plasmid: pRP[Exp]-CMV+intron>EGFP/hLDLR[NM_000527.5](ns):P2A:mCherry/hCLTB[NM_007097.5]/; CLTA /human/clathrin(CLTA)/overexpression of fluorescently tagged proteins/human cells/Non-viral, plasmid: pRP[Exp]-CMV+intron>EGFP/hLDLR[NM_000527.5](ns):P2A:mCherry/hCLTB[NM_007097.5]/; B2M/human/B2M: histocompatibility complex/overexpress FcRn/human cells /3rd generation lentivirus/; shRNA (LRP1)/human/lipoprotein receptor/knockdown LRP1 expression/human cells/3rd generation lentivirus
Vector(s) [Vector Category/Vector Technical Name]: Lentivirus/pLV[Exp]-Neo-CMV>GeneID/; Lentivirus/pLV[shRNA]-Hygro-U6>GeneID[shRNA#]/; Lentivirus/pLV[shRNA]-Bsd-U6>GeneID[shRNA#]/; Lentivirus/pLV[shRNA]-Neo-U6>GeneID[shRNA#]/; Lentivirus/pLV[Exp]-Neo-CMV+intron>GeneID1 (ns):P2A:GeneID2/; Plasmid/pRP[CRISPR]-EGFP-hCas9-U6>sgRNA/; Plasmid/pRP[Exp]-Neo-CMV-ORF/; Plasmid/pCMV6-Entry/; Plasmid/pNV-sgRNA-GFP/; Plasmid/pBa-LSS-GFP-LDLR/; Plasmid/PA-mCherry1-Clathrin-15/; Lentivirus/pLV[Exp]- CBh>hCas9/Hygro
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HepG2 cells/; Human/Huh7 cells/; Human/T/G HA-VSMC cells/; Animal/J774A.1/; Animal/RAW264.7/; Animal/MOVAS/; Human/HeLa
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse/Human blood or other bodily fluids/intravenous/inhaled isoflurane (2-3%)/ABSL2/lab coat, gloves, protective eyewear/ABSL1/No/The intravenous injections of human or mouse LDL will be performed in the BSC located in the ABSL-2 room of the DLAR facility, following BSL-2 practices.

Risk Assessment/Discussion:

Dr. Lucero is a new PI to UK and has submitted an IBC protocol for his work entitled *New Modulators of Lipoprotein Metabolism: From the liver to the vascular wall*. Dr. Lucero's lab seeks to understand the genetic basis of hereditary hypercholesterolemia by identifying and characterizing novel genes that regulate LDL metabolism. To that end, Dr. Lucero's laboratory will utilize human and animal cells for genetic modification via lentivirus transduction and plasmid transfection, human plasma for isolation of lipoproteins, fluorescent labeling of lipoproteins and injection of labeled LDL into mice. 3rd generation lentivirus will be purchased from a 3rd party vendor and not packaged by Dr. Lucero's laboratory. Lentivirus will be used to overexpress FCGRT

(immunoglobulin receptor), LIPG (lipase), Cas9 (nuclease), and B2M (histocompatibility complex). Lentivirus will be used to knockdown expression via shRNA targeting CD36, FCGRT, SREBF2 (cholesterol sensor protein), and LRP1 (lipoprotein receptor). Stably transduced cells will be sorted by flow cytometry in the FCIM Core facility followed by RT-qPCR and immunoblotting. All lentivirus work will be completed at BSL2+ containment. All work will be done in the BSC with personnel wearing lab coats, double gloves, and eye protection. All materials will be wiped with disinfectant prior to being removed from the BSC. Work surfaces will be cleaned and disinfected with 70% ethanol and Wescodyne before and after use. Sharps will not be utilized in conjunction with lentivirus, significantly decreasing the risk of accidental exposure. Dr. Lucero also describes plasmid transfection of cells to express fluorescent reporters, CRISPR/Cas9 components, or ORFs for transient expression in mammalian cells. Movas, RAW264.7, J774, HuH7, HeLa, and T/G HA-VSMC cells will be transduced with Cas9 expressing lentivirus (as described above). This work will be completed using BSL2 containment. This includes use of a BSC where work surfaces and decontaminated before and after use. Dr. Lucero will also isolate lipoproteins from human plasma obtained from the blood bank. Work with human plasma will be completed using BSL2 containment until inactivation of biohazardous materials, at which point work will be done on the open lab bench. PPE includes lab coat, disposable gloves, and eye protection. Isolated lipoproteins will be labeled with Alexa Fluor carboxylic acid, succinimidyl ester, and injected into anesthetized mice via retro-orbital injection. Injections will take place in a BSC in DLAR following ABSL2 practices. Animals will be housed at ABSL1 containment. Human source materials utilized in this protocol introduce the risk of exposure to blood borne pathogens, including HBV, HIV, HCV, etc. All work with human source materials and plasmid constructs will be done at BSL2 containment, whereas lentivirus work will be completed using BSL2+ containment. Dr. Lucero also describes an animal model of hyperlipidemia and atherosclerosis, but this project does not appear to involve any biohazardous materials subject to IBC registration. There is an IBC hold on corresponding IACUC protocol 2025-4589.

IBC Discussion & Vote:

The protocol IBC-25-97 (version 8.0) was approved pending minor modifications as listed below:
*
SCIENTIFIC SUMMARY:

1. Will sealed tubes need to be punctured for human plasma fractions? If so, please add information about the precautions in place against accidental needlestick.
2. Please include a description of signage that can be posted at the benchtop when dialysis cassettes are being used. Include a description of how leaks/spills will be handled.
3. Are proteins from plasma still biohazardous? Are there washing or purification steps that would render the products non-biohazardous? Is it possible for viruses or other unknown pathogens are present in lipoprotein fractions? If so, please clarify how downstream assays will be performed to mitigate these risks.
4. Is ABSL2 handling/containment of transgenic mouse tissues (not administered or used in conjunction with biohazardous materials) necessary? ABSL1 handling/containment may be more appropriate.
5. Include a distinction between BSL2 and BSL2+ containment practices. How do these differ?
6. Ensure descriptions of PPE utilized are consistent throughout. In the section titled “Non-viral vector delivery into cultured cells”, PPE is described as including closed-toe shoes, lab coat, and disposable nitrile gloves. There is no mention of eye protection, which is also required. Please update.

*

Doug Harrison initiated the motion. Carol Pickett seconded the motion. All IBC members present (13) voted in favor of the motion.
*

Conflicts of Interest: None
*

PI: Christopher Emfinger

IBC Protocol Number: IBC-25-103
Protocol Title: Unmasking conditional dependencies between key proteins influencing metabolic health.
Protocol Type: New Protocol
Amendment To: N/A
Applicable Guidelines & Regulations: NIH Guidelines Section III-E-3, NIH Guidelines Section III-F-1, OSHA 29 CFR 1910.1030, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section III-D-1
Maximum Containment Level: Animal Biological Safety Level 1 (ABSL1), Biological Safety Level 2 - Enhanced (BSL2+)
Primary Reviewers: C. Haughton, Y. Wu, D. Harrison

Brief Project Overview:

Diabetes and related metabolic disorders burden millions of people worldwide. Many proteins regulating metabolism rarely act in isolation. This makes the consequences of altering these proteins (e.g. through drug treatments) difficult to predict, makes identifying new therapeutic targets difficult, and means not everyone will respond equally to the same therapies. Analysis of prior data nominated new potential regulators of metabolism but they and how they interact are poorly understood and consequently require validation experiments. The goal of this project is to identify the ways in which key genes regulating metabolism depend on one another to exert their effects on overall metabolic health. The project uses adenoviral and adeno-associated viral (AAV) vectors (both non-replicating) to deliver nucleic acid plasmids that alter abundance and/or function of these key genes. The adenoviral vectors will be used in cell culture and tissue culture experiments. The AAV vectors will be given to live mice. The studies will use loss of candidate genes to determine the influence of these genes on metabolic health both individually and acting together. Findings from these studies will further clarify processes that regulate metabolic health and may identify novel therapeutic targets for intervention in diabetes and its related disorders.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Bacterial culture, Cell culture, DNA/RNA isolation/purification, Genetics, Imaging/Microscopy, Immunohistochemistry, PCR/qRT-PCR, Proteomics, Transfection, Use of Human Source Material(s), Use of viral vectors, Animal work (breeding, surgeries, etc.)
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: Transketolase (TKT)/Mouse (Mus musculus)/Enzyme/Knockdown/Mouse primary cells/Adenovirus/; Transketolase (TKT)/Human/Enzyme/Rescue experiment (over-expression)/primary cells from mice and humans/Adenovirus/; Transketolase (TKT), mutated nuclear localization sequence/Human/Enzyme/over-expression (rescue experiment)/Primary cells from mice and humans/Adenovirus/; Transketolase (TKT), mutant lacking enzymatic acitivity/Human/Enzyme/over-expression (rescue experiment)/primary cells from mice and humans/Adenovirus/; enhanced green fluorescent protein (eGFP)/Aequorea Victoria, mutated to enhance stability/fluorescence/tracking protein/expression/primary cells from mice and humans/Adenovirus/; mCherry red fluorescent protein/Aequorea Victoria, mutated to change fluorescent color/indicator protein/expression/primary cells from mice and humans/Adenovirus/; Dipeptidyl

peptidase 8 (DPP8)/Mouse/Enzyme/knockdown/primary mouse cells/Adenovirus/; Dipeptidyl peptidase 8 (DPP8)/Human/Enzyme/knockdown/primary human cells/Adenovirus/; G-protein coupled receptor 180 (GPR180)/Mouse/Plasma membrane g-protein-coupled receptor/knockdown/primary mouse cells/Adenovirus/; G-protein-coupled receptor 180 (GPR180)/Human/plasma membrane g-protein-coupled receptor/knockdown/primary human cells/Adenovirus/; Transketolase (TKT)/Human/Enzyme/knockdown/primary human cells/Adenovirus/
Vector(s) [Vector Category/Vector Technical Name]: Adenovirus/Ad-m; Adenovirus/pAV[EXP]
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Animal/INS-1/832/; Human/HEK293T/; Animal/pancreatic islet beta cells/; Human/pancreatic islet beta cells/; Animal/mouse pancreatic islet/; Human/human pancreatic islet/
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: N/A

Risk Assessment/Discussion:

Dr. Emfinger has submitted a new IBC protocol entitled *Unmasking conditional dependencies between key proteins influencing metabolic health*. In this project, Dr. Emfinger seeks to identify the effects of key metabolic regulating genes on overall metabolic health. Dr. Emfinger's lab will utilize human samples from the Integrated Islet Distribution Program from deceased human donors to isolate islet to prepare pseudoislets and dispersed cells for transfection with adenovirus vector. Islet isolation involves centrifugation using swinging-bucket rotors with safety lids that will be loaded/unloaded in a BSC and wiped with disinfectant prior to removal from BSC. Adenovirus will be purchased from a 3rd party vendor and not packaged by Dr. Emfinger's lab. Adenovirus will be used to knockdown TKT via shRNA, rescue TKT expression, knockdown DPP8 via shRNA, knockdown GPR180 via shRNA, and express mCherry or GFP tracking proteins in human or mouse cells. Downstream experiments include RNA isolation for qPCR, imaging/microscopy, and proteomics. All work with adenovirus is performed at BSL2+ containment wearing lab coat, gloves, and eye protection. Biohazardous waste generated is handled and disposed of according to UK Research Safety guidance. The animal work describes does not involve any administration of biohazardous materials.

IBC Discussion & Vote:

The protocol IBC-25-103 (version 9.0) was approved pending minor modifications as listed below:
*
DISINFECTANTS, EMERGENCY RESPONSE, TRANSPORT, WASTE – Biohazardous Materials Transport: Please update the description of transport to/from the Light Microscopy Core to specify the use of leak-proof, shatter-proof, lidded secondary container.

SCIENTIFIC SUMMARY:

1. Please clearly specify the PPE utilized for the procedures described.
2. Please clearly specify whether work described is being done within a BSC vs. the open lab bench.
3. Elaborate on how equipment will be decontaminated after being used in conjunction with biohazards.

*
Doug Harrison initiated the motion. Yadi Wu seconded the motion. All IBC members present (13) voted in favor of the motion.
*

Conflicts of Interest: None
*

PI: Nicholas Grillet
IBC Protocol Number: IBC-25-107
Protocol Title: Adeno-Associated Virus (AAV) injection into the inner ear
Protocol Type: New Protocol
Amendment To: N/A
Applicable Guidelines & Regulations: NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section III-D-1, NIH Guidelines Section III-E-1, NIH Guidelines Section III-F-1
Maximum Containment Level: Biological Safety Level 1 (BSL1), Animal Biological Safety Level 1 (ABSL1)
Primary Reviewers: C. Haughton, B. Nelson, A. Pinto

Brief Project Overview:

We are studying hearing and hearing loss. Hearing starts in the inner ear where sensory cells (called hair cells) detect the sound-induced vibration and produce an electric response from it. Hair cells do not regenerate, and culturing them in vitro is possible only for early postnatal age and does not survive for long. Transfecting hair cells has also been very challenging. An alternative is to use AAV virus injected into the semicircular canal of a newborn mouse (P0-P5), which will diffuse to the cochlea and transduce hair cells. We will use this approach to better understand the function of genes/proteins involved in sound detection and causing hearing loss when mutated. The AAV virus will be produced by a company.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Use of viral vectors, Transfection, Imaging/Microscopy, Immunohistochemistry
Transport: Yes
Materials Transported: Biohazardous Materials, Animals
Infectious Agent(s)/Natural Host(s): N/A
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: Tmc1/mus musculus/Auditory mechanosensitive channel complex/rescue hearing/Mice Tmc1-KO; Tmc2-KO and WT/AAV-cDNA6 (Biolabs)/; Tmc2/mus musculus/Auditory mechanosensitive channel complex/rescue hearing/Mice Tmc1-KO; Tmc2-KO and WT/AAV-cDNA6 (Biolabs)/; Tmc1 / Tmc2 chimera/mus musculus/Auditory mechanosensitive channel complex/rescue hearing/Mice Tmc1-KO; Tmc2-KO and WT/AAV-cDNA6 (Biolabs)/; Loxhd1/mus musculus/Auditory mechanosensitive channel complex/rescue hearing/Mice Loxhd1-KO and WT/AAV-cDNA6 (Biolabs)/; GFP or mScarlet or TdTomato/mus musculus/Auditory mechanosensitive channel complex/positive control of transduction/Mice Loxhd1-KO, TMC1-KO; TMC2-KO, WT/AAV-cDNA6 (Biolabs)/; CRE/mus musculus/Recombinase/positive control for transduction and recombination/Mice [Rosa-Flox-Stop-Flox- tdTomato (Ai14); Loxhd1-KO, TMC1-KO; TMC2-KO, WT]/AAV-cDNA6 (Biolabs)/; HA, FLAG, MYC, ALFA tags/mus musculus/Recombinase/Genetic tags added in frame with cDNAs listed above to track the corresponding proteins, /Mice [Rosa-Flox-Stop-Flox- tdTomato (Ai14); Loxhd1-KO, TMC1-KO; TMC2-KO, WT]/AAV-cDNA6 (Biolabs)/
Vector(s) [Vector Category/Vector Technical Name]: Adeno-Associated Virus (AAV)/AAV-DJ/; Adeno-Associated Virus (AAV)/AAV-2/; Adeno-Associated Virus (AAV)/AAV-9/; Adeno-Associated Virus (AAV)/AAV-2.7m8/; Adeno-Associated Virus (AAV)/AAV-9-PHP.B
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: N/A
Animal Use: Yes

Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse, Viral Vector - Adeno-Associated Virus (AAV), microinjection of the inner ear with micromanipulator, Cryoanesthesia , ABSL1, gloves, labcoat, safety googles, ABSL1, No, injection of AAV in the inner ear, which will be followed by auditory tests and euthanasia to assess gene rescue. Mice at postnatal day 0-5 (P0-P5) will be used for virus transfection of the inner ear. Hypothermia with ice will be used as the method of anesthesia. Hypothermia will be induced by placing the pup on a sterile nitrile glove and then setting that on crushed ice

Risk Assessment/Discussion:

Dr. Grillet has submitted a new IBC protocol for his project entitled *Adeno-Associated Virus (AAV) injection into the inner ear*. This project will involve the administration of Adeno-Associated Virus (AAV) vector overexpressing TMC1, TMC2, LOXHD1, GFP, mScarlet, TdTomato, or Cre to the inner ear of mouse pups. Mouse pups are anesthetized via hypothermia with ice prior to creating a small incision in the postauricular region to expose the cochlea. After administration of AAV, some mice will be euthanized to obtain tissues for immunolabeling, whereas others will be used for hearing tests. Wild type AAV is a RG1 agent, and the transgenes described here are not known to be oncogenic or otherwise hazardous. AAV will be obtained from a 3rd party vendor and not generated in Dr. Grillet's lab. All work described will be completed at BSL1/ABSL1 wearing lab coats, gloves, mask, and eye protection. Anesthetization of mice and use of micromanipulator greatly minimizes potential for accidental needlestick when administered AAV to mice. Sharps are disposed immediately after use in a designated sharps container. There is an IBC hold on corresponding IACUC protocol 2025-4629.

IBC Discussion & Vote:

The protocol IBC-25-107 (version 12.0) was approved pending minor modifications as listed below:
*
RECOMBINANT AND/OR SYNTHETIC NUCLEIC ACID MATERIALS – Gene Information Table: Please include a separate entry for each distinct genetic construct. For instance, “GFP or mScarlet or TdTomato” are all listed in one entry with “mus musculus” as the gene source. This is incorrect. Please include a distinct entry for each of these three genes – GFP, mScarlet, and TdTomato.
LOCATIONS:

1. Please include an entry for an in the Autoclave Information table as solid biohazardous waste decontamination is indicated in the protocol.
2. Indicate where the receipt and aliquoting of commercially prepared AAVs occurs in the Research Locations table.

NIH GUIDELINES AND OTHER APPLICABLE REGULATIONS: Based on the work described in this IBC protocol, NIH Guidelines Section III-D-1 does not apply and should be removed. Similarly, NIH Guidelines Section III-D-4 does apply and should be selected. Please update accordingly.

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Brandy Nelson initiated the motion. Amelia Pinto seconded the motion. All IBC members present (13) voted in favor of the motion.
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Conflicts of Interest: None
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University of Kentucky (UK)
Institutional Biosafety Committee (IBC)

Renewals

PI: Tianyan Gao
IBC Protocol Number: IBC-25-100
Protocol Title: Studies of protein phosphatases and mitochondrial metabolism in colorectal cancer
Protocol Type: Renewal
Amendment To: N/A
Applicable Guidelines & Regulations: OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section IV-B-7, NIH Guidelines Section III-D-1, NIH Guidelines Section III-F, NIH Guidelines Section III-F-1, NIH Guidelines Section III-F-3, OSHA Act of 1970 Clause 5(a)(1)
Maximum Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, Y. Wu, D. Harrison

Brief Project Overview:

Colorectal cancer (cancer of the colon and rectum) is the third most commonly diagnosed cancer and the second leading cause of cancer death in the United States. Despite significant progress made in recent years, how tumors are formed and progressed are not well understood. In cancer, the way proteins normally communicate within the cells is found to be abnormal. Loss of tumor suppressor proteins promotes the formation and progression of tumors. My lab focuses on studying the function of protein phosphatases in colon cancer. Specifically, we use animal models to study the role of PHLPP and PTPRF in the initiation and progression of colorectal cancer. The results from these studies will shed light on developing potential cancer therapy use protein phosphatases as novel targets.

Obesity and cancer are two major epidemics of this century. Recent epidemiological studies have indicated that obesity is associated with increased incidence and mortality of a wide variety of human cancers including colorectal cancer. Given the rising trend of obesity, it is anticipated that the increasing number of obese patients would present unique challenges for the development of personalized cancer therapies. Thus, a better understanding of how adipose tissue and adipocytes support tumor growth and progression is urgently needed. We will specifically examine how mitochondrial metabolism is involved in promoting tumorigenesis by mediating the interaction between increased fatty acid availability and colorectal cancer progression.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Bacterial culture, Cell culture, Creation of viral vectors, DNA/RNA isolation/purification, Flow cytometry/Cell sorting, Genetics, Imaging/Microscopy, PCR/qRT-PCR, Propagation of infectious agents, Transfection, Transformation, Use of Human Source Material(s), Use of viral vectors, Viral culture, Use of infectious agents
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: PHLPP/Human/protein phosphatase/Overexpression of this gene in mammalian cells using plasmids or retroviral constructs. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and viral constuct used in mammalian cells/pcDNA3 and pBabe-puro for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; Akt/Human/enzymatic protein/Overexpression of this gene in mammalian cells using plasmids. Lentiviral shRNA constructs are used for

knocking down this gene in mammalian cells as well./plasmid and viral constuct used in mammalian cells/pcDNA3 for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; PKC/Human/enzymatic protein/Overexpression of this gene in mammalian cells using plasmids or retroviral constructs. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 and pBabe-puro for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; KRAS/Human/Oncogene/Overexpression of this gene in mammalian cells using plasmids or retroviral constructs. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 and pBabe-puro for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; BRAF/Human/Oncogene/Overexpression of this gene in mammalian cells using plasmids or retroviral constructs. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 and pBabe-puro for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; PI3K/human/lipid kinase and oncogene/Overexpression of this gene in mammalian cells using plasmids or retroviral constructs./plasmid and virual construct used in mammalian cells/pcDNA3 and pBabe-puro for overexpression/; mTOR/Human/Protein kinase and oncogene/Overexpression of this gene in mammalian cells using plasmids. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; PTEN/human/Lipid Phosphatase and tumor suppressor/Overexpression of this gene in mammalian cells using plasmids. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; Hexokinase 2/Mouse/glucose kinase/Overexpression of this gene in mammalian cells using plasmids. Lentiviral shRNA constructs are used for knocking down this gene in mammlian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; GFP/jellyfish/reporter fluorescence protein/Overexpression of this gene in mammalian cells using plasmids or retroviral constructs./plasmid and virual construct used in mammalian cells/pcDNA3 and pBabe-puro for overexpression/; PTPRF/Mouse/Protein tyrosine phosphatase/Overexpression of this gene in mammalian cells using plasmids. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/; Drp1/Human/Dynamin-related protein 1 (DRP1); GTPase controls mitochondrial fission /Overexpression of this gene in mammalian cells using plasmids. Lentiviral shRNA constructs are used for knocking down this gene in mammalian cells as well./plasmid and virual construct used in mammalian cells/pcDNA3 for overexpression; pLKO.1 lentiviral vector for shRNA mediated knockdown/

Vector(s) [Vector Category/Vector Technical Name]: Lentivirus/pLKO.1-puro-shDrp1;Lentivirus/pLKO.1-puro-shPTPRF; Lentivirus/pLKO.1-puro; Retrovirus/pBabe-Puro; Plasmid/pCDNA3; Plasmid/pGEX6P-3

Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/293T/; Human/Caco2/; Human/HCT116/; Human/HT29/; Human/SW480/; Human/SW620/; Human/DLD1/; Human/Primary Adipocytes/; Human/Primary human cancer cells/; Animal/Mouse embryonic fibroblasts /; Animal/MC38/

Animal Use: Yes

Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse/Cells - Human, genetically modified/Subcutaneously injection/Isoflurane anesthesia/ABSL2/glove, lab coat, disposable gown, shoe covers/ABSL1/No/The cell suspension (50-100 ul) is injected subcutaneously into the flank of the animal using a small needle and syringe./; Mouse/Cells - Human, non-modified/Subcutaneously injection/Isoflurane anesthesia/ABSL2/Gloves, disposable lab coats, shoe covers/ABSL1/No/The cell suspension (50-100 ul) is injected subcutaneously into the flank of the animal using a

small needle and syringe. /; Mouse/Tissue - Human (ex. PDX tumor tissue)/Surgical subcutaneous implantation/anesthesia/ABSL2/Gloves, disposable lab coats, shoe covers/ABSL1/No

Risk Assessment/Discussion:

Dr. Gao has submitted a renewal of her IBC protocol entitled *Studies of protein phosphatases and mitochondrial metabolism in colorectal cancer*. Dr. Gao utilizes several different biohazardous materials in her laboratory, including human cells, lentivirus and retrovirus vectors, and animal xenograft experiments. Dr. Gao utilizes both 2nd and 3rd generation packaging plasmids for the lentivirus vector packaged in her laboratory, as well as a retrovirus vector. Lentivirus will be used to target PHLPP, Akt, PI3K, KRAS, PKC, mTOR, Hexokinase 2, PTEN and BRAF, PTPRF, and Drp1 for shRNA knockdown, whereas retrovirus will be used to overexpress PHLPP, PI3K, PKC, KRAS, BRAF and GFP. Dr. Gao's laboratory does not concentrate any of the viral vectors produced. There are several oncogenes expressed via retrovirus, including Akt, KRAS, BRAF, and PI3K. Tumor suppressors will also be silenced using lentiviral shRNAs including PHLPP and PTEN. Dr. Gao acknowledges the risk of tumorigenicity should exposure to these viral vectors occur, and notes that signage will be posted to communicate ongoing work with oncogenic viral vectors. Sharps will also not be utilized when working with these viral vectors, greatly minimizing the risk of accidental exposure. All work with retroviral and lentiviral vectors will be done using BSL2+ containment with personnel wearing lab coat, gloves, and eye protection. While 2nd generation lentivirus will be used to transduce cells for protein analysis, 3rd generation lentivirus will be used to transduce cells for xenograft experiments in mice. Cells transduced with 2nd generation lentivirus will not be used in animals. Human cells, both non-modified and transduced, will be administered anesthetized animals via subcutaneous injection using ABSL2 practices wearing gloves, lab coat or disposable gown, and shoe covers. Additionally, fresh tumor tissue obtained from colon cancer patients will be implanted into anesthetized mice using the same ABSL2 practices. Animals will be housed at ABSL1 containment. Tissues will be obtained from mice and used for immunohistochemistry, flow cytometry, and imaging and microscopy. All waste generated is handled and disposed of according to UK Research Safety guidance. Dr. Gao's current IBC protocol will expire on 10/12/2025.

IBC Discussion & Vote:

The protocol IBC-25-100 (version 10.0) was approved pending minor modifications as listed below:
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ANIMAL RESEARCH – Animals with Biohazards Table: The corresponding IACUC indicates colon cancer cell lines will be administered either subcutaneously or via orthotopic colonic injection or transplantation. If this is accurate, please update the Route of Administration columns accordingly to ensure congruency.
LOCATIONS – Research Locations Table: Please clarify where microscopy is being done in the “Procedures” field.
SCIENTIFIC SUMMARY:

1. In paragraph two of the Virus production section (b), the statement “If infected retrovirus carrying oncogenes, there is a small risk of enhancing tumorigenicity of those cancer cells.” implies that the only risk is exposure to the cells. Please explicitly state that exposure to oncogenic retrovirus is also a risk to personnel and briefly detail these risks.
2. Ensure that all descriptions of subcutaneous injections in mice note that the animals are under anesthesia.
3. Please expand on how patient tumor tissues are prepared and manipulated prior to administration to animals. Include whether this work is done in a BSC and the PPE required.

4. Microscopy for fixed and live tissues is noted. Please describe decontamination of equipment in these shared locations and include a note that signage will be used when working with live material to convey hazards to other personnel.

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Doug Harrison initiated the motion. Yadi Wu seconded the motion. All IBC members present (13) voted in favor of the motion.

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Conflicts of Interest: None

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PI: Jonghyuck Park

IBC Protocol Number: IBC-25-106
Protocol Title: Reprogramming Neuroimmune Responses for Functional Regeneration after Spinal Cord Injury; Developing immunotherapeutic nanoparticles for spinal cord injury; Enhancing the Therapeutic Potential of Nanoparticle-Mediated Immunotherapeutics for Spinal Trauma
Protocol Type: Renewal
Amendment To: N/A
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-1, NIH Guidelines Section III-E-1, NIH Guidelines Section III-F-3, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, NIH Guidelines Section III-D-4
Maximum Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, D. Malherbe, Y. Wu

Brief Project Overview:

Traumatic primary spinal cord injury (SCI) leads to paralysis below the level of injury, which results from neuronal death, axonal loss, demyelination, and the limited capacity of spinal cord neurons to regenerate. As a secondary injury, excessive neuroinflammatory responses play a key role in locomotor and somatosensory functional deficits after primary SCI. Our long-term goal is to develop translatable therapeutic strategies, targeting both locomotor and somatosensory functional restorations simultaneously after SCI. Due to the complex nature of SCI, we aim to employ combinative multi-stage approaches that limit excessive inflammatory responses and create an environment that supports regeneration. We propose 1) providing mechanical guidance cues via multichannel bridge chronically to enhance robust axonal outgrowth and synaptic continuity into appropriate functional fascicles for regeneration, 2) employing gene delivery to reprogram an inhibitory microenvironment thereby modulating innate immune cells phenotype, 3) incorporating neuropathic pain-silencing factor with a multichannel bridge to alleviate somatosensory dysfunctions after SCI, and 4) administrating biodegradable polymeric nanoparticle via tail vein to targeting circulating innate immune cell thereby altering their trafficking patterns and phenotype. Animals will be evaluated using locomotor and somatosensory assessments to determine the effects of immunomodulatory treatments. In a separate subset of animals, tissues will be harvested to investigate the biodistribution of innate immune cells among tissues by fluorescence imaging techniques. A small subset of animals will be perfused for histological and molecular assessment to characterize inflammatory responses after SCI.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Bacterial culture, Cell culture, Creation of viral vectors, DNA/RNA isolation/purification, Flow cytometry/Cell sorting, Histology, Imaging/Microscopy,

Immunohistochemistry, PCR/qRT-PCR, Transfection, Use of viral vectors, Use of Human Source Material(s), Use of infectious agents
Transport: Yes
Materials Transported: Animals, Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: IL10 /human/cytokine/expression/mice/lentiviral vector/; shRNA-TRPA1/human/membrane protein/silencing/mice/lentiviral vector/; Luciferase/Firefly /tracking/tracking/mice/lentiviral vector/; shRNA-TRPV1/human/membrane protein/silencing/mice/lentiviral vector/; shRNA-MAPK1/human/kinase/silencing/mice/lentiviral vector/; shRNA-MAPK14/human/kinase/silencing/mice/lentiviral vector/; shRNA-scramble/human/control/control/mice/lentiviral vector
Vector(s) [Vector Category/Vector Technical Name]: Lentivirus/lentiviral vector/VectorBuilder/cells transduction/Yes; Adeno-Associated Virus (AAV)/Adeno-associated virus (AAV) retrograde (AAVrg) vector/addgene/cells transduction/No
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HEK293T; Animal/RAW 264.7; Animal/32Dcl3; Animal/J774A.1
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Mouse/Viral Vector - Adeno-Associated Virus (AAV)/direct injection (in the brain)/chemical (anesthetic; ketamine and xylazine)/ABSL1/Disposable Gloves, Eye Protection, Surgical Mask, Head Cover, Surgical Gown, Booties or Shoe Covers./ABSL1/No/using the surgical tools AAV will be injected into the mouse brain for axon tracking/; Mouse/Viral Vector - Lentivirus/Localized delivery/anesthesia/ABSL2/Disposable Gloves, Eye Protection, Surgical Mask, Head Cover, Surgical Gown, Booties or Shoe Covers./ABSL2/No/The viral vector will be administered locally using a gelfoam scaffold placed directly on the exposed spinal cord at the injury site./; Mouse/Viral Vector - Adeno-Associated Virus (AAV)/direct injection (in the brain)/chemical (anesthetic; ketamine and xylazine)/ABSL1/Disposable Gloves, Eye Protection, Surgical Mask, Head Cover, Surgical Gown, Booties or Shoe Covers./ABSL1/No/using the surgical tools AAV will be injected into the mouse brain for axon tracking/; Mouse/Viral Vector - Lentivirus/Localized delivery/anesthesia/ABSL2/Disposable Gloves, Eye Protection, Surgical Mask, Head Cover, Surgical Gown, Booties or Shoe Covers./ABSL2/No/The viral vector will be administered locally using a gelfoam scaffold placed directly on the exposed spinal cord at the injury site.

Risk Assessment/Discussion:

Dr. Park has submitted a renewal of IBC protocol entitled *Reprogramming Neuroimmune Responses for Functional Regeneration after Spinal Cord Injury; Developing immunotherapeutic nanoparticles for spinal cord injury; Enhancing the Therapeutic Potential of Nanoparticle-Mediated Immunotherapeutics for Spinal Trauma*. Dr. Park's laboratory utilizes 3rd generation lentivirus vectors to overexpress or downregulate expression of their genes of interest, including anti-inflammatory cytokine (IL-10, IL-4, and IL-33), neuropathic pain sensing transmembrane channel (TRPA1 and TRPV1), mitogen-activated protein kinase 1 and 14), short hairpin RNA (TRPA1, TRPV1,

MAPK1, MAPK14 and scramble as a negative control. Lentivirus will be packaged in Dr. Park's laboratory using 3rd generation packaging plasmids. BSL2+ containment will be utilized throughout and includes use of disposable gloves, eye protection, surgical mask, head cover, surgical gown, and booties. All work will take place within a BSC. Lentivirus will be loaded into multichannel bridges for implantation into mice. Multichannel bridges will be surgically implanted into anesthetized mice that will also undergo spinal cord injury. Implantation will occur within BSC in DLAR. The multichannel bridge is designed to biodegrade over time. All animal work will take place at ABSL2 containment. 3 days after implantation of lentivirus-loaded multichannel bridge, animals will be moved to ABSL1 containment. If functional recovery is observed, animals will be administered AAV-Retrograde-EGFP from Addgene 9-weeks after spinal cord injury to differentiate newly regenerated axons. AAV will be administered to anesthetized mice via stereotaxic injection. 3 weeks after administration of AAV, mice will be euthanized and spinal cords removed. Cy5.5 conjugated PLG nanoparticles will also be fabricated for tail vein injection into mice. Animal samples will be prepared for flow cytometry in the FCIM core. All waste is handled and disposed of according to UK Research Safety guidance. Dr. Park's current IBC protocol will expire on 11/14/2025.

IBC Discussion & Vote:

The protocol IBC-25-106 (version 8.0) was approved pending minor modifications as listed below:
*
DISINFECTANTS, EMERGENCY RESPONSE, TRANSPORT, WASTE – Biohazardous Materials Transport Description: Please include a description of a secondary container and absorbent materials for the transport of multichannel bridges to DLAR.

SCIENTIFIC SUMMARY:

1. Please elaborate on how risks associated with AAV are mitigated.
2. In the third paragraph, please correct the phrase, “PPE *should* be used,” to “PPE *will* be used.”
3. Regarding flow cytometry, can flow staining and cell fixing be performed to minimize risk of live cell exposure?
4. Please clarify that a secondary container and absorbent material are utilized for transport of lentivirus-loaded bridges to DLAR.

*
Delphine Malherbe initiated the motion. Yadi Wu seconded the motion. All IBC members present (13) voted in favor of the motion.
*
Conflicts of Interest: None
*

PI: Luke Bradley

IBC Protocol Number: IBC-25-108
Protocol Title: B22-4013: Alternate molecular scaffolds for biotherapeutic research & development
Protocol Type: Renewal
Amendment To: N/A
Applicable Guidelines & Regulations: NIH Guidelines Section III-E, NIH Guidelines Section III-F-1, NIH Guidelines Section III-F-4, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9
Maximum Containment Level: Biological Safety Level 2 (BSL2)
Primary Reviewers: C. Shaffer, C. Pickett, J. Smalle

Brief Project Overview:

Research in the Bradley laboratory is focused on understanding of the relationship between the amino acid sequences of peptides / proteins and their biological function. The approaches used in this laboratory range from the molecular/structural to the cellular/functional characterization of these biomolecules. Standard recombinant DNA techniques such as polymerase chain reaction, restriction digest, agarose gel purification, ligations, bacterial, and mammalian transformations/transfections will be used. Furthermore, standard cell culture work will be used to further validate potential neuroprotective/neurorestorative properties.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Bacterial culture, Cell culture, DNA/RNA isolation/purification, Genetics, PCR/qRT-PCR, Proteomics, Transfection, Transformation
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: CaMI/Rat/calcium signalling/bacterial expression/E coli/pET/; GDNF/Human/growth factor/bacterial & Cell culture expression/E coli, mammalian cell culture/pCDNA/; GAPDH/Human/metabolic/bacterial expression/E coli/pGEX/; Siah1/Human/housekeeping/cell culture expression/Mammalian cell culture/pCDNA/; GFP/Aequorea victoria/luminescence/tag/E coli, mammalian/pET/; KCNQ1/Human/Ion channel/bacterial expression/E coli/pET/; FLAG/synthetic peptide/n/a - epitope/epitope Tag/E. coli, mammalian/pET/; Myc-tag/synthetic peptide derived from human Myc/myc-transcription factor/epitope tag/E. coli, mammalian/pET/; HA/Human/surface protein/epitope tag/E. coli, mammalian/pET/; SNCA/Human, canine, rodent/unknown/likely housekeeping/bacterial expression/E. coli/pET
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pET/; Plasmid/pCDNA/; Plasmid/pGFP/; Plasmid/pGEX/; Plasmid/pBT/; Plasmid/pTRG/; Plasmid/pET/; Plasmid/pCDNA/; Plasmid/pGFP/; Plasmid/pGEX/; Plasmid/pBT/; Plasmid/pTRG
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Animal/PC12/; Animal/MN9D/; Animal/B65/; Human/SHSY5Y/; Animal/E14/; Human/HEK293/; Human/SK-N-SH/MC/; Animal/rat brain
Animal Use: No
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: n/a

Risk Assessment/Discussion:

Dr. Bradley has submitted a renewal of his IBC protocol entitled *Alternate molecular scaffolds for biotherapeutic research & development*. Dr. Bradley's laboratory seeks to understand the relationship between the amino acid sequences of peptides and their biological function. Dr. Bradley describes 3 distinct projects, all of which involve mammalian cell culture and recombinant protein production in lab strain E. coli. The biohazardous risks associated with the work described in Dr. Bradley's IBC protocol include potential exposure to bloodborne pathogens, including HIV, HBV, HCV, etc. Via human cells and potential exposure to alpha synuclein, considered by many to act like a prion or "prion-like". To mitigate these risks, Dr. Bradley's laboratory utilizes BSL2 containment, including use of a BSC and lab coat, gloves, eye protection, long pants and closed-toe shoes. All waste is handled and disposed of according to UK Research Safety guidance. Dr. Bradley's current IBC protocol will expire on 9/14/2025.

IBC Discussion & Vote:

The protocol IBC-25-108 (version 6.0) was approved pending minor modifications as listed below:
*
SCIENTIFIC SUMMARY:

1. The phrase "All used/excess cells will be autoclaved prior to disposal in sink" indicates that you will be autoclaving liquid biohazardous waste. Is this accurate? Disinfection with fresh household bleach (10% bleach, 20-minute contact time) is the recommended method of disinfection for liquid biohazardous waste. If you are transporting liquid biohazardous waste for autoclaving, please describe how liquid biohazardous waste is transported safely to the autoclave.
2. Please remove the "alternative" method of serological pipet disinfection and disposal. Contaminated serological pipets should be collected in a plastic-lined cardboard box labeled as biohazardous, sealed with tape when full, and placed in a clear/orange biohazard bag for autoclaving and disposal.
3. Please clarify the concentration of bleach utilized for disinfection of alpha-synuclein work. Is 10% bleach sufficient? Please briefly discuss the nature of alpha-synuclein as "prion-like" and effective inactivation methods.

*
Jan Smalle initiated the motion. Doug Harrison seconded the motion. All IBC members present (13) voted in favor of the motion.
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Conflicts of Interest: None
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PI: Jon Thorson

IBC Protocol Number: IBC-25-112
Protocol Title: B22-4016-M: Thorson Laboratory Biosafety Protocol
Protocol Type: Renewal
Amendment To: N/A
Applicable Guidelines & Regulations: NIH Guidelines Section III-E, NIH Guidelines Section III-E-1, NIH Guidelines Section III-F-2, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9
Maximum Containment Level: Biological Safety Level 2 (BSL2)
Primary Reviewers: J. Smalle, A. Hunt, B. Nelson

Brief Project Overview:

The objectives of our research are to discover new natural products produced by soil microbes to understand the novel functions and corresponding biosynthesis with a specific emphasis on the chemical mechanisms of the corresponding biosynthetic enzymes. We work with a range of actinomycetes including organisms from commercial sources (ATCC, NRRL), from industrial collaborators (Pfizer) and new organisms from soil samples collected from diverse ecological niches within the Commonwealth of Kentucky. In addition, we utilize genetic combination of heterologous genes or biocatalysis to generate 'hybrid' unnatural natural products. Compounds that are generated and/or discovered and then tested using standard cytotoxicity against human cancer cell lines also in our laboratory.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Bacterial culture, Cell culture, DNA/RNA isolation/purification, PCR/qRT-PCR, Transformation

Transport: No
Materials Transported: N/A
Infectious Agent(s)/Natural Host(s): Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: natural product biosynthetic genes - we work with hundreds of genes from hundreds of different biosynthetic pathways. This list constantly changes and it is not practical to list them all or keep this up to date. Below are the gene classes:/Streptomyces and Micromonospora/biosynthetic pathways/heterologous production for biochemical studies/E. coli or Streptomyces/pMal; pET; pUC; pCR; pGST/; Genes involved in the biosynthesis of calicheamicin/GenBank: AF497482.1 Micromonospora echinospora/biosynthetic pathways/expression/E. coli or Streptomyces/pMal; pET; pUC; pCR; pGST/; Genes involved in the biosynthesis of esperamicin/GenBank: AY267372.1 Actinomadura verrucosospora/biosynthetic pathways/expression/E. coli or Streptomyces/pMal; pET; pUC; pCR; pGST/; Genes involved in the biosynthesis of dynemicin/GenBank: AY162971.1 Micromonospora chersina/biosynthetic pathways/expression/E. coli or Streptomyces/pMal; pET; pUC; pCR; pGST/; Genes involved in the biosynthesis of AT2433/GenBank: DQ297453.1 Actinomadura melliaura/biosynthetic pathways/expression/E. coli or Streptomyces/pMal; pET; pUC; pCR; pGST/; Genes involved in the biosynthesis of hedamycin/GenBank: AY196994.1 Streptomyces griseoruber/biosynthetic pathways/expression/E. coli or Streptomyces/pMal; pET; pUC; pCR; pGST/
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pMal vectors/; Plasmid/pET vectors/; Plasmid/pUC vectors/; Plasmid/pCR vectors (TA cloning)/; Plasmid/pGST (GST fusion expression) vectors/
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/non-small cell lung cancer cell line A549/; Human/PC-3 cancer cell line/; Human/HCT-116 cancer cell line/; Human/VCaP cancer cell line/; Human/TC-32 Ewing's cancer cell/; Human/MKL-1 skin cancer cell line/; Human/MCC26 skin cancer cell line/
Animal Use: No
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: N/A

Risk Assessment/Discussion:

Dr. Thorson has submitted a renewal of his IBC protocol entitled *Thorson Laboratory Biosafety Protocol*. Dr. Thorson's laboratory seeks to discover new natural products produced by soil microorganisms. Towards this goal, Dr. Thorson's laboratory utilizes several soil-based bacteria that are not known to be infectious. Dr. Thorson's laboratory will overexpress genes of interest via lab strain *E. coli* or *Streptomyces lividans* for downstream biochemical analysis. Dr. Thorson's lab will also isolate bacteria from soil samples obtained from Kentucky (a focus is Eastern Kentucky coal mines). They acknowledge the unknown nature of the bacterial agents in use at the time of isolation and will work in a BSC to minimize risk of exposure should any potentially pathogenic organisms be present. Once natural products of interest are identified, they are used in human cells to test for cancer cell cytotoxicity. During work with human cells staff will wearing gloves, lab coat, and safety glasses for work in the BSC. Working with human cells introduces risk of potential exposure to bloodborne pathogens, including HIV, HBV, HCV, etc. Work with human cells is limited to a dedicated cell culture room and designated lab staff. BSL2 containment is utilized for all work described in Dr. Thorson's IBC protocol. Dr. Thorson's current IBC protocol will expire on 9/6/2025.

IBC Discussion & Vote:

The protocol IBC-25-112 (version 4.0) was approved.
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Arthur Hunt initiated the motion. Jan Smalle seconded the motion. All IBC members present (13) voted in favor of the motion.
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Conflicts of Interest: None
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PI: Joshua Beckmann
IBC Protocol Number: IBC-25-113
Protocol Title: Neurobehavioral mechanisms of conditioned reinforcers and relative reinforcer value
Protocol Type: Renewal
Amendment To: N/A
Applicable Guidelines & Regulations: NIH Guidelines Section III-E, NIH Guidelines Section III-E-1, NIH Guidelines Section III-D-4, NIH Guidelines Section III-E-1, NIH Guidelines Section III-F-1, NIH Guidelines Section IV-B-7, OSHA Act of 1970 Clause 5(a)(1), UK Administrative Regulation 6.3, UK Administrative Regulation 6.9
Maximum Containment Level: Biological Safety Level 1 (BSL1), Animal Biological Safety Level 1 (ABSL1)
Primary Reviewers: C. Haughton, T. Chambers, D. Harrison

Brief Project Overview:

The purpose of the current study is to temporarily inhibit (turn off), activate (turn on), and/or record specific cells in the brain at different times during behavioral measures of natural (e.g. food) or drug reward and corresponding measures of neurotransmitter release. I propose to temporarily turn specific cells off or on by making them express either HA-KORD or h3MDq, respectively. These proteins a DREADD receptors, or 'Designer Receptors Exclusively Activated by a Designer Drug'. Both HA-KORD and h3MDq do not have any activity under normal circumstances. However, when an animal expresses a protein and is given an injection of the inert ligands salvinorin B (SalB) or clozapine-N-oxide (CNO), cells containing HA-KORD or h4MDq will be turned off or on, respectively. Thus, these protein-ligand pairs are only active when they interact. To get rats to express HA-KORD or h3MDq, they must receive an injection of adeno-associated virus directly into the brain. This virus is designed to infect brain cells with recombinant DNA. This DNA will only make protein it is specifically designed to make; i.e. it will not make the proteins naturally present in adeno-associated virus. The designed construct will cause cells to express only HA-KORD or h3MDq (proteins that has no natural function without co-administration of either SalB or CNO) and red or yellow fluorescent protein (a fluorescent protein that helps visualize what cells are expressing the protein of interest). Additionally, we will isolate the functional significance of specific neural pathways by using a dual-virus technique. The isolation of specific neural pathways is achieved through the use Cre recombinase and Cre-dependent KORD and h3MDq. Cre recombinase (via adeno-associated virus with green green fluorescent protein) is injected into projection sites and is retrograde-transferred back to cell bodies, while Cre-dependent KORD or h3MDq are injected into the location of the cell bodies; thus, Cre-dependent KORD or h3DMq will only be expressed in cells containing the Cre recombinase, functionally isolating the projection pathway of those cells and verified by overlapping fluorescence. Finally, we will utilize a GCamP calcium sensor, via fiberoptic photometry, coupled to CaMKII activity to monitor cell-specific activity during behavioral measures above and DREADD receptor function described above.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Immunohistochemistry, PCR/qRT-PCR, Use of viral vectors
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): N/A
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: Kappa Opioid Receptor Reverse-engineered from hKOR/Homosapiens/Membrane protein/Expression/Rat/AAV/; H3MDQ Reverse-engineered from CHRM3/Homosapiens/Membrane protein/Expression/Rat/AAV/; m-Cherry/Discosoma/Tracking gene/Expression/Rat/AAV/; eGFP/Aequorea victoria/Tracking gene/Expression/Rat/AAV/; m-Citrine/Aequorea victoria/Tracking gene/Expression/Rat/AAV/; Cre-dependent Kappa Opioid Receptor Reverse-engineered from CHRM3/Homosapiens/Membrane protein/Expression/Rat/AAV/; Cre-dependent H3MDQ Reverse-engineered from CHRM3/Homosapiens/Membrane protein/Expression/Rat/AAV/; Cre recombinase/Enterobacteria phage P1/Enzymatic protein/Cell-specific expression/Rat/AAV/; GCaMP6f calcium sensor/Synthetic/Tracking gene/Expression/Rat/AAV/
Vector(s) [Vector Category/Vector Technical Name]: Adeno-Associated Virus (AAV)/AAV-CaMKII-HA-KORD-mCitrine/; Adeno-Associated Virus (AAV)/AAV-CaMKIIa-hM3D(Gq)-mCherry/; Adeno-Associated Virus (AAV)/AAV-hSyn-DIO-HA-KORD-IRES-mCitrine/; Adeno-Associated Virus (AAV)/AAV-hSyn-DIO-hM3D(Gq)-mCherry/; Adeno-Associated Virus (AAV)/AAV-CMV-HI-eGFP-Cre/; Adeno-Associated Virus (AAV)/AAV9-Syn.GCaMP6f.WPRE.SV40/; Adeno-Associated Virus (AAV)/CMV-HI.eGFP-Cre/
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: N/A
Animal Use: Yes
Materials introduced into Animals [Animal Host Species/Biohazardous Material/Route of Administration/Restraint/Animal Experimental Procedures/PPE/Animal Housing/Agent Shedding/Special Practices & Procedures]: Incomplete

Risk Assessment/Discussion:

Dr. Beckmann has submitted a renewal of his current IBC protocol entitled *Neurobehavioral mechanisms of conditioned reinforcers and relative reinforcer value*. Dr. Beckmann's laboratory utilizes Adeno-Associated Virus (AAV) constructs to inhibit or activate different cells in the brains of rats. AAVs obtained from 3rd party vendors will be administered to anesthetized rats via stereotaxic injection in DLAR. AAV transgenes will include HA-KORD or h3MDq and red or yellow fluorescent protein under the synapsin I or CaMKIIa promoter in adeno-associated virus, and Cre recombinase and green fluorescent protein under the CMV promoter. Rats will be allowed to recover and undergo behavioral testing. At the conclusion of study, rats will be euthanized and brain tissue removed for immunohistochemistry or qPCR. Wild type AAV is a RG1 agent, and none of the transgenes described here are oncogenic or otherwise hazardous. The work described here will be conducted at BSL1/ABSL1 containment. Lab personnel will wear a lab coat, disposable gloves, and eye protection. Waste generated is being handled and disposed of according to UK Research Safety guidance. Dr. Beckmann's current IBC protocol will expire on 9/14/2025.

IBC Discussion & Vote:

The protocol IBC-25-113 (version 4.0) was approved pending minor modifications as listed below:
*
ANIMAL RESEARCH – Animals with Biohazards Table: Please complete the Animals with Biohazards table.

RECOMBINANT AND/OR SYNTHETIC NUCLEIC ACID MATERIALS – Gene Information Table: The gene targets listed here do not match those listed on the corresponding IACUC protocol. Please review the entries here for accuracy and update as needed to ensure congruency.

SCIENTIFIC SUMMARY: Is it necessary to include storage of these constructs in THM 212A when primary lab locations and other means of storage are indicated in BBSRB?

*

Doug Harrison initiated the motion. Tom Chambers seconded the motion. All IBC members present (13) voted in favor of the motion.

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Conflicts of Interest: None

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Incident Review

Nothing to report.

Protocol Issued Registration Numbers

Protocols issued registration numbers, including minor amendments. These protocols are exempt from IBC review and are registered with the UK Biological Safety Officer (BSO).

Czuba, Lindsay, Mechanisms of Small of Molecule Transport and Metabolism, Renewal, BSO, IBC-25-102 (v.8.0), 8/29/2025
Evers, B. Mark, Signaling pathways in the regulation of colon cancer metastasis, intestine differentiation, gut endocrine cell secretion, hepatic lipogenesis and pancreatic acinar cell aging., Amendment, BSO, IBC-24-472 (v.32.0), 8/28/2025
Yamasaki, Tritia, Neuroscience Biobank, Amendment, BSO, IBC-24-476 (v.24.0), 8/25/2025
Iragavarapu, Chait, 23-NHL-32-CT-PMC: The ELiPSE-1 Study: A Phase 1, Multicenter, Open-Label Study of CNTY-101 in Subjects With Relapsed or Refractory CD19-Positive B-Cell Malignancies, Amendment, BSO, IBC-24-64, 8/22/2025
Kim, Joseph, GO44479: A Phase II, Open-Label, Multicenter, Randomized Study of the Efficacy and Safety of Adjuvant Autogene Cevumeran Plus Atezolizumab and mFOLFIRINOX versus mFOLFIRINOX Alone in Patients with Resected Pancreatic Ductal Adenocarcinoma, Amendment, BSO, IBC-24-52, 8/22/2025
Brainson, Christine, Defining epigenetic vulnerabilities of lung cancer and lung disease, Amendment, BSO, IBC-25-85 (v.18.0), 8/22/2025
Norris, Christopher, Use of recombinant viral constructs to study calcineurin/NFAT activity in rodent brain tissue, Amendment, BSO, IBC-25-34 (v.23.0), 8/22/2025
Helsley, Robert, Macronutrient metabolism in Cardiometabolic Disease, Amendment, BSO, IBC-25-78 (v.16.0), 8/22/2025
Rangnekar, Vivek, Apoptosis by Par-4, Amendment, BSO, IBC-24-396 (v.34.0), 8/19/2025
Shaffer, Carrie, B23-4242-M: Molecular Mechanisms of Bacterial Secretion Systems, Amendment, BSO, IBC-24-123 (v.20.0), 8/19/2025
Blackburn, Jessica, Generation and use of transgenic zebrafish to study human cancer, Amendment, BSO, IBC-25-61 (v.18.0), 8/19/2025
Blackburn, Jessica, Identifying mechanisms of cancer progression using lentiviral infected human cell lines, Amendment, BSO, IBC-25-60 (v.18.0), 8/19/2025

Kern, Philip, Inflammation in & Regulation of Obesity, Renewal, BSO, IBC-25-95 (v.8.0), 8/15/2025
Cai, Weikang, Understanding astrocytes and microglia functions in neurological diseases., Amendment, BSO, IBC-24-408 (v.51.0), 8/15/2025
Despa, Florin, Cardiovascular consequences of diabetes; electrical remodeling in heart disease, Amendment, BSO, IBC-25-72 (v.18.0), 8/15/2025
Norris, Christopher, Sanders-Brown Intravital Mouse Phenotyping Core, Amendment, BSO, IBC-25-40 (v.17.0), 8/13/2025
Cindy Burklow, A Plant Genomics Approach to Drug Discovery, Amendment, BSO, IBC-24-44 (v.23.0), 8/13/2025
Norris, Christopher, Use of recombinant viral constructs to study calcineurin/NFAT activity in rodent brain tissue, Amendment, BSO, IBC-25-34 (v.17.0), 8/13/2025
Xiao, Xu, Intracellular Cholesterol transport in metabolic diseases, Amendment, BSO, IBC-24-469 (v.41.0), 8/13/2025
Logeman, Brandon, Sex and physiological State dependent molecular characterization of circuits gov, New, BSO, IBC-25-99 (v.14.0), 8/11/2025
Chaiswing, Luksana, Redox Metabolism (RM) Shared Resource Facility (SRF), Amendment, BSO, IBC-24-466 (v.16.0), 8/11/2025
Roberts, Jill, Vascular Pathology in Stroke and Dementia, Renewal, BSO, IBC-25-93 (v.8.0), 8/8/2025
Liu, Xiaoqi, Plk1 in epigenetics of prostate cancer development and progression, Amendment, BSO, IBC-24-114 (v.35.0), 8/8/2025
Starr, Marlene, Obesity-mediated protection in sepsis and related studies of adipose tissue in health and disease, Amendment, BSO, IBC-24-507 (v.18.0), 8/7/2025
Campbell, Kenneth, Cellular level contractile function in human heart failure, Amendment, BSO, IBC-24-482 (v.34.0), 8/7/2025
Dutch, Rebecca, Purification of Viral Vectors with Electrodialysis Using Ultrafiltration Membranes, Amendment, BSO, IBC-24-398 (v.25.0), 8/7/2025
Helmy, Yosra, Evaluation of the efficacy of different probiotic strains and small molecules against diarrhea-causing pathogens, Amendment, BSO, IBC-25-12 (v.22.0), 8/6/2025

Protocols Meeting Registration Requirements

Protocols that have been approved by the IBC pending minor modifications that have met approval requirements.

Wu, Yadi, Characterize the role of EBF1 and Hivep2 in breast cancer progression, Renewal, IBC, IBC-25-88 (v.11.0), 8/25/2025
Li, Feng, Influenza D Virus Entry and Tissue Tropism, Amendment, IBC, IBC-24-32 (v.32.0), 8/20/2025
Seifert, Ashley, Understanding mechanisms regulating regeneration and scarring in vertebrates, Renewal, IBC, IBC-25-67 (v.12.0), 8/20/2025
Li, Feng, Rotavirus Project, Amendment, IBC, IBC-24-388 (v.28.0), 8/20/2025
Page, Allen, Immunology of horses, Renewal, IBC, IBC-25-80 (v.14.0), 8/19/2025
Brainson, Christine, B22-4022-M2: Defining epigenetic vulnerabilities of lung cancer and lung disease, Renewal, IBC, IBC-25-85 (v.12.0), 8/19/2025
Awuah, Samuel, Understanding and developing novel small molecule anticancer agents, Amendment, IBC, IBC-24-90 (v.26.0), 8/18/2025
Jo, Misung, Mechanisms of Periovulatory Processes, Renewal, IBC, IBC-25-86 (v.16.0), 8/15/2025

Moe, Luke, B22-4014-M: Functional metagenomics of soil-dwelling bacteria, Renewal, IBC, IBC-25-66 (v.11.0), 8/15/2025
Duncan, Elizabeth, Cloning planarian genes for RNA interference screening, Renewal, IBC, IBC-25-96 (v.14.0), 8/15/2025
Stewart, Andrew, Gene Therapy Approaches to Induce and Control Neuronal Growth in Rodents With Spinal Cord Injuries, Amendment, IBC, IBC-24-333 (v.77.0), 8/15/2025
Konkol, Joshua, Managing forest pathogens with RNA interference., New, IBC, IBC-25-91 (v.7.0), 8/15/2025
Van Eldik, Linda, Microglia responses to CNS injury: targeting p38 MAPK signaling, Renewal, IBC, IBC-25-83 (v.13.0), 8/14/2025
Mohrin, Mary, Molecular Mechanisms of Aging, Amendment, IBC, IBC-24-412 (v.26.0), 8/14/2025
Barry-Hundeyin, Mautin, Study of immune tumor microenvironment in gastrointestinal cancers, Amendment, IBC, IBC-24-98 (v.32.0), 8/13/2025
de Souza, William, Transmission dynamics and virus-host interactions of arboviruses, New, IBC, IBC-25-05 (v.17.0), 8/13/2025
Spry, Malinda, Biology Teaching Labs-Microbiology BIO209 and BIO309, New, IBC, IBC-25-69, 8/13/2025
Despa, Florin, Cardiovascular consequences of diabetes; electrical remodeling in heart disease, Renewal, IBC, IBC-25-72 (v.12.0), 8/13/2025
Yalniz, Fevzi, Autolus-OOS-EAP: Expanded Access Program (EAP) for Obecabtagene Autoleucel (obe-cel) Out-of-specification (OOS) in Adult Patients with Acute Lymphoblastic Leukemia (AUTO1-OS1), New, IBC, IBC-25-57, 8/13/2025
Fong, Ka Wing, Understanding the mechanisms underlying advanced prostate cancer and finding novel therapies, Amendment, IBC, IBC-24-385 (v.48.0), 8/13/2025
Messaoudi Powers, Ilhem, Impact of microbial infections, age, and nutrition on the development and function of the immune system, Amendment, IBC, IBC-24-447 (v.36.0), 8/13/2025

IBC Training

Nothing to report.

Adjournment

Doug Harrison initiated a motion to adjourn the meeting at 1:30pm. Arthur Hunt seconded the motion. All IBC members present (13) voted in favor of the motion.