SAFETY Meeting Minutes
UAMS IBC

MEETING TIME RECORDS

Meeting start time: 3/6/2026 12:01 PM
Meeting end time: 3/6/2026 12:43 PM
Meeting type: Virtual

Name of Regular/Alternate Member	Status (Member or Alternate)	Present by Teleconference?
Ha-Neui Kim	Member	No
Matthew Jorgenson	Member	Yes
Robert Hunter	Member	No – voted by e-mail
Kimberly Murphy	Member	No
Lindsey Clark	Member	Yes
James Douglas	Member	Yes
Amanda Holloway	Ex Officio	No
James Bishop	Member	No
Youssef Aachoui	Member	Yes
Jia Liu	Member	Yes
Yuet-Kin Leung	Member	Yes
Melaney Gee	Member	Yes
Mark Manzano	Member	Yes
Christine Simecka Morgan	Member	No
Antino Allen	Member	Yes
KyoungHyun Kim	Member	Yes
James Townsend	Ex Officio	No
Shengyu Mu	Member	No
Kikumi Ono-Moore	Ex Officio	No
Zhiqiang Qin	Member	Yes

QUORUM INFORMATION

Number of SAFETY members on the roster: 17
Number required for quorum: 9
Quorum: Yes

All members present via teleconference received all pertinent material before the meeting and were able to actively and equally participate in all discussions.

ATTENDANCE STATUS AND VOTING KEY	
ABSTAIN:	Present for the vote but not voting "For" or "Against."
ABSENT:	Absent for discussion and voting for reasons other than a conflict of interest.
RECUSED:	Absent from the meeting during discussion and voting because of a conflict of interest.
SUBSTITUTION:	When regular members and their alternate(s) are listed in the ATTENDANCE table above and an alternate member serves as a substitute for the regular member this identifies the name of the alternate to indicate which individual is serving as the voting member for this vote. May be deleted if there are no substitutions.

GUEST NAMES
N/A

Previous Meeting minutes approved: No – Committee voted to table minutes for correction and will vote on approval at next meeting.

REVIEW OF SUBMISSIONS

The review and discussion of the protocols listed below included the following elements: the agents involved and their characteristics; types of manipulations planned; the source(s) and nature of the nucleic acid sequences; the host organism(s) and vector(s) to be utilized; whether expression of a foreign gene is intended and, if so, the specific protein(s) to be produced; the containment conditions to be applied, including biosafety level and any special provisions; and the relevant sections of the NIH Guidelines.

All IBC members present were reminded to identify any conflicts of interest as each registration was reviewed.

For each protocol reviewed, it was confirmed that the Principal Investigator (PI) and laboratory personnel have received appropriate training in the safe conduct of research.

Initial Protocol

1. Review of SPROTO202600000008

Title:	Understanding and treating gastrointestinal bacterial infections
Investigator:	Miranda Wallace
Submission ID:	SPROTO202600000008
Description:	This protocol involves the development of probiotic Saccharomyces cerevisiae var boulardii (Sb) yeast as orally delivered production systems for therapeutics treating bacterial

	gastrointestinal infections. Sb will be genetically modified to express and secrete therapeutic proteins of interest from the OGS539 vector that are effective against BSL-II opportunistic pathogens Clostridioides difficile (Cd) and enterotoxigenic Bacteroides fragilis (ETBF). The Cd and ETBF strains tested are all toxigenic, causing inflammation and diarrheal disease in mammalian hosts. The recombinant DNA encoding the therapeutics effective against Cd and ETBF are derived from synthetic design or from antimicrobial factors such as defensins or phage endolysins. The therapeutic effects of the probiotics will be studied in tissue culture under BSL-II conditions in a BSC. We will also utilize rodent models of infection under BSL-II conditions in an approved animal facility. The PI will additionally study antibiotic resistance mechanisms in Bacteroides fragilis group (BFG) bacteria. This will include the BSL-II species Bacteroides fragilis sensu stricto, Bacteroides thetaiotaomicron, Bacteroides ovatus, Bacteroides caccae, Bacteroides faecis, Bacteroides pyogenes, Phocaeicola vulgatus, Parabacteroides distasonis, and Parabacteroides merdae. This will involve a functional genomics screen of 173 clinical isolates, wherein genomic elements causing increases in antibiotic resistance are identified among the isolates by transferring segments of the genome to the pZE21 vector, transforming into an E. coli host and testing for increased antibiotic resistance. We will utilize BSL-II protective measures and containment protocols for this work, including PPE and use of BSCs.
Agent Containment:	Biological Containment Levels: • E. coli: BSL-1 • Caco-2 (Human Colorectal Adenocarcinoma Cells): BSL-1 • Bacteroides spp.: BSL-2 • Parabacteroides distasonis: BSL-2 • Bacteroides spp.: BSL-2 • Clostridium difficile: BSL-2 • Bacteroides spp.: BSL-2 • E. coli: BSL-1 • Clostridium difficile: BSL-2 • Yeast: BSL-1 • Blautia obeum: BSL-1 • Animal Blood: BSL-1 • E. coli: BSL-1 • Vero: BSL-1 • Bacteroides spp.: BSL-2 • Bacteroides spp.: BSL-2 • E. coli: BSL-1 • Parabacteroides merdae: BSL-2

	• Enterocluster citroniae: BSL-2 • Animal Tissue: BSL-2 • Bacteroides spp.: BSL-2 • E. coli: BSL-1 • Clostridium difficile: BSL-2 • Phocaeicola vulgatus: BSL-2 • Fecal pellets: BSL-2
Applicable NIH Guidelines:	• Section III-D-1-a • Section III-F-2 • Section III-F-3 • Section III-D-4 • Section III-F-7 • Section III-D-2-a • Section III-F-8-C-II • Section III-F-1 • Section III-D-1 • Section III-D-2 • Section III-D • Section III-F-8-C-III • Section III-F-8

a. **Determination:** Modifications Required

b. **Required modifications:**
Committee Determination: Modifications Required.
Please review and respond to all comments throughout submission.
Please contact BSO with any questions/concerns.

c. **Votes:**
For: 11
Against: 0
Recused: 0
Absent: 6
Abstained:

De Novo Review

2. Review of SPROTO202600000009

Title:	Endocrine disruption (BP255)
Investigator:	Yuet-Kin Leung
Submission ID:	SPROTO202600000009
Description:	PROJECT 1: Functional Analysis of Hormone Receptors and Their Isoforms Nuclear receptors, including estrogen receptors, GPER1, and androgen receptors, have been postulated to have anti-proliferation/proliferation functions, respectively, in the regulation of cancer cell growth. With the discovery of novel

	nuclear receptor isoforms, their cognate function requires reevaluation. We will use various vectors, including retroviral/lentiviral vectors, to manipulate gene expression levels in cell lines to study their putative functions and investigate their inter-relationship. Protein-protein interaction among hormone receptor isoforms will be conducted in yeast. Expression profile of the enzymes, their cellular localization and their clinical relevance can be elucidated by using human archival samples and cell lines. To find out the potential ligand of each isoforms, they will be overexpressed in E. coli and the purified products will be subjected to crystallographic analysis. E coli and yeast will be used to clone and subclone the gene of interest for protein expression and protein-protein interaction studies. The carcinogenic potential of those nuclear receptor-modified cell lines will be tested in vitro using cell-based assay models. PROJECT 2: Epigenetic Action of Estrogens and Endocrine Disruptors in Disease Endocrine disruptors, including environmental estrogens and metalloestrogens, will be exposed to endocrine cells/tissues and/or mice/rats during the stage of development. Since some of the endocrine disruptors do not cause prostate cancer, chemicals (e.g. Testosterone+MNU) will be used to trigger carcinogenesis in mice or rats to determine their disease risk. Adult stem cells in the tissues will be isolated via flow cytometry. The stemness of isolated cells will be tested using tissue recombination assay or xenograft/allograft models. Sperm will be collected from exposed/control males and their offspring generations for assessing the multigenerational impacts on sperm quality, sperm epigenome/epitranscriptome and specific disease traits. Gene expression and DNA Methylation profiling are employed in this project, and the usage of bacterial cells, vector plasmids, cell lines immortalized from rat, mouse, or human endocrine-related tissues/organs, and micro-dissected samples will also be required. Lentivirus infection carrying estrogen receptors (or genes related to their signaling pathways or reporter genes) or their knockdown cassette, which is not oncogenic, will be performed in vitro to alter endogenous gene expression. PROJECT 3: Role of estrogen receptor beta in mouse prostate Estrogen receptor beta (ERbeta) is antiproliferative in prostate cancer cell models. However, whether ERbeta could be exploited as a cancer prevention target is currently unknown. We created floxed ERbeta mice (from the transgenic core at

	the University of Cincinnati) and bred them with prostate-specific Cre-recombinase (with probasin promoter) mice, which were acquired from NCI, to produce prostate-specific ERbeta mice on two genetic backgrounds (B6 and 129). Experiments will be carried out in this project including cell culture, gene over-expression/knock-in and knockout/knockdown, cell treatment, molecular manipulation of DNA, RNA and protein levels, the expression determination in prostate tissue samples, and animal models. Lentivirus infection carrying estrogen receptor beta (or gene fragments related to its signaling pathways or reporter genes) or their knockdown cassette which is not oncogenic will be transduced in the primary mouse prostate cells or cancer cells to alter endogenous gene expression and their change of functions will be investigated using in vitro assays. PROJECT 4: Discovery of biomarkers in human specimens The goal of this project is to reveal novel molecular biomarkers (including but not limited to DNA, RNA proteins and biochemicals) in body fluids/tissues (including frozen tissues, FFPE/OCT tissues, urine, blood, serum, plasma, hair and saliva) for human exposure as indicated by surrogate/chemical biomarkers and/or human disease (non-infectious diseases-related) progression as indicated by known surrogate markers. Clinical specimens will be collected and aliquoted by the clinicians, nurses and appropriate clinical staff at the Translational Research Institute or collaborator's clinical laboratory. The samples will be sent to our research laboratory for storage/further analysis or sent to the core facility/commercial laboratory for further processing. For example, the samples will be sectioned in the core facility for histology/IHC analysis and/or DNA/RNA/proteins/biochemicals will be extracted in the research laboratory for biomarkers discovery analysis (ELISA, sequencing, gene expression etc). PROJECT 5: Cancer xenograft models This project will be conducted in our research laboratory, utilizing core facilities for flow cytometry, genomics, and pathology, as well as the animal facility. Building on preclinical evidence that the G protein-coupled estrogen receptor 1 (GPER1) agonist G-1 (also called LNS8801) significantly reduces tumor mass in castration-resistant prostate cancer (CRPC) human xenograft models, this study aims to elucidate the mechanisms of action of G-1, with a particular focus on its capacity to reprogram the tumor

	immune microenvironment. We will employ immunodeficient and humanized CRPC xenograft models using prostate cell lines (including fibroblasts) and their ADT (androgen deprivation therapy)-resistant derivatives. This mouse model enables both the engraftment of human tumor cells and the survival and functionality of human immune cells. The overarching goal of this study is to determine how G-1 modulates the immune system to combat CRPC, with particular emphasis on the role of neutrophils and the dynamics of the tumor immune microenvironment. Immune cells from these models will be isolated and cultured for further study. Biohazards involved are: human/mouse/rat tissues (including but not limited to prostate, ovary, endometrium and breast), human/mouse bodily fluids (including urine, blood, and saliva), lentivirus, retrovirus, E coli, yeast, human/mouse cancer cell lines, chemical carcinogens (e.g MNU) and endocrine disruptors (e.g. benzo(a)pyrene and metalloestrogens), prostate cancer therapeutics (e.g. Abiraterone and G-1).
Agent Containment:	Biological Containment Levels: • Human Blood: BSL-2 • Human Saliva: BSL-2 • Human Tumor Tissue: BSL-2 • Animal Tissue: BSL-2 • Buccal Swab: BSL-2 • Human Serum: BSL-2 • Animal Serum: BSL-2 • Human Plasma: BSL-2 • Hair: BSL-1 • Urine: BSL-2 • Lentivirus: BSL-2 • Retrovirus: BSL-2 • Yeast: BSL-2 • E. coli: BSL-2 • C4-2: BSL-2 • DU145: BSL-2 • TRAMP-C2: BSL-2 • LAPC4: BSL-2 • SKBR3 Human Cell Line: BSL-2 • MCF7 Human Cell Line: BSL-2 • COS-7 (African green monkey kidney fibroblast-like cell

	line): BSL-2 • U2OS: BSL-2 • OVCA: BSL-2 • TRAMP-C3: BSL-2 • VCaP: BSL-2 • MDA-MB-231 (Human TNBC cell line): BSL-2 • LNCaP: BSL-2 • Immortalized Mouse Epididymal Epithelial Cell Line (DC2): BSL-2 • Primary Animal Cells: BSL-2 • Human Prostate Carcinoma Cancer-Associated Fibroblasts: BSL-2 • Human Primary Immune Cells: BSL-2 • HEK293E Human Cell Line: BSL-2 • Human Primary Epithelial Cells: BSL-2 • PC-3: BSL-2 • TRAMP-C1: BSL-2 • AIT: BSL-2 • HepG2: BSL-2 • T47D: BSL-2
Applicable NIH Guidelines:	• Section III-D-1-a • Section III-E • Section III-D-2-a • Section III-D • Section III-D-3 • Section III-E-1 • Section III-D-3-a

a. **Determination:** Modifications Required

b. **Required modifications:**
Committee Determination: Modifications Required.

Please review and respond to all comments throughout submission.

Please contact BSO with any questions/concerns.

c. **Votes:**

For:	10
Against:	0
Recused:	1
Absent:	6
Abstained:	0

De Novo Review

3. Review of SPROTO202600000012

Title:	Osteocytes Control (BP147)
Investigator:	Charles OBrien
Submission ID:	SPROTO202600000012
Description:	Genetically-modified mice, cell lines, and primary cell cultures will be used to study bone remodeling. The mouse work involves breeding colonies to produce experimental mice and genotyping of the offspring by PCR. In some cases, compounds such as prednisolone or tamoxifen will be administered to the mice. Prednisolone will be administered by s.c. pellet implantation to cause bone loss similar to that seen in humans treated with this drug. Tamoxifen will be administered by i.p. injection to activate reporter genes for lineage-tracing studies (identify which cell types are derived from which progenitors). Analysis of the mice includes harvesting tissues, fixing them with 10% neutral buffered formalin, paraffin-embedding, and sectioning. All staff will wear PPE consisting of lab coat, nitrile gloves, and goggles or safety glasses. The cell culture work will involve culturing mouse and human cell lines in a CO2 incubator and working with the cells in a biological safety cabinet. In some cases, we will suppress gene expression in these cells using short hairpin RNAs or single guide RNAs produced by lentiviral vectors prepared in a packaging cell line.
Agent Containment:	Biological Containment Levels: • Animal Tissue: BSL-2 • E. coli: BSL-2 • Mouse Bone Marrow Macrophages: BSL-2 • HEK293T Human Cell Line: BSL-2
Applicable NIH Guidelines:	• Section III-E-3 • Section III-E-1

a. **Determination:** Modifications Required

b. **Required modifications:**
Committee Determination: Modifications Required.
Please review and respond to all comments throughout submission.
Please contact BSO with any questions/concerns.

c. **Votes:**

For: 11
Against: 0
Recused: 0
Absent: 6
Abstained: 0

Initial Protocol

4. Review of SPROTO202600000003

Title:	Radiation or environmental stress-induced mitochondrial dysfunction and tissue injury
Investigator:	Nukhet Aykin-Burns
Submission ID:	SPROTO202600000003
Description:	Polychlorinated biphenyls (PCBs) are a family of synthetic industrial chemicals that were used widely for various industrial applications in manufacturing and agriculture. Environmental accidents due to PCBs have been reported suggesting it is a health hazard to the exposed population. In Chicago and Philadelphia, environmental contamination and air pollution have been reported suggesting a health hazard situation to US citizens. The overall goal is to better understand the toxicological properties of PCBs in animal models and extrapolate this data to the human situation and to develop meaningful antidotes to neutralize the toxicity. An in vitro cell culture model using mouse embryonic fibroblasts and isolated mitochondria will help to better understand the mechanism of action of PCBs. We will determine PCB toxicity at the organism level and at the molecular level to better understand the processes involved in tissue injury in Sv129 and C57BL6mice. Since mitochondria are implicated in PCB toxicity, this organelle will be studied in isolated condition. We will also determine the role of Sirt3, a protein involved in protecting cells from tissue injury, particularly by protecting the mitochondrial function against various external stressors such as PCBs or ionizing radiation. In vitro projects are to study the role of reactive oxygen species (ROS) in mechanisms of radiation or PCB or radiation induced normal tissue damage by over-expressing mitochondrial and cytosolic antioxidant enzymes via adenoviral infection of mammalian cells (mouse embryonic fibroblasts, primary human skin cells, breast epithelial cells, tonsillar epithelial cells, skin cell line, rat heart myocyte cell line, cancer cell lines) using type 5 adenoviral constructs purchased from Viraquest (acquired by Antibodies Inc). They provide adenoviruses with/or without a reporter gene, and/or

	the gene of your choice, in the E3 region of the backbone Prior to shipping, all viruses are tested using PCR to ensure there are no detectable E1 sequences in the particles that can be from revertants or external E1 contamination. All cell culture work with adenovirus will be conducted in BSL II facilities. In vivo projects will include the use of luciferase/RFP expressing rat liver hepatocellular carcinoma cell line orthotopically placed in the livers of the Sprague Dawley and Buffalo rats. This way when we use any anticancer therapies (such as radiotherapy or chemotherapy [using Doxorubicin and Parthenolide as our chemotherapeutic agents for transarterial chemoembolization]), tumor growth can be monitored via IVIS imaging. There are no gain of function of any gene (other then the reporter genes RFP and luciferase) in these cells.
Agent Containment:	Biological Containment Levels: • Animal Tissue: BSL-2 • Adenovirus: BSL-2 • PC3: BSL-2 • MiaPaCa: BSL-2 • HaCaT: BSL-2 • E0771 Murine Cell Line: BSL-2 • A549: BSL-2 • Clone9: BSL-2 • 3T3: BSL-2 • HepG2: BSL-2 • 4T1 Murine Cell Line: BSL-2 • MCF7 Human Cell Line: BSL-2 • SNU398: BSL-2 • HDF: BSL-2 • HCT116: BSL-2 • SNU438: BSL-2 • MCA-RH-7777: BSL-2 • MB231: BSL-2 • FaDu: BSL-2
Applicable NIH Guidelines:	• Section III-D-4 • Section III-D • Section III-D-3

a. **Determination:** Modifications Required

b. **Required modifications:**
Committee Determination: Modifications Required.
Please review and respond to all comments throughout submission.
Please contact BSO with any questions/concerns.

c. **Votes:**

For:	11
Against:	0
Recused:	0
Absent:	6
Abstained:	0

REVIEW OF OTHER AGENDA ITEMS

- No other new business was discussed