Lundquist Institute for Biomedical Innovation
at Harbor-UCLA Medical Center

Institutional Biosafety Committee
Meeting Minutes
06/10/2025
Zoom Virtual Conference

MEMBERS PRESENT	MEMBERS ABSENT
David Applebaum, M.S.	Rami Doueiri, Ph.D.
Fawzia Bardag-Gorce, Ph.D.	Fang Wang, Ph.D.
Helen Chun, Ph.D.	
Scott Filler, M.D.	
Adrienne Zweifel, Ph.D.	

STAFF PRESENT	STAFF ABSENT
Elizabeth Burrola, CIP	Rosemary Madnick, MBA
Rosa Harmon, CPIA	
Annie Hilo	

1. CALL TO ORDER
The meeting was called to order by Dr. Filler at 3:00 PM.

2. MEETING MINUTES
The minutes of the May 13, 2025 meeting were presented.

A motion was made and seconded to APPROVE the minutes with the minor revision.

Vote: For - 4, Opposed - 0, Absent - 1(F. Bardag-Gorce), Abstained - 0, Recused – 0

3. BUA REVIEW

A. Amendments

1. **IBC #:** IBC 2024-U-CRISPR SF
   PI: Scott Filler, M.D.
   iRIS Ref #: 062301

   Summary: CRISPR/Cas9 will be used to construct a pool of human cells, each of which has a deletion of a different gene. These cells will be screened to identify genes whose products are required for fungi to damage these cells. Results will be verified by using CRISPR/Cas9 to delete specific genes in the human cells.

   CRISPR/Cas9 will also be used to delete genes in the fungi *Candida albicans* and *Aspergillus fumigatus* to identify genes that are required for virulence.

Inserts: Brunello sgRNA library, pFC331, pFC334, pVG2.2hph, p402, pNAT, pV1093

Vectors: pLenti-Cas9-Blast vector, pLentiGuide-Puro plasmid, psPAX2, pCMV-VSVG, Brunello human whole genome sgRNA library, pLentiCRISPRv2-blast plasmid, pV1039, pFc334, Pfc331

Pathogens: *Candida albicans, Aspergillus fumigatus, candidalysin, Candida glabrata*

Risk Assessment: Risk Group 2.

Containment: ABSL-2.

Training: Training has been verified by the Research Compliance Office Staff and EHS.

NIH Guidelines: Section III-D.

Conflicts: Dr. Filler was placed in a waiting room during the discussion and vote on this BUA.

Motion: A motion was made and seconded to REQUIRE MODIFICATIONS TO SECURE APPROVAL of the BUA.

Modifications Required to BUA:

1. Section 5.0 - Description of Experiment(s)/Research
   - For *C. glabrata*, the PI is to include the nature of the mutations being created using CRISPR (point mutations, deletions, etc) and how these mutations are expected to affect treatment of a laboratory-acquired infection.
   - For *Aspergillus,* the PI is to include the nature of the mutations being created sing CRISPR (point mutations, deletions, etc) and how these mutations are expected to affect treatment of a laboratory-acquired infection.

2. Section 10.0 - Encoded Recombinant or Synthetic DNA Sequences
   - The PI is to add an entry for the fluorescent reporters being used. Multiple entries are not necessary; all can be added under one entry (e.g., GFP, RFP, BFP).

3. Related to the previous exempt determination of #31788-01 IBC entitled, "Aneuploidy and Acquired Antifungal Drug Resistance in Candida species" and the possible report to the Office of Science Policy
   - Has genetically modified *C. glabrata* been used? If so, was it described under another BUA (prior to the approval of IBC 2025-31788-01)?

Vote: For - 4, Opposed - 0, Absent - 0, Abstained – 0, Recused – 1 (Filler)

2. **IBC #:** IBC2025-U-C.auris SS
PI: Shakti Singh, Ph.D.
iRIS Ref #: 062297

Summary: Experiments aim to identify cell surface proteins of *Candida auris* that can be used as vaccine antigens.

Inserts: Nourseothricin (NTC) N-acetyl transferase (NAT), *Candida auris* Hyr1p like (HIL) proteins, *Candida auris* 5 Cell surface proteins and 1 control (Als3) protein

Vectors: pNAT, pUC19, pYEX-S1

Pathogens: *Candida albicans, Candida auris*

Risk Assessment: Risk Group 1. Risk Group 2.

Containment: ABSL-1. ABSL-2.

Training: Training has been verified by the Research Compliance Office Staff and EHS.

NIH Guidelines: Section III-D, Section III-E, Section III-F.

Conflicts: NA

Motion: A motion was made and seconded to REQUIRE MODIFICATIONS TO SECURE APPROVAL of the BUA.

Modifications Required to BUA:

1. Section 5.0 - Description of Experiment(s)/Research

- Functional characterization of cell wall components:
  a) How were the *C. auris* mutants created? If clean deletions, the PI is to indicate how this was verified.
  b) The PI is to clarify the plastic abiotic surface used to test adhesion.
  c) The PI is to define the TIME acronym the first time it is used.
  d) Is the micafungin a clinically relevant antibiotic? If so, the PI is to discuss how this treatment may affect the ability to treat a laboratory-acquired infection.

- Adhesion to host cell surface:
  a) The PI is to describe how the catheter adhesion experiments are performed (size of catheter pieces, primary/secondary containment of the *C. auris*-covered plastic, etc). If the examination procedure is different, the PI is to provide an explanation. If this is explained in 2.iii, the PI is to add a sentence to notify the reader that this information is in a different section.

b) For the complemented strains, the PI is to confirm that the complementation is performed the same as previously approved.

- Ability the damage host vascular endothelial cells:
  a) Is the invasion experiment performed in 96-well plate format? If yes, the PI is to clarify how the plates are sealed and how it is done. If the plates are not sealed, the PI is to clarify how the lab will ensure containment of the samples (lidded).
  b) Is the colorimetric assay performed in 96-well plate format? If yes, the PI is to clarify if the plates are sealed and how, and if the plates need to be sealed when using the plate reader.

- Effect on cell wall/membrane integrity:
  a) The PI is to confirm that growth defects will be assessed by comparing the growth curves of the various strains. If morphology is used, the PI is to describe how this is done.

- Virulence in vivo:
  a) J. The PI is to confirm that the details of the in vivo *C. auris* work is the same as what's previously approved.

2. Section 12.0 –Research with Eukaryotic Hosts (including Fungi)
   - PI is to include the TIME and A549 cells.

Vote: For - 5, Opposed - 0, Absent - 0, Abstained – 0, Recused – 0

3. **IBC #:** IBC-U-S.pneum NJ
PI: Nicholas Jendzjowsky, Ph.D.
iRIS Ref #: 062386

Summary: Amendment to add IACUC protocol #2025-33188-01 to this umbrella IBC protocol. Resiniferatoxin is also being added. Toxin is dissolved in DMSO and tween 80, then further diluted in PBS. If any is left over, it is further diluted in 70% ethanol and disposed of in chemical waste.

Inserts: AAV DREADD vectors

Vectors: Diptheria Toxin, pAAV-hSyn-Cre-P2A-dTomato, AAV DREADD

Pathogens: *Streptococcus pneumoniae, Staphylococcus aureus*, Diphtheria Toxin, Resiniferatoxin

Risk Assessment: Risk Group 2.

Containment: ABSL-2.

Training: Training has been verified by the Research Compliance Office Staff and EHS.

NIH Guidelines: Section III-E

Conflicts: NA

Motion: A motion was made and seconded to REQUIRE MODIFICATIONS TO SECURE APPROVAL of the BUA.

Modifications Required to BUA:

1. Section 4.0 – Background Information
   - The PI is to ensure all personnel listed in 4.4 have updated Biosafety training and revise this section to reflect the most current training date.

2. Section 5.0 - Description of Procedure(s)/Research
   - Experimental Procedures – The PI is to include the use of resiniferatoxin in this section (more than referencing its use in the amendment).
   - Assessment – The PI is to reference the LD50 of resiniferatoxin and how this amount corresponds to the amounts used in these experiments.
   - Assessment – The PI is to explicitly state what PPE is being used when handling.
   - Emergency Procedures – The PI is to discuss exposure response procedures for resiniferatoxin explicitly as well as symptoms of exposure in a lab setting (sharps or splash), expected time of onset (if known), and the outcome of exposure.
   - Emergency Procedures – The PI is to post Poison Control Center phone number in areas where toxins are used and have the SDS printed out so an exposed individual can take it along when seeking medical treatment.

3. Section 6.0 - Risk Assessment
   - The PI is to select the applicable section of the NIH Guidelines.

4. Section 8.0 - Infectious Agents/Toxins
   - The lab's IACUC protocol states "Resiniferatoxin, a capsaicin analogue, will be injected in three escalating doses on 3 consecutive days (30ug/kg, 70ug/kg, and 100ug/kg) subcutaneously." but the concentrations written in the BUA for this entry indicate mg/kg amounts. The PI is to address this discrepancy.
   - The PI is to clarify if the toxin is dissolved in 70% ethanol, used, and then disposed of as chemical liquid waste.

5. Section 9.0 - Vectors for Recombinant or Synthetic DNA
   - The PI is to confirm that diphtheria toxin should be included in this section (vector). If yes, the PI is to provide details to clarify its use.

Vote: For - 5, Opposed - 0, Absent - 0, Abstained – 0, Recused – 0

B. Continuing Reviews

1. **IBC #:** IBC 32595-01
   PI: Virender Rehan, M.D.
   iRIS Ref #: 062341

Summary: To determine the mechanism underlying perinatal e-cig vaping-induced effects on offspring cardiac phenotype are mediated by post-transcriptional effects of elevated cardiac MIAT on extracellular matrix deposition, the experiment will overexpress MIAT expression via lentivirus transduction in cultured primary rodent cardiac fibroblasts followed by treatment with vehicle PG/VG (2% or 4%), nicotine, menthol, tobacco, or nicotine plus menthol or tobacco at optimal doses based on dose and time-course experiments.

Inserts: MIAT

Vectors: psPAX2, which is lentivirus packaging plasmid, pMD2.G, pMA3211

Pathogens: NA

Risk Assessment: Risk Group 2.

Containment: ABSL-2

Training: Training has been verified by the Research Compliance Office Staff and EHS.

NIH Guidelines: Section III-D

Conflicts: NA

Motion: A motion was made and seconded to REQUIRE MODIFICATIONS TO SECURE APPROVAL of the BUA.

Modifications Required to BUA:

1. Section 4.0 - Background Information
   - For item 4.4, the PI is to ensure all study personnel are listed and have up to date Biosafety training. The PI is to revise the section to reflect all study personnel's most current training dates.

2. Section 5.0 - Description of Procedure(s)/Research
   - Lay Description – The PI is to define PG/VG acronym the first time it is used.

- Assessment – The PI is to update the sentence "Therefore, there is no potential risk to the environment and any employees working on this protocol." to state that risk is unlikely or low instead of no risk.
- Emergency Procedures – The PI is to use 10% bleach for spills instead of 70% ethanol.

3. Section 6.0 - Risk Assessment
   - The PI is to update the BSC certification date.
   - The PI is to update the vaccination section to reflect that Hepatitis B vaccination will be offered to staff since human established cell lines (HEK293) are used.

4. Section 9.0 - Vectors for Recombinant or Synthetic DNA
   - The PI is to add the actual packaged lentiviral vector to this section in addition to the packaging plasmids.
   - The PI is to provide a more thorough assessment of the hazardous potential for the lentivirus, including the risk of insertional mutagenesis.
   - The PI is to confirm that these plasmids encode a reporter/tracker and not various regions needed for the formation of lentiviral vector. In general, provide more information regarding the potential hazards of the genes these plasmids encode, If these are all packaging plasmids for lentivirus, the PI is to discuss that all three plasmids would need to be present to get a functional, replication-incompetent infectious particle.

5. Section 10.0 - Encoded Recombinant or Synthetic DNA Sequences
   - Sections 5.0 and 9.0 reference pHIV-luciferase and reporter/trackers, respectively, but no reporter/tracker is included in this section. The PI is to address this discrepancy.
   - The PI is to provide a more thorough assessment of the hazardous potential for the MIAT.
   - The PI is to discuss what would be the likely outcome should an accidental exposure occur.
   - Is MIAT considered a non-coding RNA? If yes, the PI is to include a description under the "Describe potential hazards" section.

6. Section 12.0 - Research with Eukaryotic Hosts

   - The Lay Description in Section 5.0 mentions transducing primary rodent cardiac fibroblasts using lentivirus, but these cells are not listed in this section as a host. The PI is to address this discrepancy.

Vote: For - 5, Opposed - 0, Absent - 0, Abstained - 0, Recused - 0

2. **IBC #:** 22871-01
   PI: Ke Zhang, Ph.D.

iRIS Ref #: 062278

Summary: The goal of this project is to develop and eventually commercialize a novel point-of-care test (POCT) capable of rapidly and highly accurately detecting the allergic IgE responsible for inducing allergic asthmas and food allergies.

Inserts: NA

Vectors: NA

Pathogens: NA

Risk Assessment: Risk Group 1

Containment: ABSL-1

Training: Training has been verified by the Research Compliance Office Staff and EHS.

NIH Guidelines: Section III-F

Conflicts: NA

Motion: A motion was made and seconded to EXEMPT the BUA.

Vote: For - 5, Opposed - 0, Absent - 0, Abstained - 0, Recused - 0

4. OTHER BUSINESS

a. Safety Committee Report (David Applebaum) Accident/Spills
Mr. Applebaum reported two non-exposure incidents that occurred in April that are not reportable to the IBC.

b. Draft Biological Incident Report Form – *C. auris* incident
The report was distributed to Committee Members via email for review. Dr. Zweifel raised concerns about the wording in certain sections, particularly those related to medical treatment requirements and privacy issues. Also, the exposed individual has still not been added to the BUA for training verification. Mr. Applebaum will follow up with the Principal Investigator and revise the report before it is finalized.

The Office of Research Compliance will notify investigators of the TLI IBC requirement to list all individuals handling recombinant or synthetic nucleic acid molecules or infectious agents in their BUA.

c. Draft SOP - Biological Exposure Investigation
The Committee Members reviewed the SOP via email and did not have any questions or

concerns. The document can be finalized and implemented for future use.

d. Communication from Dr. Kathryn Harris dated June 2, 2025

e. Meeting Minutes Template and Points to Consider from NIH
The Committee reviewed the NIH template for meeting minutes, which outlines requirements for documenting project details such as animal models, risk assessments, and project overviews. After discussion, the Committee agreed to continue using the current minutes format and consider future revisions based on how other institutions document their minutes once those become available. Additionally, the Committee discussed implementing a Designated Member Review (DMR) process for non-recombinant or synthetic nucleic acid molecules.

f. Lab Coat Guidance - verbal update
Tabled for the next meeting due to time constraints.

g. Self-Assessment Tool for Institutional Biosafety Committees and Programs of Oversight of Recombinant or Synthetic Nucleic Acid Research
Tabled for the next meeting due to time constraints.

With no further business, the meeting adjourned at 4:17 PM

Respectfully submitted,

Signed by:
Scott Filler
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Scott Filler, M.D.
Chair, Institutional Biosafety Committee

cc: Research Committee Agenda