INSTITUTIONAL BIOSAFETY COMMITTEE

DRAFT MEETING MINUTES

The University of Texas at San Antonio
Wednesday November 6th, 2024
Microsoft Teams Meeting

Minutes Prepared by: Mohammad Siddiqur Rahman Khan

MEMBERS PRESENT (need 7 for quorum)

☒Dr. Jose Lopez-Ribot, Chair, Voting

☐Dr. Janakiram Seshu, Vice-Chair, Voting

☒Mr. Mohammad Rahman Khan *ex officio*, Biosafety Officer, Laboratory Safety

☒Dr. JiehJuen Yu, Voting

☒Dr. Karl Klose, Voting

☐Dr. Marcel Perret-Gentil, Voting

☒Dr. Jurgen Engelberth, Voting, Plant Specialist

☒Dr. Astrid Cardona, Voting

☐Mr. Rich Garza, Hazardous Waste Manager with vote

☒Ms. Yolanda Acosta, *ex officio* Scientific Alternate with vote

☐Dr. Ana Vallor, Non-Affiliated, Voting

☐Dr. Shannan Hall-Ursone, Non-Affiliated, Voting

☒Dr. Soo Chan Lee, Voting (Scientific Alternate)

☒Mr. Anthony Vallejo, *ex officio*, Director of Laboratory Safety, (Scientific Alternate)

GUESTS

☒Mrs. Rachel Davis, UTSA Scholarly Resources Librarian

☐Ms. Jolyn Demarest, Occupational Health Program non-voting

☐ Dr. Hamid Badali, Voting, (Scientific Alternate)

☒Ms. Kimberly Moore, Laboratory Safety Specialist, (non-voting)

START: 09:02am **09 voting members present**

ADJOURN: 09:23 am

I. REVIEW OF THE MINUTES OF THE PREVIOUS MEETING

Minutes of Meeting held on October 2nd, 2024
Score 1: Approved
Committee Decision: 09 in favor, **0** opposed, and **0** abstention

II. REVIEW OF APPLICATIONS

In reviewing each protocol discussed below, the committee gave consideration to the following specific concerns, as appropriate:

a. Adequacy of containment equipment / procedures / facilities to be implemented
b. Agent characteristics (e.g., virulence, pathogenicity, environmental stability)
c. Types of manipulations planned
d. Source(s) of the inserted DNA sequences (e.g., species)
e. Nature of the inserted DNA sequences (e.g., structural gene, oncogene)
f. Host(s) and vector(s) to be used
g. Whether or not an attempt will be made to obtain expression of a foreign gene, and if so, the protein that will be produced.

IBC# 133: AMINO ACID INNOVATIONS: ENZYMES, BIOSYNTHESIS, AND REDOX COFACTORS.

Using recombinantly expressed wild-type or engineered variant proteins, we study the structure-functional relationship of enzymes involved in 1) Amino acid metabolism (tryptophan, tyrosine, and cysteine), 2) Amino acid crosslink-derived protein cofactors, and 3) Amino acid oxidations among over 500 natural amino acids for natural product biosynthesis. Our research aims to gain insights into the fundamental biochemistry of amino acid metabolism and how enzymes play a crucial role in these processes.
Microbial Agents, Infectious Agents or Toxins
Biosafety Level
BSL 1
Risk Group
1
Section of the NIH Guidelines (if applicable)
Section III-F-1 Section III-F-2 Section III-F-3 Section III-F-4 Section III-F-5 Section III-F-6 Section III-F-7 Section III-F-8

Score: 2
Committee Decision: 09 in favor, **0** opposed, and **0** abstention
Comments:

1. Complete the forms for viral vectors and pathogen registration for organisms and any vectors you want to use in your study.
2. provide the plasmid name that you intend to utilize in your research.

IBC# 08: CHEMOKINES AND CNS INFLAMMATION

The main goal of the study is to understand the mechanisms by which chemokines and other immune factors regulate inflammation in the central nervous system. We are particularly interested in microglia, the resident brain macrophages, and the mechanisms that control their activation. One of the chemokines of interest in my research is fractalkine. In humans, different forms of the fractalkine receptor have been identified and individuals expressing a variant/mutant version of the receptor have an increased risk of advancing to secondary progressive multiple sclerosis, which correlates in general to enhanced demyelination and disability. Due to this association, our goal is to determine the role of the normal and variant receptors in microglia function. Using mouse models of brain inflammation (experimental autoimmune encephalomyelitis and diabetic retinopathy) and de-identified human post-mortem tissues, our objective is to understand how dysregulated microglial responses lead to neuronal damage and define alternative strategies to ameliorate brain inflammation. With these models, other goals include: - To induce expression of fractalkine in its soluble or membrane-bound form and determine its effects in microglia-neuronal function. - To deplete specific cells utilizing diphtheria toxin to induce death of resident microglia in brain and retinal tissues in CX3CR1-DTR transgenic mice. - To generate iPSC derived microglial cells and determine the role of human CX3CR1 variant receptors in microglial function and neuronal damage.
Microbial Agents, Infectious Agents or Toxins
Diphtheria toxin and Pertussis toxin
Biosafety Level
BSL 2
Risk Group
1
Section of the NIH Guidelines (if applicable)
Section III-D-4 Section III-D-4-a Section III-E-3

Score: 1
Committee Decision: 09 in favor, **0** opposed, and **0** abstention

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IBC# 130: REPROGRAMMING SOMATIC CELLS INTO PLURIPOTENT STEM CELLS.

We receive primary cells from humans and non-human primates (generally blood or skin samples) and reprogram them into induced pluripotent stem cells using a sendai virus system. These are cultured for several passages and then banked and subjected to quality control analysis before use in the lab or distribution to other labs.
Microbial Agents, Infectious Agents or Toxins
Biosafety Level

BSL 2
Risk Group
1
Section of the NIH Guidelines (if applicable)
Section III-D-3 Section III-D-4 Section III-D-4-a

Score: 1
Committee Decision: 09 in favor, **0** opposed, and **0** abstention

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IBC# 131: GENOME EDITING OF PLURIPOTENT STEM CELLS USING CRISPR/CAS9 .

We use CRISPR/Cas9 to edit the genome of human and non-human primate pluripotent stem cells. These edits include the insertion of fluorescent reporter or antibiotic resistant genes behind genes of interest. Some current genes are ARX, TFAP2C, DDX4, ACR and LRRK2.
Microbial Agents, Infectious Agents or Toxins
Biosafety Level
BSL 2
Risk Group
1
Section of the NIH Guidelines (if applicable)
Section III-D-3 Section III-D-4 Section III-D-4-a

Score: 1
Committee Decision: 09 in favor, **0** opposed, and **0** abstention

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III. REVIEW OF AMENDMENTS

S/N	Lab Name	PI	Amendments for	Reviewer comments	Decision

IV. ADMINISTRATIVE APPROVAL

S/N	Lab Name	PI	Amendments for	Reviewer comments	Decision

V. EXPIRED / CLOSED PROTOCOLS

None at this time

VI. NEW BUSINESS

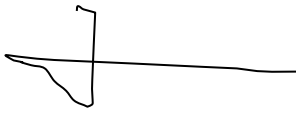
A. Update from BSO.

- **MBT BSL3 shutdown**

B. Open Business:

VII. ADJOURN

The meeting was adjourned at 09:23 AM. Next month's meeting will take place on Wednesday, December 4th 2024 at 9.00 AM via Teams.



Jose Lopez-Ribot, IBC Chair