INSTITUTIONAL BIOSAFETY COMMITTEE

DRAFT MEETING MINUTES

The University of Texas at San Antonio
Wednesday October 2nd, 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: 09:02 am **08 voting members present**

ADJOURN: 09:49 am

I. REVIEW OF THE MINUTES OF THE PREVIOUS MEETING

Minutes of Meeting held on September 4th, 2024
Score 1: Approved
Committee Decision: 08 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# 127: STRUCTURE AND FUNCTION OF ION CHANNELS.

Ion channels play several roles in physiology, such as in the nerve conduction, heart beating, feeling of the pain, touch, thermosensation, etc. My laboratory aims to identify basic protein moieties that serve as sensors for different physical stimuli and their consequences in cellular excitability. I will use model ion channels to study the mechanosensation, thermosensation and voltage-dependece. The model proteins we use are mammalian cardiac muscle sodium (NaV1.5) and potassium (hERG)channels, Shaker potassium channels (Kv1.X), the rat thermoreceptors TRPV1 (Heat receptor) and TRPM8 (cold recepctor), the bacterial mechanosensitive ion channel large (MscL) and small (MscS) conductance, and the mammalian mechanosensitive ion channel (Piezo1). These channels are going to be expressed in Xenopus laevis oocytes and/or in HEK (human embryonic kidney cells) 293. The oocytes will be obtained by purchasing the ovaries lobes from Xenopus1 and the HEK293 from ATCC (American Type Culture Collection). The laboratory has a stock of recombinant DNAs (rDNAs) of various animal and bacterial origins that code for these various ion channels. Most of these rDNAs have been obtained from other investigators. For oocytes the lab will use RNA injection and for HEK293 DNA transfection for protein expression and electrophysiological experiments. The protein sequences will be modified using standard molecular biology techniques and sequenced. This procedure is useful to test the role of specific region of the protein. The lab will use voltage-clamp techniques to record ionic and gating currents (charge movement within the protein in response to a change in trans-membrane voltage), as well as using acute temperature steps to obtain information about the energy landscape of these channels, which will also be used to explore the location of the temperature sensor in the thermoreceptors. The lab has the ability to apply tension in the cell membrane, which will be explore to understand the mechanism of mechanosensation in ion channels canonically and non-canonically classified as mechanosentive.
Microbial Agents, Infectious Agents or Toxins

Tetrodotoxin, Agitoxin type II
Biosafety Level
BSL 2
Risk Group
2
Section of the NIH Guidelines (if applicable)
Section III-F-8

Score: 2
Committee Decision: **08** in favor, **0** opposed, and **0** abstention

IBC# 128: DECIPHERING MECHANISM(S) OF KLRG1+ILC2S MEDIATING RSV SEVERITY IN INFANTS

This research project seeks to understand how a common infant lung infection, Respiratory Syncytial Virus (RSV), influences long-term respiratory health. Specifically, we are exploring the role of a particular immune cell (KLRG1+ILC2) that appears to be influential in determining the severity of RSV and subsequent respiratory issues. By studying these cells in both human infants and animal models, we aim to decipher how early-life RSV infections might set the stage for more severe lung conditions later in life. The insights grained could forge new therapeutic strategies, reducing the risk of chronic respiratory diseases stemming from severe infantile RSV infections and bolstering public health. The potential ripple effects promise to alleviate societal and economic impacts of such diseases, safeguarding future generations' health.
Microbial Agents, Infectious Agents or Toxins
Respiratory syncytial virus (RSV)
Biosafety Level
BSL 2
Risk Group
1
Section of the NIH Guidelines (if applicable)

Score: 1
Committee Decision: **08** in favor, **0** opposed, and **0** abstention

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
1	[redacted]	[redacted]	IBC#34: [redacted] general assays IBC# 98: [redacted]	Added cell lines.	Admin Approved
2	[redacted]	[redacted]	IBC# 115: Behavioral Biology of Zoo Animals and Wildlife [redacted] (Students will learn methodological techniques and	New protocol	Admin Approved

			conduct original research in the fields of bioacoustics and animal behavior, with additional focus on the application of bioinformatics approaches such as machine learning to these fields.)		
3	[redacted]	[redacted]	IBC# 101: Biomechanics of Human Cadaveric Tissue (The purpose of these studies is to address the mechanical and biomechanical factors influencing hard and soft tissue integrity and performance, as well as non-invasive tissue assessment and modeling using medical imaging.)	Renewal	Admin Approved

V. EXPIRED / CLOSED PROTOCOLS

None at this time

VI. NEW BUSINESS

A. Update from BSO.

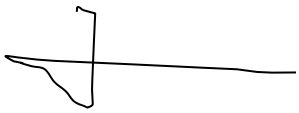
- **BSB BSL3 shutdown**
- **Lab close out SOP**
- **Autoclave**

B. Mass Spectrometry and Proteomics Core lab

C. Open Business:

VII. ADJOURN

The meeting was adjourned at 09:49 AM. Next month's meeting will take place on Wednesday, November 6th 2024 at 9.00 AM via Teams.



Jose Lopez-Ribot, IBC Chair