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

Date: 04JUNE2025
Time: 12:01 PM – 1:17 PM
Location: Virtual Meeting via Zoom - https://uky.zoom.us/j/82820667087

Minutes

Call to Order

The meeting was called to order by Doug Harrison at 12:01PM.

Attendance

IBC Members Present

Steve Brown (Local, Non-Affiliated Member)

Thomas Chambers (Co-Chairperson)

Doug Harrison (Co-Chairperson)

Cheryl Haughton (Animal Containment Expert)

Arthur Hunt (Plant Containment Expert)

Delphine Malherbe (Laboratory Staff Representative)

Delena Mazzetti (Biological Safety Officer)

Micheal Mendenhall (Institutional Member)

Brandy Nelson (Institutional Member)

Jan Smalle (Plant Containment Expert)

Regrets

Anika Hartz (Institutional Member)

Xiangan Li (Institutional Member)

Carol Pickett (Local, Non-Affiliated Member)

Maj-Linda Selenica (Institutional Member)

Mindy Thompson (Institutional Member)

Katerina Wolf (Institutional Member)

Yadi Wu (Institutional Member)

Guests

Elizabeth Brooks (Administrative Support Associate I)

Robert Hayman (Assistant Biological Safety Officer)

Melissa Hollifield (Animal Research Compliance Manager)

Jeff Howell (IBC Administrative Professional II)

Audra Strahl (IBC Administrative Professional II)

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

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

2025.05.07 IBC Meeting Minutes.pdf

Michael Mendenhall initiated a motion to approve the May 7, 2025, IBC meeting minutes as written. Thomas Chambers seconded the motion. All IBC members present (10) voted in favor of the motion.

Old Business

None

New Business

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.

Amendments

PI: Ila Mishra

IBC Protocol Number: IBC-24-89
Protocol Title: Small peptide hormones in metabolic disorders
Protocol Type: Amendment
Amendment To: Genetic Constructs, Manipulations planned, Personnel
Applicable Guidelines & Regulations: NIH Guidelines Section III-F-1, OSHA 29 CFR 1910.1030, NIH Guidelines Section IV-B-7, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section III-D-2, NIH Guidelines Section III-D-4
Maximum Containment Level: Biological Safety Level 2 (BSL2), Animal Biological Safety Level 1 (ABSL1)
Primary Reviewers: C. Haughton, D. Harrison, B. Nelson

Brief Project Overview:

Research work in Mishra lab is focused on neural regulation of metabolism. Asprosin is a newly discovered hormone that leads to an increase in glucose production by the liver and an increase in appetite, thereby contributing to diabetes and obesity. Elevated levels of asprosin have been reported in human patients with diabetes and obesity, and also in mice models that present with diabetes and obesity. On the other hand, human patients with genetic deficiency of asprosin (genetic rare disease called NPS; Neonatal Progeroid Syndrome) are acutely lean, show deficits in blood glucose levels and appetite. Mishra lab assesses metabolic hormones in human plasma and serum samples, studies how asprosin functions at a cellular level (using the immortalized human cell line such as HEK293T cells) and is attempting to identify additional functions of asprosin (such as its

role in regulation of blood pressure). Our research on asprosin will continue to shed light into mechanisms behind how excess asprosin can lead to obesity and diabetes and how lack of asprosin can lead to extreme leanness. These findings will not only have the potential to help NPS patients, but also patients that suffer from obesity, high blood pressure, diabetes, and other metabolic diseases.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Cell culture, DNA/RNA isolation/purification, Histology, Immunohistochemistry, Imaging/Microscopy, PCR/qRT-PCR, Use of Human Source Material(s), Transfection, Use of viral vectors, Use of infectious agents
Transport: Yes
Materials Transported: Biohazardous Materials, Animals
Infectious Agent(s) [Agent/Natural Host(s)]: Human sourced materials (RG2)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: Protein tyrosine phosphatase type delta (PTPRD) /Homo sapiens /Surface Receptor /Expression of Protein/HEK293T Cells/pcDNA3.1//; FBN1 (Profibrillin) /Homo sapiens /Extra cellular matrix protein, metabolic hormone /Expression of Protein/HEK293T Cells/pcDNA3.1//; Phosphatase domain 2 of PTPRD /Homo sapiens /Enzymatic Protein /Expression of Protein/HEK293T Cells/pcDNA3.1//; RPN1/Homo sapiens /Membrane Protein /Knockdown /HEK293T Cells/lentiCRISPRv2 Plasmids//; Cas9/Streptococcus pyogenes/enzyme/Expression of protein/Mus musculus/AAV-FLEX-saCas9//; GFP/Aequoria victoria/Marker Protein/Expression of protein/Mus musculus/AAV8-hSyn-DIO-EGFP//; mCherry/Discosoma sea anemone/Marker protein/Expression of protein/Mus musculus/AAV8-hSyn-DIO-mCherry//; DNAJB6/Homo sapiens /Heat Shock Protein/Knockdown /HEK293T Cells/lentiCRISPRv2 Plasmids
Vector(s) [Vector Category/Vector Technical Name]: Adeno-Associated Virus (AAV)/AAV8-hSyn-DIO-EGFP/; Adeno-Associated Virus (AAV)/AAV8-hSyn-DIO-mCherry/; Adeno-Associated Virus (AAV)/AAV2-hSyn--DIO-hM4Di-mCherry /; Adeno-Associated Virus (AAV)/AAV2-hSyn-DIO-hM3D(Gq)-mCherry/; Adeno-Associated Virus (AAV)/AAV-FLEX-saCas9/; Adeno-Associated Virus (AAV)/AAV-Ptprd/sgRNA-FLEX-GFP/;
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HEK293T
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)/intra-cranial injections/Isoflurane-anesthesia/ABSL1/Lab coat, gloves and eye protection/ABSL1/No/None

Risk Assessment/Discussion:

Dr. Mishra has submitted an amendment to her existing IBC protocol to add a project utilizing AAV vectors administered to mice via intracranial injection. The AAVs utilized will be obtained from a third-party vendor (Addgene or Creative Biogene). The following AAV constructs will be administered to mice: AAV-Ptprd/sgRNA-FLEX-GFP, AAV-FLEX-saCas9, AAV-Ptprd/sgRNA-FLEX-GFP, AAV-hSyn-DIO-mCherry, AAV2-hSyn-DIO-hM4Di-mCherry, AAV2-hSyn-DIO-mCherry, AAV2-hSyn-DIO-hM3D(Gq)-mCherry. Mice are deeply anesthetized and placed into a stereotaxic device for intracranial delivery of AAVs, which significantly minimizes risk of accidental needle-stick. After intracranial administration of AAVs, mice will be subjected to downstream assays primarily designed to test the effects of AAV treatments on blood pressure. Lab members will wear lab coats, gloves and eye protection. All biohazardous waste handling is described in accordance with UK Research Safety guidance. Additional changes include updates to lab personnel and administrative information.

IBC Vote:

The amendment to IBC-24-89 (version 26.0) was approved pending minor modifications as listed below:

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Recombinant and/or Synthetic Nucleic Acid Materials: Vector Information Table – This table must be updated with the AAV constructs added in this IBC amendment.

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Doug Harrison initiated the motion. Brandy Nelson seconded the motion. All IBC members present (10) voted in favor of the motion.

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Conflicts of Interest: None

PI: Ryan Temel

IBC Protocol Number: IBC-24-119
Protocol Title: Knockdown and overexpression of genes in mice and nonhuman primates using antisense oligonucleotides (ASO)
Protocol Type: Amendment
Amendment To: Genetic constructs
Applicable Guidelines & Regulations: NIH Guidelines Section III-F, NIH Guidelines Section IV-B-7, NIH Guidelines Section III-E, NIH Guidelines Section III-F-1, NIH Guidelines Section III-F-8, 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
Containment Level: Biological Safety Level 2 (BSL2), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, B. Nelson, T. Chambers

Brief Project Overview:

The Temel lab studies metabolic diseases that impact the liver, cardiovascular system, and brain. To determine the disease mechanisms and to develop new therapies to prevent or treat the diseases, our lab injects mice and monkeys with antisense oligonucleotide (ASO) drugs that decrease the amount or activity of a specific protein or RNA. ASOs are chemically created in the lab from synthetic nucleic acids and therefore are considered a biohazardous material. The monkey species that we use for our research is the cynomolgus monkey, which can carry and transmit human pathogenic microbes such as shigella bacteria, hepatitis A virus, salmonella bacteria, and herpes B virus. The Temel lab uses procedures approved by the University of Kentucky Internal Biosafety Committee to reduce the risk of exposure to ASOs and transmission of pathogens carried by monkeys.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), DNA/RNA isolation/purification, Histology, Immunohistochemistry, PCR/qRT-PCR, Cell culture, Flow Cytometry/Cell Sorting, Imaging/Microscopy, Use of infectious agents
Transport: Yes
Materials Transported: Animals, Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Non-human primate (NHP) materials (RG2)/cynomolgus monkey
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: ATP binding cassette transporter G8/mouse/membrane protein, sterol transporter/knockdown/mouse/naked nucleic acid//; Non-coding control/mouse/N/A/Negative control/mouse/naked nucleic acid//; microRNA-128-1/primate/Regulatory RNA/knockdown/cynomolgus monkey/naked nucleic acid//; microRNA-22/primate/Regulator RNA/knockdown/cynomolgus monkey/naked nucleic acid//; LIM Domain And Actin Binding 1/mouse/cytoskeleton-associated protein /knockdown/mouse/naked nucleic acid//; Angiopoietin-like 3 (Angptl3)/mouse/Lipase inhibitor/knockdown/mouse/naked nucleic acid//; Sterol O-acyltransferase 2 (Soat2)/mouse/Lipid

synthesis/knockdown/mouse/naked nucleic acid//; Angiotensinogen/primate/renin-angiotensin system/knockdown/cynomolgus monkey/naked nucleic acid
Vector(s) [Vector Category/Vector Technical Name]: Naked nucleic acid/Antisense Oligonucleotides
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Animal/J774 monocyte; macrophage
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]: Macaque, Cynomologous/Naked Nucleic Acid-r/sDNA/subcutaneous injection/anesthesia/ABSL2/scrubs, eye protection, disposable cap, mask, face shield, gown, gloves (2 pair), and shoe covers/ABSL2/No/None

Risk Assessment/Discussion:

Dr. Temel has submitted an IBC amendment to add a project utilizing news antisense oligonucleotides (ASOs) in mice to knockdown expression of proteins that alter the concentration or composition of triglyceride-rich lipoproteins (TRLs), specifically they will target Angiopoietin-like 3 (Angptl3) and Sterol O-acyltransferase 2 (Soat2) for knockdown. ASOs in this project will be administered to mice via subcutaneous injection as previously described and approved. Lab coats, gloves, and eye protection will be worn for the work described at ABSL1 procedures and housing. All biohazardous waste handling is described in accordance with UK Research Safety guidance. Dr. Temel's laboratory is currently approved to administer a variety of ASOs in mice and NHPs. The additional ASOs targeting Angptl3 and Soat2 added in this amendment do not significantly alter the biohazard risks associated with this project. Dr. Temel has also updated lab personnel and administrative information in this amendment.

IBC Discussion & Vote:

The amendment to IBC-24-89 (version 16.0) was approved.
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Thomas Chambers initiated the motion. Cheryl Haughton seconded the motion. All IBC members present (10) voted in favor of the motion.
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Conflicts of Interest: None

PI: Rebecca Dutch

IBC Protocol Number: IBC-24-134
Protocol Title: Paramyxovirus and pneumovirus protein function
Protocol Type: Amendment
Amendment To: Genetic constructs, Project Title, Proteins produced, Other
Applicable Guidelines & Regulations: OSHA Act of 1970 Clause 5(a)(1), OSHA 29 CFR 1910.1030, UK Administrative Regulation 6.9, UK Administrative Regulation 6.3, NIH Guidelines Section IV-B-7, NIH Guidelines Section III-F-3, NIH Guidelines Section III-F-1, NIH Guidelines Section III-D-2, NIH Guidelines Section III-D-1
Containment Level: Biological Safety Level 2 - Enhanced (BSL2+)
Primary Reviewers: M. Mendenhall, D. Malherbe, B. Nelson

Brief Project Overview:

The paramyxovirus and pneumovirus families contain established major human pathogens, including measles virus, respiratory syncytial virus, human metapneumovirus, and human parainfluenza virus 3 (HPIV3). The paramyxoviruses also include the newly emerged human pathogens, Hendra virus and Nipah virus. Our laboratory

focuses on understanding the molecular details of infection by these viruses, from the starting point of viral entry to the ending steps of viral spread. The fusion (F) protein of each virus promotes fusion of viral and host cellular membranes, an event that is both an essential step mediating entry of enveloped viruses into the host cell and an excellent model system for investigating the basic molecular events in any membrane fusion process. The long-term objectives of our research are:

- To understand the precise mechanism(s) of the paramyxovirus F proteins in promotion of membrane fusion, to delineate the events involved in cellular entry of these important pathogens, and to aid in developing new antiviral treatment
- To understand how paramyxovirus glycoproteins work in tandem with other viral and host proteins to allow spread of the virus to new target cells;
- To decipher the molecular details of replication of these viruses

To achieve these goals, we study both the synthesis and function of paramyxoviral glycoproteins in transient expression systems and determine specific residues or regions of the proteins involved in critical processes. We utilize pseudotype particle systems, in which the viral glycoproteins are incorporated into non-infectious particles, to study entry promoted by the Hendra and Nipah virus glycoproteins, allowing us to determine regions of the proteins and cellular components that play important role in initial events in infection. We also study virus-like particle formation as part of a large grant to improve vaccine approaches. Utilizing infection with human metapneumovirus, a recently identified, ubiquitous human pathogen, to analyze trafficking events involved in paramyxovirus entry, and to study the replication, assembly and spread of the virus. Finally, our laboratory will utilize the non-pathogenic henipavirus, Cedar virus, to analyze the critical process of virus entry and replication, providing critical new information for a viral family that contains several members of pandemic potential. Our research protocols involve recombinant DNA techniques, the use of human and animal cell lines, and the use of BSL-2 (or 2+) infectious pathogens, and the appropriate procedures will be followed to minimize risk and maintain a safe working environment.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Bacterial culture, DNA/RNA isolation/purification, Flow Cytometry/Cell Sorting, Cell culture, Immunohistochemistry, PCR/qRT-PCR, Propagation of Infectious Agents, Genetics, Use of Infectious Agents, Proteomics, Transformation, Use of Viral Vectors, Transfection, Viral culture
Transport: No
Materials Transported: N/A
Infectious Agents/Natural Hosts(s): Cedar Virus (RG1-virus)/Australian Flying Fox; Vesicular Stomatitis Virus (VSV) (RG2-virus)/Humans, horses, cattle, pigs, etc.; Respiratory Syncytial Virus (RSV) (RG2-virus)/Human; Simian Varicella Virus (SVV) (RG2-virus)/Canine/Simian; Human metapneumovirus (hMPV) (RG2-virus)/Human; Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human; Human Parainfluenza Virus (HPIV) (RG2-virus)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: HMPV F, G, SH and mutants (glycoprotein genes)/HMPV/glycoprotein/expression in cell culture/Mammalian cells/pCAGGS;SV5 F and HN mutants (glycoprotein genes)/SV5/glycoprotein/expression in cell culture/Mammalian cells/pCAGGS;HMPV L, P, M, and N proteins/HMPV/Structural and RNA replication/expression in cell culture/Mammalian cells/pCAGGS;Hendra virus F, G and mutants/Hendra Virus/glycoprotein/expression in cell culture/Mammalian cells/pCAGGS, lentivirus;Nipah virus F, G and mutants/Nipah Virus/glycoprotein/expression in cell culture/Mammalian cells/pCAGGS;RSV F and G/RSV/glycoprotein/expression in cell culture/Mammalian cells/pCAGGS;Ebola Gp, transmembrande domain only/Synthetic/Portion of glycoprotein/express as part of chimeric protein in E. coli/E. coli/pET11;SARS S, transmembrande domain only/Synthetic/Portion of glycoprotein/express as part of chimeric protein in E. coli/E.

coli/pET11;Influenza HA, transmembrane domain only/Synthetic/Portion of glycoprotein/express as part of chimeric protein in E. coli/E. coli/pET11;rabies G, transmembrane domain only/Synthetic/Portion of glycoprotein/express as part of chimeric protein in E. coli/E. coli/pET11;Nipah M/Nipah Virus/Structural Protein/expression in cell culture/Mammalian cells/pseudotype virus particles;mcherry-tagged actin, tubulin, Rab GTPases/Human/Cytoskeletal Proteins/expression in cell culture/Mammalian cells/Adenovirus;Hendra M/Hendra Virus/Structural Protein/expression in cell culture/Mammalian cells/pseudotype virus particles;RSV P, M, L and N proteins/RSV/Structural and RNA replication/expression in cell culture/Mammalian cells/pCAGGS;GTP evaluator proteins/Bacterial protein w/ yellow fluorescent protein added/GTP sensor/expression in cell culture/Mammalian cells/lentivirus;SARS-CoV-2 Spike/SARS-CoV-2 (Dr. Gaya Amarasinghe)/viral fusion protein/expression in cell culture/Mammalian cells/pTwist and pCAGGS;ACE2/Human/Human receptor protein/expression in cell culture/Mammalian cells/pCAGGS;TMPRSS2/Human/Human serine protease/expression in cell culture/Mammalian cells/pCAGGS;Cedar virus N, P and L/Cedar Virus/viral replication protein genes/expression in cell culture/Mammalian cells/pCMV;Cedar virus F, M and G/Cedar Virus/Viral attachment and fusion protein genes/expression in cell culture/Mammalian cells/pCAGGS;HPIV P, NP, and L/Human Parainfluenza Virus/glycoprotein/protein expression in cell culture/Mammalian cells/PCAGGS;HPIV L tagged ECFP or EYFP/viral/viral polymerase/FRET/human/pCMV
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pGEM4A; Plasmid/pET11; Plasmid/pCAGGS; Plasmid/VSV-deltaG;Plasmid/NL43R-E-Luc3; Adenovirus/Adenovirus; Plasmid/p(+)JPS07E2; Plasmid/pTwist; Plasmid/CedPV pOLTV5; Lentivirus/lentivirus- pLVX-M-Puro_HeVF-P2AeGFP-T2A-HeV M; Lentivirus/lentivirus-pMD2.G; Lentivirus/lentivirus-psPAX2; Plasmid/complete HPIV3 cDNA;Plasmid/HPIV3 L-ECFP; Plasmid/HPIV3 L-EYFP;Plasmid/pCMV
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HeLa T4; Animal/Vero; Animal/BHK; Animal/MDBK; Animal/CHO; Animal/BSR; Human/293T; Human/A549; Animal/Pt kid; Animal/Pt brain; Animal/RO5T; Animal/RO6E; Human/HAE (human airway epithelial) cultures; Human/BEAS-2B; Human/16 HBE;Human/CV-1
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. Dutch has submitted an IBC amendment to add a project utilizing Human parainfluenza virus 3 (HPIV3), a Risk Group 2 (RG2) virus. Dr. Dutch will utilize two recombinant HPIV3 viruses produced in a collaborator's lab (Dr. Rachel Fearns). The two recombinant HPIV3 viruses each contain a tagged polymerase (L) gene with a different tag. This work seeks to understand how human parainfluenza virus 3 (HPIV3) inclusion bodies coordinate genome replication and transcription, to determine whether polymerase complex assembly and dimerization occur specifically within these viral condensates, and to assess whether polymerase dimerization in cells and condensates directs enzymatic decision between transcription and replication. Work with live HPIV3 will be completed in the BSC. All samples are fixed with <4% PFA in the BSC prior to downstream assays including immunofluorescence, IFA/FISH, etc. Lab members will wear lab coats, nitrile gloves, and eye protection. All work with HPIV3 will be done in vitro. There is no animal work involved in this project. All biohazardous waste handling is described in accordance with UK Research Safety guidance. Dr. Dutch's laboratory is currently approved to work with several RG2 viruses, including VSV, RSV, SVV, and hMPV. Dr. Dutch has also updated administrative information and laboratory locations in this amendment.

IBC Discussion & Vote:

The amendment to IBC-24-134 (version 18.0) was approved.

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Michael Mendenhall initiated the motion. Brandy Nelson seconded the motion. All IBC members present (10) voted in favor of the motion.

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Conflicts of Interest: None

PI: Terrence Barrett

IBC Protocol Number: IBC-24-326
Protocol Title: B22-4064-M: Regulation of Intestinal Stem Cell Activation in Colitis
Protocol Type: Amendment
Amendment To: Biological Safety Level (BSL), Laboratory or Greenhouse procedures, Organisms used in research, Personnel
Applicable Guidelines & Regulations: UK Administrative Regulation 6.9, UK Administrative Regulation 6.3, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section IV-B-7, NIH Guidelines Section III-E-1, NIH Guidelines Section III-D-1, NIH Guidelines Section III-F, NIH Guidelines Section III-F-1, OSHA 29 CFR 1910.1030
Containment Level: Biological Safety Level 2 - Enhanced (BSL2+)
Primary Reviewers: C. Haughton, T. Chambers, D. Malherbe

Brief Project Overview:

Patients with inflammatory bowel disease (IBD) have a high risk of developing colorectal cancer. Over 90% of colorectal cancers contain mutations in the DNA of the cancerous cells. These mutations are known and they belong to genes that are part of a specific chain of events (a pathway) that start when the immune system becomes inflamed during colitis and acts on these intestinal cells, in particular adult intestinal stem cells. Our goal is to understand the molecular steps in this pathway. We propose to stimulate the immune system in various mouse models of colitis, to use different types of mice that have specific genes altered or inactivated, and to manipulate cultured cells in order to map and understand the pathway from inflammation to cancer. Understanding this pathway could help develop or improve treatments for patients with inflammatory bowel disease and reduce their risk of colorectal cancer.

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, Immunohistochemistry, PCR/qRT-PCR, Proteomics, Transformation, Use of Viral Vectors, Use of Human Source Material(s), Transfection
Transport: Yes
Materials Transported: Biohazardous Materials, Animals
Infectious Agent(s)/Natural Host(s): Citrobacter rodentium (RG1-bacteria)/rodent; Escherichia coli (RG2-bacteria)/rodent; Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Human; Campylobacter jejuni (RG2-bacteria)/Poultry, cattle, sheep, rodents
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: beta catenin/Human/Inflammation signaling/knockdown and overexpression of endogenous beta catenin/cultured human cell lines/pLV-EF1a-MCS-IRES-GFP;p110/Human/Inflammation signaling/knockdown of endogenous p110/cultured human cell lines/pGIPZ;NOX1/Human/redox regulation/knockdown of endogenous NOX1/cultured human cell lines/CD510B-1;p85 alpha/Human/inflammation signaling/knockdown of endogenous p85/cultured human cell lines/pGIPZ;P13K/Human/kinase involved in proliferation, migration/knockdown of endogenous P13K/cultured human cell lines/pGIPZ; PTEN/Human/metabolism signaling pathway/knockdown of endogenous PTEN/cultured human cell lines/pLV-EF1a-MCS-IRES-GFP;YAP/Human/metabolism signaling pathway/knockdown and

overexpression of endogenous YAP/cultured human cell lines/pLV-EF1a-MCS-IRES-GFP;p38/Human/metabolism signaling pathway/knockdown of endogenous p38/cultured human cell lines/pLV-EF1a-MCS-IRES-GFP;
Vector(s) [Vector Category/Vector Technical Name]: Lentivirus/pLV-EF1a-MCS-IRES-GFP-Puro; Lentivirus/CD510B-1; Lentivirus/pGIPZ; Plasmid/pYX-Asc;
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Animal/Intestinal enteroid/colonoid; Human/NCM; Human/HT29; Human/SW-480; Human/HEK293; Human/RKO; Human/Caco-2
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/Citrobacter rodentium (RG1-bacteria)/Oral-Gastric Gavage/Restrained by hand in a vertical position, immobilizing head and neck/ABSL2/Gloves, Disposable Lab Coat, Face Shield/ABSL2/No/Citrobacter rodentium is pathogenic to and transmissible among mice, but is not pathogenic to humans. Gavage needles will be loaded with bacteria in a BSC in ABSL2 DLAR procedure room./; Mouse/Escherichia coli (RG2-bacteria)/Intragastrically/Restrained by hand in a vertical position, immobilizing head and neck/ABSL2/Gloves, Disposable Lab Coat, Dust Mask, Shoe Covers, Hair Net/ABSL2/No/The work with the strains is handled under BSL-2 conditions, which requires wearing PPE (lab coat, dust mask, gloves, shoe covers and hair net), in the mouse room cages and bedding should be autoclaved and carcasses incinerated. We should use microisolator cages that have dedicated air flow which is hepa filtered, so spread between caged does not occur (E. coli transmission would be fecal oral, not aerosol anyway). However, animal care takers should change gloves between cages when changing bedding/; Mouse/Campylobacter jejuni (RG2-bacteria)/Oral Gavage/Gently restrain mouse and insert 20-22G gavage needle slowly into esophagus, avoiding force/ABSL2/Gloves, Disposable Lab Coat, Face Shield/ABSL2/No//

Risk Assessment/Discussion:

Dr. Barrett has submitted an amendment to add two new projects utilizing mice. Specifically, transgenic mice will be colonized with human fecal samples obtained from IBD patients with active disease. Frozen fecal samples will be pooled and administered to mice via oral gavage. After fecal transplant, mice will be treated with AuPhos, a novel oral therapeutic. A second group of mice that have undergone human fecal transplant will be infected with *C. jejuni* via oral gavage and be treated with Tlp3-inhibitor tripeptide Lys-Lys-Lys and CadA-inhibitor 6-aminohexanoate (6AH). 14-days post infection, mice will be euthanized and tissues collected for various downstream analysis. There is a corresponding IBC-hold on IACUC 2019-3245. *C. jejuni* is a Risk Group 2 (RG2) bacteria. Lab members will wear gloves, disposable lab coat, and face shield for the work described at ABSL2 experimental procedures. Mice administered *C. jejuni* will be housed at ABSL2 housing. This amendment also covers updates to lab personnel and administrative information.

IBC Discussion & Vote:

The amendment to IBC-24-326 (version 13.0) was approved pending the minor modifications listed below:
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ANIMAL RESEARCH – Animals with Biohazards Table: Please include an entry for administration of human fecal material to mice via gavage.
SCIENTIFIC SUMMARY:

1. Clarify that work with *Campylobacter jejuni* and animals infected with C. *jejuni* is done in a Biological Safety Cabinet (BSC).
2. Please briefly describe the culture and propagation of *C. jejuni*.
3. Expand on biosafety considerations when working with *C. jejuni*. Describe the most likely routes of exposure of lab personnel, signs/symptoms of exposure, and specify that lab members are trained specifically to recognize and report signs and symptoms of exposure to *C. jejuni*. The Pathogen Safety Data

Sheet (PSDS) available online is an excellent reference for training of laboratory members regarding C. jejuni. See -> https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/campylobacter-jejuni.html.

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Thomas Chambers initiated the motion. Delphine Malherbe seconded the motion. All IBC members present (10) voted in favor.

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Conflicts of Interest: None

PI: Andrew Stewart

IBC Protocol Number: IBC-24-333
Protocol Title: Gene Therapy Approaches to Induce and Control Neuronal Growth in Rodents With Spinal Cord Injuries
Protocol Type: Amendment
Amendment To: Personnel, Genetic constructs, Proteins produced
Applicable Guidelines & Regulations: NIH Guidelines Section III-F, NIH Guidelines Section III-D-4, NIH Guidelines Section III-E-1, NIH Guidelines Section III-F-1, NIH Guidelines Section IV-B-7, UK Administrative Regulation 6.9, UK Administrative Regulation 6.3, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section III-D-1
Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, M. Mendenhall, D. Malherbe

Brief Project Overview:

I seek to regenerate the spinal cord after it has been damaged. My past work has deleted a gene (PTEN) from the mouse genome that inhibits regeneration of the spinal cord. Our results worked far better than anticipated. This was made possible due to mouse lines that are transgenic and interact with proteins (Cre) that are delivered using gene therapies. This approach can only work in these specific transgenic mice and will not work in any other organism. The aim of this project is to make a similar gene therapy strategy that will work in non-transgenic animals, or in other words, be able to work in any species or organism.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Bacterial culture, Cell culture, Creation of Viral Vectors, DNA/RNA isolation/purification, Genetics, Histology, Imaging/Microscopy, Immunohistochemistry, PCR/qRT-PCR, Transfection, Transformation, Use of Viral Vectors, Use of Infectious Agents
Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Hosts: 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)]: AKT3/Human/Oncogene and cell growth/induce regeneration in a neuron specific manner/bacteria, human cell line, mouse and rat spinal cord/AAV retro/; rTA/Bacteria/Regulatory/Make inducible expression of AKT3/bacteria, human cell line, mouse and rat spinal cord/AAV retro/; rtTA and TET-ON 3G/Bacteria/Regulatory/Make inducible expression of AKT3/bacteria, human cell line, mouse and rat spinal cord/AAV retro/; eGFP/dTomato/mCherry/tdTomato/Jelly Fish/Tracking/Label Neurons/bacteria, human cell line, mouse and rat spinal cord/AAV retro/; Cre/Bacteria/Regulatory/KO PTEN from transgenic mouse line. Make a stable cell line of neuronal stem cells that express cre recombinase to test Syn1-DIO constructs in vitro./Mouse and Rat Spinal Cord, human neuronal stem cells and packaging cells/AAV retro/; Flp/Bacteria/Regulatory/expression of genes in a Flp dependent manner/Mouse and Rat Spinal Cord/AAV retro/;

Cre/Bacteria/Regulatory/create stable cell line producing cre recombinase to test other cre-dependent constructs./Neural Stem cell line/Lenti-Cre-IRES-PuroR/; miR30-shRNA(Kv1.2 murine)/shRNA/Translation/knockdown the expression of the potassium channel Kv1.2./Neural Stem Cell Line/AAV-Retro/; Crispr Cas9 and Guide arms against REST/NRSF/Bacteria/Translation/Knockout of the DNA binding domain of gene REST/NRSF/HEK293/Expression Plasmid/; ApoA1/Human/Lipid Trafficking/Study of HDL and Dysfunctional HDL/HEK293/AAV plasmid/; ApoA1(milano)/Human/Lipid Trafficking/Study of HDL and Dysfunctional HDL/HEK293/AAV Plasmid/; PKA (PRKACA)/Human/Regulatory/Catalytic domain of PKA to study effects on neural excitability./Hek293, Mouse and Rat Spinal Cord/AAV-Retro/; PKA (L 206 -> R) (PRKACA)/Mouse/Regulatory/Mutant catalytic domain of PKA to confer constitutive activity via interference with regulatory domain./Hek293, Mouse and Rat Spinal Cord/AAV-Retro/; 3xHA-eGFP-OMP25(C' 170-206)/Mouse/Mitochondria Reporter/Mitochondrial targeted reporter with HA tag for neuron-specific pull down studies./Hek293, Mouse and Rat Spinal Cord/AAV-Retro/; DDR2/Human/Receptor/Study of collagen receptor for axon growth over collagen/Hek293, hNPC/AAV Plasmid/; EPAC1 (VLVLE to AAAAA)/Mouse/Regulatory/Expression of constitutively active EPAC1 in vitro and in spinal-projecting neurons in vivo to study regeneration/Mouse and Rat Spinal Cord, HEK293s, Mouse Primary Neuron Culture/AAV retro/; miR30(CXCL12/shRNA/Translation/Knockdown of Mouse CXCL12 in vitro and in vivo/Mouse and Rat Spinal Cord and Hek293/AAV2/; miR30(CXCR4)/shRNA/Translation/Knockdown of Mouse CXCR4 in vitro and in vivo/Mouse and Rat spinal cord, Hek293/AAV retro/; BFP (Blue Fluorescent Protein)/Aequorea victoria/Reporter/Reporter Gene/Mouse and Rat Spinal Cord, HEK293/AAV2/; L1CAM/RAT/Cell Adhesion Molecule/Express in Stem Cells for Transplantation/Mesenchymal Stem Cells/pLenti-EF1a-L1CAM-CMV-BFP/PuroR/; NCAM1/Rat/Cell Adhesion Molecule/Expression Stem Cells for Transplantation/Mesenchymal Stem Cells/pLenti-EF1a-NCAM1-CMV-BFP/NeoR/; CNTN1/Rat/Cell Adhesion Molecule/Express in Stem Cells for Transplantation/Mesenchymal Stem Cells/pLenti-EF1a-CNTN1-CMV-BFP/HygroR/; miRFP670 Nano/Nostoc punctiforme/Reporter Gene/Reporter Gene for Vector Transduction/Rat and Mouse/pAAV-(Antisense) WPRE3-myrAKT3-TRE3G (SENSE) Syn1-TETON3G-2a-miRFP670 Nano WPRE3/; /pAAV-(Antisense) WPRE3-dTomato-TRE3G (SENSE) Syn1-TETON3G-2a-miRFP670 Nano WPRE3/; pAAV-(Antisense) WPRE3-3' beta Actin-myrAKT3-TRE3G (SENSE) Syn1-TETON3G-2a-miRFP670 Nano WPRE3/; Kir2.1/synthetic/Ion Channel/Establish Stable Cell Line/HEK293/Lentivirus/; PGC1alpha/Mouse/Transcription Factor/Co-activator/Gene Expression in neurons in mice/Mouse, Rat, HEK293, mouse Neural Stem Cells /AAV retro/; HA_eGFP-MitoTag/Jelly Fish/Reporter Gene/Label Mitochondria and Pull Down/Mouse, Rat, HEK293, Mouse Neural Stem Cells/AAV Retro/; shRNA (Kv1.2)/shRNA/Regulatory/Knockdown Kv1.2/Mouse/AAV Retro/; HA-eGFP-MitoOMM/Jelly Fish/Tracking/Identification and isolation of neuron-specific mitochondria/Hek293, Mouse and Rat Spinal COrd/pAAV-CamKIIa-HA-eGFP-MitoOMM/; 3xFlag-BFP-MitoOMM/Jelly Fish/Tracking/Tracking and isolation of Astrocyte-specific mitochondria/Hek293, Rat and Mouse Spinal Cord/pAAV-GFAP-3xFlag-BFP-MitoOMM/; Myc-RFP-MitoOMM/Jelly Fish/Tracking/Tracking and Isolation of Oligodendrocyte-specific mitochondria/Hek293, Mouse and Rat spinal cords/pAAV-MAG2.2-Myc-RFP-MitoOMM/; Pink1/Mouse/Regulatory/Overexpression of Pink1 in spinal projecting neurons within mouse and Rat spinal cords after injury./Hek293, Mouse and Rat spinal cords/pAAV-Syn1-Pink1-p2a-HA-eGFP-MitoOMM
Vector(s) [Vector Category/Vector Technical Name]: Adeno-Associated Virus (AAV)/AAV; Adeno-Associated Virus (AAV)/AAV2
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/hNPC (Human Neural Progenitor Cell) ATC-5004/; Human/hiPSC (Human Induced Pluripotent Stem Cells)/; Human/Hek 293-REST-KO/; Animal/Mouse Neural Stem Cell
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)/Spinal Cord

Injection/Anesthesia/Vertebral Clips/ABSL1/Mask/Gloves/Eye Protection/Lab Coat/Hair Bonet/ABSL2/No/Sterile technique, We use a BSC for injection although not required. Mice will be housed in ABSL2 containment for 24 hours after treatment until the wound has closed. Some AAVs contain the use of antisense oligonucleotides

Risk Assessment/Discussion:

Dr. Stewart has submitted an amendment to add 4 new AAV vectors, all obtained from VectorBuilder, for work in mice. Three new AAVs are designed to label mitochondria in a cell-specific manner, where the 4th will overexpress Pink1. AAVs will be administered to animals as previously described and approved via spinal cord injection in anesthetized mice. The addition of these new AAVs does not significantly alter the biohazardous risks associated with this project. Lab members will wear mask, gloves, eye protection, lab coat, and hair bonnet for AAV work in mice. Animal housing level for AAV work needs to be clarified.

IBC Discussion & Vote:

The amendment to IBC-24-333 (version 61.0) was approved.
*
Michael Mendenhall initiated the motion. Delphine Malherbe seconded the motion. All IBC members present (10) voted in favor of the motion.
*
Conflicts of Interest: None

PI: Xiaoqi Liu

IBC Protocol Number: IBC-24-355
Protocol Title: Enhancing the efficacy of prostate cancer therapy
Protocol Type: Amendment
Amendment To: Cells or tissues used in research
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-1, UK Administrative Regulation 6.3, NIH Guidelines Section IV-B-7, OSHA 29 CFR 1910.1030, NIH Guidelines Section III-F-8, UK Administrative Regulation 6.9, OSHA Act of 1970 Clause 5(a)(1)
Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, D. Harrison, T. Chambers

Brief Project Overview:

Prostate cancer (PCa) is the second leading cause of cancer death in males in the United States, with 191,930 new cases and 33,330 deaths estimated in 2020. The androgen receptor (AR) signaling pathway, which controls the growth of PCa cells, including those in castration-resistant prostate cancer (CRPC), is a valid target for treatment. In support, current approaches to treat CRPC are to delay or replace treatment with docetaxel with androgen signaling inhibitors (ASIs), such as abiraterone and enzalutamide. However, overall survival was only improved by five (abiraterone) or two (enzalutamide) months in the recent phase III trial that compared with placebo in CRPC patients. Therefore, new mechanism-based studies are urgently needed to identify novel targets and strategies to overcome ASI resistance, thus achieving effective management of this neoplasm. Our prior research has indicated that Plk1 holds promise as a target for treating drug-resistant CRPC. However, the precise underlying mechanisms remain inadequately understood. Based on the literature, we have pinpointed several candidates (EP300, Wnt3a, Wnt5a, PORCN, AR, ATM, PHGDH, AIFM2, AhR, Mre11, p62, Nrf2, DNMT3A, ASF1A). To substantiate our hypothesis, we will conduct rigorous in vitro and in vivo experiments.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Cell culture, PCR/qRT-PCR, Use of Infectious Agents, Immunohistochemistry, Genetics, DNA/RNA isolation/purification, Flow Cytometry/Cell Sorting, Histology, Bacterial culture, Use of Viral Vectors,

Transfection, Transformation, Creation of Viral Vectors, Imaging/Microscopy, Animal work (breeding, surgeries, etc.), Propagation 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.)/Human
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: Plk1 /Mouse and Human /cell cycle/division /expression or knockdown/human cells: LNCaP , C4-2, 22Rv1 ,PC3, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA, pGEX-4T-1/; EP300/p300 /Mouse and Human /oncogene /expression or knockout/Human cells: LNcap,22Rv1,C4-2,PC-3 ,Du145 and mouse cell line: Myc-Cap/pcdna3.1,PX459/; CSNK1A1(CK1)/Human /Kinase/expression or knockdown/Human cells: LNcap,22Rv1,C4-2,PC-3 and Du145/pLKO.1 and pLenti-GIIICMV-C-term-HA/; PORCN /Human /o-acryltransferasre /Overexpression and knockdown/22RV1, LuCaP35CR, LuCaP77CR, LuCaP96CR, C4-2, C4- 2R, MR49F, LNCaP, DU145, PC3, Mouse Urogenital Sinus Mesenchyme Cell/pLKo.1, pCDNA3.1/; Wnt3A /Human /Cell proliferation /Overexpression and knockdown/22RV1, LuCaP35CR, LuCaP77CR, LuCaP96CR, C4-2, C4-2R, MR49F, LNCaP, DU145, PC3, Mouse Urogenital Sinus Mesenchyme Cell/pLKo.1, pCDNA3.1/; Wnt5a /Human /cell migration and invasion /Overexpression and knockdown/22RV1, LuCaP35CR, LuCaP77CR, LuCaP96CR, C4-2, C4-2R, MR49F, LNCaP, DU145, PC3, Mouse Urogenital Sinus Mesenchyme Cell/pLKo.1, pCDNA3.1/; Mre11 /Human /DNA damage/Overexpression and knockdown/Human cell: 22Rv1, PC-3,E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1, and pCDNA3.1/; AR /Human /oncogene /expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; AhR /Human /oncogene /expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; PHGDH/Human /oncogene /expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; ASF1A/ Human /oncogene /expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP,E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; shRNA-p62 /Human /oncogene /knockdown/human cancer cells:22rv1,c4-2, c4-2r, mr49f, Lncap/pLKo.1/; ATM/Human /kinase/expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; AIRM2 /Human /oncogene/expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; p62 /Human /DNA damage /expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; Nrf2 /Human /DNA damage /expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; DNMT3A /Human /oncogene/expression and knockdown/human cancer cells: 22RV1, C4-2, C4- 2R, MR49F, LNCaP, E. coli /pLKO.1 and pLenti-GIIICMV-C-term-HA,pGEX-4T-1/; GFP /jellyfish Aequorea victoria/tracking/expression /human cancer cells: 22RV1, C4-2, C4- 2R, MR49F/pfx/; RFP /jellyfish Aequorea victoria/tracking/expression /human cancer cells: 22RV1, C4-2, C4- 2R, MR49F/pclbw/; Mre11 S2A /Human /DNA damage/expression /human cancer cells: 22RV1, PC3 /pCDNA3.1/; Mre11 S2D /Human /DNA damage/expression /human cancer cells: 22RV1, PC3 /pCDNA3.1/; Cas9 /S. pyogenes /endonuclease/knockout/mouse cell line: Myc-Cap /PX459/; NDUFA3 /Human /respiratory chain components /knockdown/C4-2R /pLKO.1/; ATP5MC2 /Human /respiratory chain components /knockdown/C4-2R /pLKO.1/; COX5B /Human /respiratory chain components /knockdown/C4-2R /pLKO.1/; HIF1 alpha/human/oncogene/overexpression or knockdown/22RV1, LuCaP35CR, LuCaP77CR, LuCaP96CR, LuCaP145.1, C4-2, C4- 2R, MR49F, LNCaP, DU145, PC3, Mouse Urogenital Sinus Mesenchyme Cell/pLKO.1 and pLenti-GIIICMV-C-term-HA, pGEX-4T-1, PCDNA3.1,/; TAF1/Human/Oncogene/knockout or overexpression/Human cells: LNcap,22Rv1,C4-2,PC-3 ,Du145 and mouse cell line: Myc-Cap/pLKO.1 and pLenti-GIIICMV-C-term-HA, pGEX-4T-1, PCDNA3.1, PX459/; Nanog/Human/cell proliferation/overexpression/C4-2, C4-

2B/pLV-EF1a-IRES-Hygro-Nanog WT, S41A/S297A, or Nanog S41D/S297D/; Lin28B/Human/development, tumor progression/overexpression/C4-2, LASCPC-01/pLV-EF1a-IRES-Hygro-Lin28B WT, T228A/T188A/S189A/T190A, or T228D/T188D/S189D/T190D/; INSM1/Human/transcription factor/overexpression/LNCaP, LASCPC-01/pLV-EF1a-IRES-Hygro-INSM1, INSM1 S119A/S358A/S435A, or S119D/S358D/S435D /; HOXB13/Human/tumor suppressor/overexpression/22Rv1, C4-2B/pLV-EF1a-IRES-Hygro-HOXB13 WT, S56A/S147A, or S56D/S147D/;
Vector(s) [Vector Category/Vector Technical Name]: Lentivirus/pLKO.1 puro /; Plasmid/pCMV-VSV-G /; Plasmid/pCMV/hygro-Flag /; Plasmid/pET-GST /; Plasmid/plc-Flag-CSNK1A1 WT-Puro /; Plasmid/Myc-DDK-tagged)-Human casein kinase 1 /; Plasmid/pCDNA3.1 /; Plasmid/pCMV6-Entry /; Lentivirus/pLV-EF1a-IRES-hygromycin /; Plasmid/pfx-mitoEGFP /; Plasmid/pclbw-mitoTagRFP /; Plasmid/PX459 /; Lentivirus/pRSV-Rev /; Lentivirus/pMDLg/pRRE /; Lentivirus/pCMV-VSV-G
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/LNCaP /; Human/PC3 /; Human/DU145 /; Human/22RV1 /; Human/C4-2B /; Human/HeLa /; Human/C4-2R /; Human/MR49F /; Human/22RV1-ER /; Animal/KPC2 /; Human/PC3-TR /; Human/DU145-TR /; Animal/TRAMP-C2 /; Human/LNCaP-Plk-1 /; Animal/TRAMP-C2-Ras /; Human/C4-2-GR /; Human/22Rv1-GR /; Animal/KPC2-GFP-Luc /; Human/U2OS/ASF1A /; Human/U2OS/ASF1A-S16A/S166A /; Human/U2OS/ASF1A-S16D/S166D /; Human/hTERT-PF179T CAF /; Human/hTERT-PF179T CAF-WNT3a /; Human/hTERT-PF179T CAF-WNT5a /; Human/hTERT-PF179T CAF-shWNT3a ; Human/hTERT-PF179T CAF-shWNT5a /; Animal/Mouse Urogenital Sinus Mesenchyme Cell /; Human/22Rv1-Plk1 /; Human/PSC27 /; Human/PSC27-Wnt3a overexpression /; Human/PSC27-Wnt3a knockdown /; Human/PSC27-Wnt5a overexpression /; Human/PSC27-Wnt5a knockdown /; Human/LNCaP with WT-AhR /; Human/LNCaP with AhR-S489A /; Human/LNCaP with AhR-S489D /; Human/MR49F with WT-AhR /; Human/MR49F with AhR-S489A /; Human/MR49F with AhR-S489D /; Human/MR49F with p62-WT /; Human/MR49F with p62-s24A /; Human/MR49F with p62-S24D /; Human/LNCaP with p62-WT /; Human/LNCaP with p62-S24A /; Human/LNCaP with p62-S24D /; Human/LuCaP35CR /; Human/LuCaP77CR /; Human/LuCaP96CR /; Human/LuCaP147CR /; Human/22RV1-ER with shctrl /; Human/22RV1-ER with shRNA /; Animal/Myc-Cap /; Animal/Myc-Cap with p300 Knockout /; Human/PDX 275/; Human/PDX 287/; Human/PDX 27.1/; Human/PDX 27.2/; Human/PDX 167.2M/; Human/PDX 201.1/; Human/PDX 387.38/; Human/LUCap145.1/; Human/LUCap145.2/; Human/C4-2R-EV/;Human/LASCPC-01/;Human/C4-2/;Human/22RV1-EV/;Human/22RV1-HOXB13/;Human/22RV1-HOXB13 S56A/S147A/;Human/22RV1-HOXB13 S56D/S147D/;Human/C4-2B-EV/;Human/C4-2B-HOXB13/;Human/C4-2B-HOXB13 S56A/S147A/;Human/C4-2B-HOXB13 S56D/S147D/;Human/C4-2B-Nanog/;Human/C4-2B-Nanog S41A/S297A/;Human/C4-2B-Nanog S41D/S297D/;Human/C4-2-EV/;Human/C4-2-Nanog/;Human/C4-2-HOXB13 S56A/S147A/;Human/C4-2-Nanog S41D/S297D/;Human/LNCaP with empty vector/;Human/LNCaP INSM1/;Human/LNCaP INSM1 S119A/S358A/S435A/;Human/LNCaP INSM1 S119D/S358D/S435D/;Human/LASCPC-01with empty vector/; Human/LASCPC-01 INSM1/;Human/LASCPC-01INSM1 S119A/S358A/S435A/;Human/LASCPC-01INSM1 S119D/S358D/S435D/;Human/C4-2-Lin28B/;Human/C4-2-Lin28B T228A/T188A/S189A/T190A/;Human/C4-2-Lin28B T228D/T188D/S189D/T190D/;Human/LASCPC-01 Lin28B/;Human/LASCPC-01-Lin28B T228A/T188A/S189A/T190A/;Human/LASCPC-01 Lin28B T228D/T188D/S189D/T190D
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/subcutaneous implantation/anesthesia/ABSL2/gown, mask, gloves/ABSL1/No/refer to SOP

Risk Assessment/Discussion:

Dr. Liu has submitted an IBC amendment to add a new PDX model in mice. 4 new gene constructs (nanog, Lin28B, INSM1, and HOXB13 and mutations of each) will be overexpressed via lentivirus in CRPC tumor cells for administration to anesthetized mice via subcutaneous injection. Lab members will wear gown, mask, and gloves

for this work within a BSC. Stably transduced cells are created as previously described and approved. This new project is very similar to previously described and approved work in Dr. Liu's IBC protocol. The specific gene targets for overexpression are new to this amendment. There is a corresponding IBC-hold on IACUC 2020-3680.

IBC Discussion & Vote:

The amendment to IBC-24-355 (version 23.0) was approved pending the minor modifications listed below:
*
ANIMAL RESEARCH – Animals with Biohazards table: What does "refer to SOP" mean? What SOP is being referenced here? Please specify the special practices and procedures for these materials being administered to mice. Specifically, clarify that this work is done in a BSC.
SCIENTIFIC SUMMARY:

1. The specific function(s) of the new transgenes added in this experiment should be described. Should personnel be accidentally exposed to the lentiviral constructs expressing these genes, what health effect(s) might be expected? The risks associated with working with a lentivirus overexpressing genes known to be associated with cell proliferation and tumor progression must be acknowledged.
2. Add a comment to the amendment section noting that PPE, lentivirus manipulation, animal handling and housing, and disposal will be the same as for previously approved portions of the protocol. If there are to be any differences in any of these techniques, please describe those clearly.

*
Doug Harrison initiated the motion. Thomas Chambers seconded the motion. All IBC members present (10) voted in favor of the motion.
*
Conflicts of Interest: None

New Protocols

PI: William de Souza

IBC Protocol Number: IBC-25-05
Protocol Title: Transmission dynamics and virus-host interactions of arboviruses
Protocol Type: New Protocol
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-1, UK Administrative Regulation 6.9, UK Administrative Regulation 6.3, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section IV-B-7
Containment Level: Biological Safety Level 2 (BSL2)
Primary Reviewers: D. Harrison, M. Mendenhall, A. Hunt

Brief Project Overview:

This project studies how viruses that are spread by blood-sucking invertebrates (like mosquitoes, midge, and ticks) infect people and how these infections spread. We use multiple scientific methods to understand these diseases, including studying how viruses work (virology), how our bodies fight off infections (immunology), how the viruses mutate, and how the virus evolves (genomics). We also use computers to analyze large amounts, which also understand how these viruses spread; we study things like how often people get sick (epidemiology) and where these viruses live in nature (ecology). We also study how these viruses make people sick by doing experiments in the laboratory. Our research helps us learn how viruses and people interact, which is important for preventing and treating these diseases.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Cell culture, DNA/RNA isolation/purification, Imaging/Microscopy, PCR/qRT-PCR, Propagation of infectious agents, Viral culture, Use of Human Source Material(s), Use of infectious agents, Flow cytometry/Cell sorting

Transport: Yes
Materials Transported: Biohazardous Materials
Infectious Agent(s)/Natural Host(s): Chikungunya Virus (CHIKV) 181/25 vaccine strain (RG2-virus)/Vaccine-lab generated/; Mayaro Virus (MAYV) (RG2-virus)/Humans, animals, and insects (mosquitoes)/; Venezuelan Equine Encephalitis Virus (VEEV) TC83 vaccine strain (RG2-virus)/Vaccine-lab generated/; Oropouche (OROV) (RG2-virus)/Humans, animals, and insects (midges)/; La Crosse Virus (LACV) (RG2-virus)/Humans, animals, and insects (mosquitoes)/; Dengue Virus (DENV) Serotype 1-4 (RG2-virus)/Humans, animals, and insects (mosquitoes)/; Zika Virus (RG2-virus)/Humans, animals, and insects (mosquitoes)/; Yellow Fever Virus (YFV) vaccine strain 17D (RG2-virus)/Vaccine-lab generated/; West Nile Virus (WNV) (RG2-virus)/Humans, animals, insects (mosquitoes)/; Japanese Encephalitis Virus (JEV) SA 14-14-2 vaccine strain (RG2-virus)/Humans, animals, and insects (mosquitoes)/; St. Louis Encephalitis Virus (SLEV) (RG2-virus)/Humans, animals, insects (mosquitoes)/; Bourbon Virus (BRBV) (RG2-virus)/Humans, animals, and ticks/; Rift Valley Fever -MP12 (RVFV-MP- 12) vaccine strain (RG2-virus)/Vaccine-lab generated /; Human Sourced Materials (RG2-cells, tissues, bodily fluids, organs, etc.)/Humans/; Usutu virus (USUV) (RG2-virus)/Humans, animals, insects (mosquitoes)
Source & Nature of Inserted Nucleic Acid(s) [Gene Information/Gene Source/Gene Category/Use of Construct/Host(s)/Vector(s)]: N/A
Vector(s) [Vector Category/Vector Technical Name]: N/A
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Animal/Vero clone E6/; Animal/Vero cells/; Human/HEK293/; Insect/Aedes albopictus clone C6/36/; Human/HuH-7 /; Animal/Immune Cells/; Human/Immune Cells/; Animal/Immune Cells/; Human/human primary astrocytes /; Human/Human Umbilical Vein Endothelial Cells
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. de Souza has submitted an IBC protocol for work with a number of RG2 arboviruses. Dr. de Souza's lab studies how viruses are spread by invertebrates like mosquitoes, midges, and ticks, however this project does not involve any work with animals, including insects, or recombinant/synthetic nucleic acid materials. Dr. de Souza describes work with all viruses conducted in a BSC at BSL2. Centrifugation of infectious materials is described in accordance with UK Research Safety guidance and will utilize sealed safety rotors/buckets/cups that are loaded/unloaded in a BSC and wiped with disinfectant prior to removal from BSC. Flow cytometry will be completed using cells fixed with paraformaldehyde. Arboviruses are transmitted to humans in the wild via biting arthropods. The primary risk associated with working with these agents in a laboratory is accidental needle-stick or other parenteral inoculation.

IBC Discussion & Vote:

IBC protocol IBC-25-05 (version 9.0) was returned to the investigator for the significant revisions listed below.
*
DISINFECTANTS, EMERGENCY RESPONSE, TRANSPORT, WASTE – Biohazardous Materials Transport Description: Transportation of biohazards is indicated in the Scientific Summary. As such, please select “Yes” under the Transport section and provide details on how materials will be safely transported to facilities on campus in the Biohazardous Transport Description text field. Guidance on transport of biohazardous materials can be found on our website: https://researchsafety.uky.edu/biological-safety/transport
PERMITS: Import of human samples suspected of being infected with human infectious agents requires a CDC Import Permit. Please check “Yes” here and attach a copy of the permit once acquired.

SCIENTIFIC SUMMARY:

1. The summary implies that infected cells will be transported to various campus locations for flow cytometry, scRNA-seq, Luminex analysis, etc. Please clearly describe how materials are transported (secured in a closed, lidded, shatter-proof secondary container) and specify the locations (building and room numbers, facility names) of transport. Be very clear about whether biohazardous materials are inactivated prior to being removed from the BSC and how inactivation is achieved.
2. Does this protocol involve the manipulation/use of any risk group 3 (RG3) viruses? Please be very clear in naming attenuated strains and briefly describe their attenuation. For any attenuated strains that are exempt from Federal Select Agent regulations, please clearly specify the exempt strains.
3. For extracted RNA from BSL3 collaborators, please clearly describe how these samples are inactivated prior to being shipped to your laboratory. Are these samples accompanied by a certificate of inactivation or some other documentation to verify samples have been rendered non-infectious and safe for handling at BSL2?
4. The import of human samples suspected to be infected with human infectious agents from collaborators in Brazil, Guatemala, and Angola will require a CDC Import Permit. You can find more information about the CDC's Import Permit Program and how to apply online here -> https://www.cdc.gov/import-permit-program/php/index.html.
    a. Regarding these samples, is there any testing done at the point of origin to rule out other infectious agents? What steps are taken to ascertain that these patients aren't infected with RG3 viruses or those on the Federal Select Agent and Toxin list?
5. Regarding the samples from experimentally infected NHPs from collaborators, please specify the virus(viruses) with which they are infected. Use of the term "arboviruses" is vague and can include RG3 agents.
6. The statement "sharps are only used when necessary" is too vague. Please clearly note when sharps will be utilized and specify how risk of accidental parenteral inoculation will be avoided when working with sharps.
7. Expand on centrifugation procedures used in conjunction with biohazards: What type of centrifuge will be used? Clinical? High speed? Ultracentrifuge? Will centrifugation be performed in the BSC or on the open bench? Will safety buckets/rotors be employed to prevent aerosol production? Will sample containers and equipment be wiped with disinfectant before and after use?
8. Please elaborate on how bands in Ficoll gradients will be extracted.
9. Describe how cross-contamination of multiple viruses will be prevented. Will work be limited to only one virus at a time?
10. Please expand the description of single-cell sequencing. Where is the 10X Chromium instrument? Who is doing this work? The last sentence of this paragraph does not seem to fit. Please clarify.
11. Under paragraph 5, section B:
    a. Remove reference to use of UV light for inactivation. UV light is not a suitable method of decontamination/inactivation.
    b. Specify that liquid biohazardous waste is treated with bleach such that the final concentration is 10% bleach.
    c. 70% ethanol alone is not an adequate disinfectant for work with human source materials. Please specify the use of freshly prepared 10% bleach (contact time 20 minutes), followed by 70% ethanol for stainless steel surfaces.

*

Michael Mendenhall initiated the motion. Doug Harrison seconded the motion. All IBC members present (10) voted in favor of the motion.

*

Conflicts of Interest: None

Renewals

PI: Josh Morganti

IBC Protocol Number: IBC-25-49
Protocol Title: Aging and Disorders of the CNS
Protocol Type: Renewal
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-4, NIH Guidelines Section III-E-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
Containment Level: Biological Safety Level 2 (BSL2), Animal Biological Safety Level 1 (ABSL1)
Primary Reviewers: C. Haughton, J. Smalle, D. Malherbe

Brief Project Overview:

We are interested in Traumatic Brain Injury as it pertains to the aging brain. TBI in the aging population is highly correlated with increased risk of dementia and other neurodegenerative diseases. We study the cellular mechanisms that happen in response to TBI, in particular in astrocytes and microglia, the cell types in the brain that support neurons. Several of our projects have to do with an inflammatory pathway in response to injury, the NFkBp65 (RelA) pathway, and whether or not it differs in astrocytes or microglia in the adult brain vs the aging brain. We also study the polymorphisms of ApoE (2,3, and 4) and how each relates to functioning of astrocytes and microglia.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), DNA/RNA isolation/purification, Flow cytometry/Cell sorting, Histology, Imaging/Microscopy, Immunohistochemistry, PCR/qRT-PCR, Use of viral vectors, Cell culture
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)]: Ribotag/created tag/tracking/tagging of proteins/mouse/AAV/; ApoE (mouse)/created peptide/regulatory gene inhibitor/targeted knockdown of ApoE/mouse/AAV/; GCamp6f/created tag/tracks Calcium influx/Calcium tracking/mouse/AAV
Vector(s) [Vector Category/Vector Technical Name]: Adeno-Associated Virus (AAV)/AAV-Ribotag; Adeno-Associated Virus (AAV)/AAV-ApoE; Adeno-Associated Virus (AAV)/AAV-GFAP-GCamp6F
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/Human iPSC ApoE4/4 astrocyte; Human/Human iPSC Apoe3/3 astrocyte; Animal/BV-2 cells
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]: Viral Vector - Adeno-Associated Virus (AAV)/Intracranial or IP/Isoflurane/ABSL1/Lab Coat, Eye Protection, gloves/ABSL1/No/N/A

Risk Assessment/Discussion:

Dr. Morganti has submitted a renewal to his existing IBC protocol entitled *Aging and Disorders of the CNS*. Dr. Morganti's laboratory is particularly interested in how traumatic brain injury relates to the aging brain. Dr.

Morganti's laboratory utilizes a number of AAVs purchased from 3rd party vendors for administration to mice. The AAVs utilized will overexpress tracking genes, including Ribotag and GCamp6f, and a antisense oligonucleotide (ASO) designed to knockdown expression of mouse ApoE. Lab members will wear lab coats, eye protection, and gloves for administration of AAV to anesthetized mice. Traumatic brain injuries (TBIs) will be induced in animals administered AAVs 2-4 weeks after injection. Animals administered AAVs will be subjected to MRI and other imaging in the Norris laboratory. Dr. Morganti's laboratory also utilizes iPSC astrocytes (human origin) to examine metabolism in response to stimuli and inhibitors targeting the NFKB pathway. Cells are manipulated in a BSC, plated in 96 well plates and treated with transcription factor prior to transport to the Redox Metabolism Shared Resource Facility to measure oxygen utilization. Plates are sealed with parafilm and placed inside a secondary container for transport. Cells are not genetically manipulated. Lab members will wear lab coats, disposable gloves, and eye protection for work with human cells at BSL2.

IBC Discussion & Vote:

IBC protocol IBC-25-49 (version 9.0) was approved pending the minor modifications listed below:
*

ANIMAL RESEARCH – Animals with Biohazards Table: The entry for AAV also includes IP under "Route of Administration". IP administration of AAV in mice is not described in the Scientific Summary. Please remove reference to IP administration here if not accurate. Otherwise, IP administration of AAVs must also be described in the Scientific Summary below. Ensure this table is congruent with work described in the Scientific Summary and vice versa.
LOCATIONS – Biological Safety Equipment: Please select “Manipulations of animals” in the Biological Safety Cabinet (BSC) Procedures.
SCIENTIFIC SUMMARY:

1. The Animals with Biohazards Table above includes intracranial and IP routes of administration of AAVs in mice. Morganti IACUC 2019-3327 also indicates AAV-mApoE may be delivered systemically via IP injection. Please describe IP administration here, if accurate. Otherwise, reference to IP administration in the Animals with Biohazards Table above should be removed. Ensure work described here is congruent with the Animals with Biohazards Table above and vice versa.
2. Please clarify the contact time for paraformaldehyde perfusion and methanol inactivation/lysis methods that are performed prior to initiation of downstream assays.

*

Jan Smalle initiated the motion. Delphine Malherbe seconded the motion. All IBC members present (10) voted in favor of the motion.
*

Conflicts of Interest: None

PI: Jessica Blackburn

IBC Protocol Number: IBC-25-60
Protocol Title: Identifying mechanisms of cancer progression using lentiviral infected human cell lines
Protocol Type: Renewal
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-1, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, OSHA 29 CFR 1910.1030, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section IV-B-7
Containment Level: Biological Safety Level 2 - Enhanced (BSL2+), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, D. Harrison, B. Nelson

Brief Project Overview:

Our laboratory is working to define the mechanisms of leukemia and brain tumor progression and to use our findings to identify new drug targets for potential therapeutic application. The focus of this Biosafety Protocol is to use lentivirus to introduce recombinant DNA into already established human cell lines. The recombinant DNA causes the cells to either over-express the gene of interest or causes knock-down of expression of the gene of interest, so we can better define what this gene is doing in cells to promote cell survival or growth. We will also use patient-derived leukemia and solid tumor samples to establish PDX models in mice.

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, Imaging/Microscopy, PCR/qRT-PCR, Transfection, Transformation, Use of Human Source Material(s), Use of viral vectors
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)]: Protein tyrosine phosphatase 4A3 (PRL-3)/Human/Enzymatic Protein /Expression or Knockdown/Human Cells/pLKO and pCMV (expression); pLKO.1 (knockdown)/; Protein tyrosine phosphatase 4A1 (PRL-1)/Human/Enzymatic Protein /Expression /Human Cells/pLKO andpCMV/; Protein tyrosince phosphatase 4A2 (PRL-2)/Human/Enzymatic Protein /Expression /Human Cells/pLKO andpCMV/; Green Fluorescent Protein (GFP)/Jellyfish/Tracking Gene/Expression /Human Cells/pCMV/; Luciferase/Firefly /Tracking Gene/Expression /Human Cells/pCMV/; dsRED/Synthetic /Tracking Gene/Expression /Human Cells/pCMV/; Cas9/Bacteria/DNA Replication/Gene Editing /Expression /Human Cells/pCMV/; TP53/Human/Tumor Supprresor /Expression or Knockdown/Human Cells/pLKO and pCMV (expressed); pLKO.1 (knockdown)/; H3/Human/Histone/Expression/Human Cells/pLKO and pCMV/; NHE1/human/Transporter/Expression or knockdown/Human cells/pLKO or pLKO.1
Vector(s) [Vector Category/Vector Technical Name]: Lentivirus/pLKO.dest.puro /; Lentivirus/pCMV-dest.puro /; Lentivirus/pLKO.1 puro /; Lentivirus/pCW57.1
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HEK293T/; Human/Loucy /; Human/Molt-4 /; Human/ALL-SIL /; Human/Jurkat /; Human/REH /; Human/NALM-16/; Human/Human leukemia cells, de-identified and passed at least 1X through mice before sent to our lab /; Human/HBP-ALL /; Human/HSB2 /; Human/Daoy/; Human/SCC-126 /; Human/SCC-127
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, non-modified/IV/cylindrical restraint tube/ABSL2/gloves, gown, hair cover, eye protection/ABSL1/No/Work in a BSC/; Mouse/Cells - Human, genetically modified/IV/cylindrical restraint tube/ABSL2/gloves, gown, eye protection, hair cover/ABSL1/No/Work in a BSC/; Mouse/Tissue - Human (ex. PDX tumor tissue)/Subcutaneously Injected/anesthesia, no physical restraint/ABSL2/gloves, gown, eye protection, hair cover, work in a BSC/ABSL1/No/Solid tumors will be injected subcutanously into the flank of the mouse with a 25G needle. Injections will take place in a BSC and sharps will be discarded in the DLAR biohazard sharps waste

Risk Assessment/Discussion:

Dr. Blackburn has submitted a renewal of her IBC protocol entitled *Identifying mechanisms of cancer progression using lentiviral infected human cell lines*. Dr. Blackburn's laboratory utilizes lentiviral constructs to transduce cells

for downstream assays including western blotting, RNA isolation, microscopy, and cell viability/apoptosis assays. This project also utilizes leukemia or solid tumor cells to establish PDX models in mice via tail-vein injection. Mice are euthanized at experiment endpoint and tissues obtained for various downstream assays.

IBC Discussion & Vote:

IBC protocol IBC-25-60 (version 8.0) was approved pending the minor modifications listed below.
*
DISINFECTANTS, EMERGENCY RESPONSE, TRANSPORT, WASTE – Biohazardous Materials Transport Description: Please update the FACS facility location.
SCIENTIFIC SUMMARY:

1. Please clarify what material will be subjected to FACS. Note whether material is inactivated prior to sorting.
2. If animal materials are returned to the lab for additional experiments, please indicate the nature of those manipulations up to the point at which biohazardous materials will be inactivated.
3. Please note how animal carcasses and materials will be disposed of.
4. Describe the potential impacts of unintentional human exposure to the lentiviral constructs in use.

*
Doug Harrison initiated the motion. Brandy Nelson seconded the motion. All IBC members present (10) voted in favor of the motion.
*
Conflicts of Interest: None

PI: Jessica Blackburn

IBC Protocol Number: IBC-25-61
Protocol Title: Generation and use of transgenic zebrafish to study human cancer
Protocol Type: Renewal
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-4, NIH Guidelines Section III-F, NIH Guidelines Section III-F-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
Containment Level: Biological Safety Level 2 (BSL2), Animal Biological Safety Level 2 (ABSL2)
Primary Reviewers: C. Haughton, D. Harrison, B. Nelson

Brief Project Overview:

In our lab, we study zebrafish to learn more about human diseases, like cancer. Zebrafish are small fish that can help us understand big problems in medicine. Here's how we use them:
1. Making Disease Models in Zebrafish: We inject special DNA, which plays a role in human diseases, into zebrafish eggs when they are just one cell. This DNA gets mixed into the zebrafish's own DNA, and the fish then carry this DNA for their whole life. We make sure this DNA works only in certain parts of the zebrafish, where we want to study the disease.
2. Turning Genes On and Off: We use a tool called CRISPR/Cas9, which is like molecular scissors, to cut the DNA and turn specific genes on or off. This helps us see what happens in diseases when certain genes are too active or missing.
3. Transplanting Human Cancer Cells: Sometimes, we put human cancer cells into zebrafish. This lets us watch how these cancer cells behave and how the zebrafish's body reacts to them.
4. Testing New Drugs: We also give zebrafish new drugs to see if these drugs can treat diseases without hurting the fish. This helps scientists make better drugs before they even start testing them in larger animals or humans.

Using zebrafish in these ways is safe for people and gives us a lot of helpful information about diseases and how to treat them.

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, PCR/qRT-PCR, Transformation, Use of Human Source Material(s), Proteomics
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)]: GFP/Jellyfish/Tracking Gene/Expression/Zebrafish/pDEST tol2pA2/; dsRED/Coral/Tracking Gene/Expression/Zebrafish/pDEST tol2pA2/; PRL3/Homo sapiens /Enzyme/Expression/Zebrafish/pDEST tol2pA2/; PRL2/Homo sapiens /Enzyme/Expression/Zebrafish/pDEST tol2pA2/; Myc/Mus musculus /Oncogene /Expression/Zebrafish/pDEST tol2pA2/; KRAS/Homo sapiens /Oncogene /Expression/Zebrafish/pDEST tol2pA2/; H3 (histone H3)/Homo sapiens /Cell Growth/housekeeping/Expression/Zebrafish/pDEST tol2pA2/; TP53/Homo sapiens/Tumor suppressor /Expression/Zebrafish/pDEST tol2pA2/; prl1/ptp4a1/danio rerio /Enzyme/CRISPR target (knock-out)/Zebrafish/n/a, KO is of the endogenous gene/; prl2/ptp4a2/danio rerio/Enzyme/CRISPR target (knock-out)/Zebrafish/n/a KO is of an endogenous gene/; Tau/Homo sapiens /Cell Growth/housekeeping/Expression/Zebrafish/pDEST tol2pA2/;prl3/ptp4a3/danio rerio/Enzyme/CRISPR target/Zebrafish/n/a, KO is of the endogenous gene
Vector(s) [Vector Category/Vector Technical Name]: Plasmid/pDEST tol2pA2
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/Sarcoma; Human/Glioma; Human/Neuroblastoma
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]: Fish/Cells - Human, non-modified/Injection/Anesthesia/ABSL2/Yes/ABSL2/No/Zebrafish will be kept in a special cell culture incubator when xenografted with human cells and will never be introduced back into the general facility.

Risk Assessment/Discussion:

Dr. Blackburn has submitted a renewal for a separate project entitled *Generation and use of transgenic zebrafish to study human cancer*. This project involves the production of transgenic zebrafish and xenograft studies in zebrafish to test FDA-approved chemotherapies.

IBC Discussion & Vote:

IBC protocol IBC-25-61(version 8.0) was approved pending the minor modifications listed below:
*
SCIENTIFIC SUMMARY: Please provide a brief description of the target genes being manipulated and potential consequences of personnel exposure.
*
Doug Harrison initiated the motion. Brandy Nelson seconded the motion. All IBC members present (10) voted in favor of the motion.
*
Conflicts of Interest: None

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

PI: Jill Turner

IBC Protocol Number: IBC-25-62
Protocol Title: Pharmacogenetics of Nicotine Dependence
Protocol Type: Renewal
Applicable Guidelines & Regulations: NIH Guidelines Section IV-B-7, UK Administrative Regulation 6.3, UK Administrative Regulation 6.9, OSHA Act of 1970 Clause 5(a)(1), NIH Guidelines Section III-D-4, NIH Guidelines Section III-E-1, NIH Guidelines Section III-F-1, OSHA 29 CFR 1910.1030
Containment Level: Biological Safety Level 2 (BSL2), Animal Biological Safety Level 1 (ABSL1), Biological Safety Level 1 (BSL1)
Primary Reviewers: C. Haughton, T. Chambers, J. Smalle

Brief Project Overview:

Nicotine is the most highly addictive and highly abused drug in the world. Although there are a number of pharmacotherapies for smoking cessation, quitting success rate remains less than 20%. The proposed research will be directed towards a pharmacogenetic understanding of nicotine dependence; using state of the art genomic and functional techniques. Specifically, genetically modified mice will be used alongside adeno-associated viruses (AAVs) in these experiments to discern the necessity of specific proteins in the acquisition of drug dependence. This project will not only help us better understand why current treatment success rates are so low, but it will identify new pharmacological targets for smoking cessation and perhaps indicate how tailoring these drugs to an individual's genetics can improve quite rates.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), DNA/RNA isolation/purification, Imaging/Microscopy, Immunohistochemistry, PCR/qRT-PCR, Proteomics, Use of Human Source Material(s), Use of infectious agents, Use of viral vectors
Transport: Yes
Materials Transported: Biohazardous Materials, Animals
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)]: Cre Recombinase/PI bacteriophage/enzymatic protein/knockdown/mouse/Adeno-associated virus/; Red Fluorescent Protein/synthetic construct/reporter/tracking gene/expression/mouse/Adeno-associated virus/; GCamp6f/synthetic construct/calcium reporter/expression/mouse/AAV/; sgRNA/synthetic construct/guide for cas9 to the ErbB4 locus/knockdown/mouse/AAV/; scr sgRNA/synthetic construct/control guide for cas9/control/mouse/AAV/; EGFP/synthetic construct/reporter/tracking gene/expression/mouse/AAV/;
Vector(s) [Vector Category/Vector Technical Name]: Adeno-Associated Virus (AAV)/AAV9.CMV.Pl.Cre.rBG/; Adeno-Associated Virus (AAV)/AAV9.CMV.TurboRFP.WPRE.rBG/; Adeno-Associated Virus (AAV)/AAV9.Syn.GCaMP6f.WPRE.SV40/; Adeno-Associated Virus (AAV)/AAV9.CMV.sgRNA.rBG/; Adeno-Associated Virus (AAV)/AAV9.CMV.scr.rBG
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)/I cran/anesthesia/Stereotaxic apparatus/ABSL1/lab coat, booties, gloves, face mask/ABSL1/No/N/A

Risk Assessment/Discussion:

Dr. Turner has submitted a renewal for her project entitled *Pharmacogenetics of Nicotine Dependence*. Dr. Turner utilizes a number of AAVs and human serum to better understand nicotine dependence. AAVs will be obtained from 3rd party vendors and administered to mice via stereotaxic surgery to deliver Cre, sgRNA targeting the ErbB4 gene, GCaMP6F, RFP, or SCR. Mice administered AAVs will be subjected to behavioral tests prior to sacrifice during which brain tissue will be collected for qPCR, western blotting, and immunohistochemistry. In the second project (currently on hold), Dr. Turner's laboratory intends to obtain de-identified plasma samples from the UK CCTS to assess cytokine levels via Luminex.

IBC Discussion & Vote:

IBC protocol IBC-25-62 (version 9.0) was approved.
*
Thomas Chambers initiated the motion. Jan Smalle seconded the motion. All IBC members present (10) voted in favor of the motion.
*
Conflicts of Interest: None

PI: Robert Helsley

IBC Protocol Number: IBC-25-78
Protocol Title: Macronutrient metabolism in Cardiometabolic Disease
Protocol Type: Renewal
Applicable Guidelines & Regulations: NIH Guidelines Section III-D-4, NIH Guidelines Section III-D-1, 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-F-1
Containment Level: Biological Safety Level 2 - Enhanced (BSL2+)
Primary Reviewers: C. Haughton, A. Hunt, M. Mendenhall

Brief Project Overview:

Overconsumption of sugar and fat can synergistically promote cardiometabolic diseases. Our lab is interested in understanding how macronutrient signaling pathways may be exploited for the treatment of dyslipidemia, NAFLD, and atherosclerosis. Fructose is often found in sugar-sweetened beverages and has been linked to the development of cardiovascular disease and NAFLD. We are focused on understanding how the rate-limiting enzyme in fructose catabolism, ketohexokinase (KHK), promotes these metabolic disturbances in both cell culture and in mice. Moreover, our goal is to understand how KHK is regulated at the gene and protein level, and how its absence influences metabolism and the development of metabolic disease. Our previous studies have shown that KHK strongly suppresses fatty acid catabolism through an enzyme known as carnitine palmitoyltransferase 1 (CPT1). Studies in both mice and human cells are planned to evaluate the effect of genetic (AAVs; Cre-transgenics) approaches can increase KHK activity, suppress CPT1-mediated fat oxidation, and alter cardiometabolic disease. We also utilize antisense oligonucleotides to knockdown genes of interest in-vivo. Using cell culture, we will utilize mouse and human cells to undergo mechanistic studies aimed at identifying how KHK and CPT1 are regulated in the liver, adipose, heart, and macrophage.

Summary of Biohazard Materials & Manipulations:

Manipulations Planned: Animal work (breeding, surgeries, etc.), Bacterial culture, Cell culture, DNA/RNA isolation/purification, Flow cytometry/Cell sorting, Histology, Imaging/Microscopy, Immunohistochemistry, PCR/qRT-PCR, Transfection, Transformation, Use of Human Source Material(s), Use of infectious agents, Use of viral vectors
Transport: Yes

Materials Transported: Animals
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/Reporter/ectopic expression/human cells, mice/pcDNA3, AAV8/; Cre Recombinase/P1-like viruses P1 Phage/enzyme/Deletion of floxed alleles from mouse genome/human cells, mice/AAV8/; CETP/homo sapiens/enzyme/ectopic expression/human cells, mice/AAV8/; PCSK9/mus musculus, C57/BL6/chaperone protein/ectopic expression/humans cells, mice/AAV8/; Cpt1a/mus musculus C57/BL6/enzyme/ectopic expression, knockdown/human cells, mice, human and mouse hepatocytes, mouse 3T3L1 adipocytes, and macrophages/AAV8, siRNA, lentivirus/; Ketohexokinase/mus musculus C57/BL6/enzyme/knockdown, ectopic expression/human and mouse hepatocytes/siRNA, AAV8, lentivirus
Vector(s) [Vector Category/Vector Technical Name]: Adeno-Associated Virus (AAV)/AAV-serotype 8/; Naked nucleic acid/siRNA KHK /; Lentivirus/KHK-C, AldoB, CPT1a, or TKFC Lentivirus/; Plasmid/DNA plasmids/;Plasmid/DNA plasmids/; Plasmid/pSpCas9n(BB)-2A-Puro (PX462) V2.0/; Naked nucleic acid/Antisense Oligonucleotide targeting ApoAIV/; Naked nucleic acid/Antisense Oligonucleotide targeting LDLR/; Plasmid/pSpCas9n(BB)-2A-GFP (PX461)/; Naked nucleic acid/ACC1/2 Antisense Oligonucleotides
Cell line(s) Used [Cell Line Type/Cell Line Technical Name]: Human/HEK293/; Human/WIF-B9/; Human/HepG2/; Animal/3T3-L1/; Human/THP1/; Human/Huh-7/; Animal/AML12/; Human/HLE/; Human/hADSC/; Animal/Primary hepatocytes
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)/IV/Mouse restrainer/ABSL1/Lab coat, gloves/ABSL1/No/All procedures involving adeno-associated viruses (AAVs) will be conducted in the biological safety cabinet to minimize exposure by inhalation. Lab coats and gloves will be worn by all personnel when preparing and using AAVs and mice that have been infected to reduce exposure by skin contact. To minimize the risk of parenteral exposure, all sharps and will be placed in appropriately labeled containers. Needles will not be capped or broken. In accordance with general laboratory safety precautions, eating, drinking or smoking in the laboratory will be strictly prohibited to reduce exposure by ingestion. All surfaces and instruments will be cleaned with 10% bleach following any experiment.; Mouse/Naked Nucleic Acid-r/sDNA/subcutaneous or IP/Isofluorane/ABSL1/Gloves, labcoat/ABSL1/No/Mice will be injected subcutaneously with ASOs which is dissolved in saline. 50-300 ul will be injected at one time. Injections will be repeated once or twice a week for the duration of the experiment. Mice will be anesthetized with 3-4% isoflurane to minimize distress associated with subcutaneous injections, and reduce the risk of accidental human needle stick exposure. /; Mouse/Naked Nucleic Acid-r/sDNA/subcutaneous/Isofluorane/ABSL1/Lab coat, gloves/ABSL1/No/Mice will be injected subcutaneously with siRNA which is dissolved in saline. 50-300 ul will be injected at one time. Injections will be repeated every two weeks for duration of the experiment. Mice will be anesthetized with 3-4% isoflurane to minimize distress associated with subcutaneous injections, and reduce the risk of accidental human needle stick exposure.

Risk Assessment/Discussion:

Dr. Helsley has submitted a renewal of his IBC protocol entitled *Macronutrient metabolism in Cardiometabolic Disease*. Dr. Helsley's laboratory utilizes a number of recombinant/synthetic nucleic acid materials (AAVs, lentivirus, siRNAs, ASOs) to manipulate genes in vitro and in vivo. AAVs and siRNAs will be utilized in mice to modulate fructose metabolism and fatty acid oxidation. AAVs will also be utilized in cell culture. AAVs will be purchased from UPenn Vector Core or Addgene. SiRNAs from Alnylam Pharmaceuticals targeting KHK will be used in mice as well. Lentivirus, obtained from Origene, will be used to stably transduce cells to express Cpt1a and KHK. Transduced cells will be subjected to a variety of downstream assays/manipulations. ASOs targeting mRNAs

of ApoAIV and LDLR will be administered to mice. Lastly, human tissue will be obtained from the BPTP SRF for isolation of RNA, proteins, and lipids.

IBC Discussion & Vote:

IBC protocol IBC-25-78 (version 6.0) was approved pending the minor modifications listed below.
*
ANIMAL RESEARCH – Creating/Breeding Transgenic Animals: Please uncheck the box "My work involves the creation of transgenic or knock out rodents." as alteration of the germ line is being performed by a vendor company outside of UK.
LOCATIONS: Research Locations Table: DLAR locations (housing and procedure rooms) should be listed here as well.
SCIENTIFIC SUMMARY:

1. Please replace the statement about ethanol and UV sterilization in the BSC with 10% bleach followed by ethanol for disinfection.
2. In the description of disposal of radioisotopes and biohazards, please describe how biohazardous materials will be inactivated prior to disposal as radioactive materials.
3. Please update PPE requirements during dissection of animals to include surgical mask or face shield.

*
Arthur Hunt initiated the motion. Michael Mendenhall seconded the motion. All IBC members present (10) voted in favor of the motion.
*
Conflicts of Interest: None

Incident Review

Nothing to report.

Protocol Issued Registration Numbers

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

Xiao, Xu, Intracellular Cholesterol transport in metabolic diseases, Amendment, BSO, IBC-24-469 (v.33), 6/3/2025
Chakravarti, Ritu, Immune Mechanisms of Autoimmune Diseases, Amendment, BSO, IBC-24-522 (v.33), 6/2/2025
Rao, Madhumathi, Metabolic Bone Disease Registry, Amendment, BSO, IBC-24-87 (v.23), 5/29/2025
Pack, Daniel, Design of non-viral gene delivery vectors., Renewal, BSO, IBC-25-55 (v.12), 5/29/2025
Guo, Zhenheng, Roles of Bmal1, iPLA2, MR, and GLP-1R in cardiovascular diseases, Amendment, BSO, IBC-24-358 (v.23), 5/29/2025
Ortinski, Pavel, Neurobiology of Cocaine Seeking, Amendment, BSO, IBC-25-29, 5/28/2025
Gensel, John, B22-3966-M2: Regenerative, Pro-Inflammatory, and Lipid Biomarkers after Spinal Cord Injury, Renewal, BSO, IBC-25-46 (v.12), 5/27/2025
Wang, Wangxia, Mitochondrial Function and microRNA Regulation in Traumatic Brain Injury and Alzheimer's Disease, Amendment, BSO, IBC-24-63 (v.33), 5/21/2025
Despa, Florin, B22-3990-M5: Cardiovascular consequences of diabetes; electrical remodeling in heart disease, Amendment, BSO, IBC-24-163, (v.25), 5/21/2025
Troedsson, Mats, Development of a protein-based diagnostic in vivo test for endometrial biofilms, Amendment, BSO, IBC-25-04 (v.27), 5/20/2025

Liu, Xiaoqi, Plk1 in cancer development, Amendment, BSO, IBC-24-91 (v.34), 5/20/2025
Kagan, Isabelle, Distribution of Slafractonia leguminicola (formerly Rhizoctonia leguminicola) in red clover and search for resistant red clover varieties, and mycotoxin analysis, Amendment, BSO, IBC-25-17 (v.14), 5/20/2025
Frolenkov, Gregory, Mechanoelectrical and Electromechanical Transduction in Auditory Hair Cells, Amendment, BSO, IBC-24-496, (v.16) 5/16/2025
Corbin, Kendall, Investigation of the human gut microbiome: Corbin research program, Amendment, BSO, IBC-24-383 (v.24), 5/16/2025
Berron, Bradley, B22-3929: Cell patterning and adhesion analysis, Closure, BSO, IBC-24-143 (v16), 5/12/2025
Zhu, Caigang, Development of novel optical metabolic imaging methods for cancer diagnosis and treatment, Amendment, BSO, IBC-25-43 (v.20), 5/9/2025

Protocols Meeting Registration Requirements

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

Rieske-Kinney, Lynne, B22-3914-M: Developing RNAi for Suppression of Exotic Wood-Boring Forest Pests, Renewal, IBC, IBC-25-50 (v.11), 5/29/2025
Chaiswing, Luksana, The Role of Antioxidants in the Progression of Certain Types of Tumor Cell Lines, Renewal, IBC, IBC-25-21 (v.18), 5/28/2025
Palli, Reddy, Insect Physiology, Biochemistry and Molecular Biology, Amendment, IBC, IBC-24-82 (v.14), 5/23/2025
Tong, Sheng, Development of magnetic-responsive nanomaterials for disease treatment, Renewal, IBC, IBC-25-47 (v.13), 5/20/2025
Xiao, Xu, Intracellular Cholesterol transport in metabolic diseases, Amendment, IBC, IBC-24-469 (v.27), 5/16/2025
Thibault, Olivier, Human skin fibroblasts and constitutively active insulin receptors in the brain of rodents, Amendment, IBC, IBC-24-240 (v.37), 5/14/2025
Liu, Xiaoqi, Plk1 in cancer development, Amendment, IBC, IBC-24-91 (v.28), 5/14/2025
Iragavarapu, Chait, JNJ-90014496: A Phase 1b Multicenter, Open-label, Study of JNJ-90014496, an Autologous CD19/CD20 Bi-specific CAR-T Cell Therapy in Adult Participants with B-cell Non-Hodgkin Lymphoma, New, IBC, IBC-25-35, (v.8), 5/12/2025

IBC Training

Delena Mazzetti reminded IBC members that IBC Member training is available in the SciShield Course Directory (https://uky.scishield.com/raft/training/courses) and that all IBC members must complete IBC member training annually.

Adjournment

Doug Harrison initiated a motion to adjourn the meeting. Michael Mendenhall seconded the motion. All IBC members present (10) voted in favor of the motion. The meeting adjourned at 1:17PM.