CHAPMAN UNIVERSITY | Environmental Health and Safety

Institutional Biosafety Committee
Meeting Agenda
Monday, September 8, 2025
Time: 1:00 pm
Zoom and Keck-149

Quorum = 6

Present	**Department/IBC Affiliation**
Rosalee Hellberg, Ph.D.**, Chair**	Associate Professor, Food Science, Schmid College of Science and Technology
Chuck Sohaskey, Ph.D.	EH&S / Biosafety Officer
Marco Bisoffi, Ph.D.	Associate Program Director of Chemistry and Biochemistry, Associate Professor of Biochemistry and Molecular Biology
Karen Swift, B.S.	Manager, EH&S, Chemical Hygiene Officer
Jason Yamaki, Pharm.D., Ph.D.	Assistant Professor, School of Pharmacy
Bruce Webster, Ph.D.	Community 1
Ashley Whelpley	Senior Lab Technician
Hagop Atamian, Ph.D.	Assistant Professor of Biology, Schmid
Trinka Adamson	IACUC veterinarian
Kimberly Muth	Vivarium manager
Excused	
Miao Zhang, Ph.D.	Assistant Professor, School of Pharmacy
Gio Bravo	Vivarium supervisor
Bill Peacher MS CLS	Community 2

I. **MEMBERSHIP ISSUES**
None

II. **REVIEW OF MINUTES** of June 9, 2025
Approved unanimously

III. **IBC CHAIRPERSON REPORT**
No report

IV. **BIOSAFETY OFFICER REPORT**
2023-9-1 Nauli, Surya. Masimo: The use of nanoparticles in research and development – CLOSED

2024-9-4 Muth, Kimberly. *E. faecalis* induced Anastomosis leak model in C57BL/6 Mice - CLOSED

1. **Biosecurity issues**
   Biosecurity refers to the measures and practices used to prevent the introduction and spread of diseases among animals, people, and the environment. This issue has been considered at all previous meeting but will be documented in the minutes now.

2. **Hepatitis B vaccine**
   Any researcher who might be exposed to blood or human cells during lab work is considered at risk for contracting hepatitis B. Employees of the university will be offered the vaccine from Concentra or their personal physician. If they choose not to receive the vaccine at the time it is offered, they will be required to sign a declination form. However, they will be informed that the vaccine remains available to them at any time in the future should they change their mind.

V. INITIAL PROJECT REVIEWS

Trinka joined the meeting at this point.

2025-9-1 Sharma, Ajay. To evaluate the ocular safety and trans corneal penetration of the test compound Tarsus NCE1.

- *Sharma (BUA) - To evaluate the ocular safety and trans corneal penetration of the test compound Tarsus NCE1.*

This project is designed to test how safe a compound, Tarsus NCE-1 is to eye tissue, and whether it can pass through the outer layer of the cornea. Two different human eye cells, cornea and conjunctival epithelial cells will be grown and then exposed to Tarsus NCE-1 and necrosis/apoptosis will be measured. Then corneal permeation will be measured with donor human corneas. Two rabbit cell lines might also be tested. Because the human cells are all RG2 it is a BSL-2 project. There is no rDNA work and no biosecurity risks. But they will be offered the hepatitis vaccine. The project was approved with the following stipulations:

1. Question 2 – Please expand on question 2. Work with human cells is never without risk as they can carry bloodborne pathogens.
2. Table 8 – The risk group of each cells type is 2.
3. Question 22 – Please add the location of the work
4. Question 29 and 37 should always be yes.
5. Question 39 should be yes and have additional information.
6. Question 43 should be yes for lab coats
7. Question 49 – 51 about training should be yes. All training must be completed before any work can begin.
8. Question 66 – Training dates must be provided.

VI. CONTINUING PROJECT REVIEWS

2024-9-1 Kaur, Kamaljit. Uptake and toxicity studies of synthetic drug (doxorubicin) conjugates using breast cancer cells and normal (non-cancerous) cells

- *Kaur (BUA) - Uptake and toxicity studies of synthetic drug (doxorubicin) conjugates using breast cancer cells and normal (non-cancerous) cells*

The purpose is to evaluate the uptake and toxicity of doxorubicin conjugates with normal and cancerous human cells. Normal human cells, several breast cancer cells lines and one umbilical cell line will be grown and treated with standard or conjugated doxycycline. FACS will be used to determine how much drug entered the cells, and MTT to see how many survived. The biggest risk is from accidental exposure to the drug or the cell lines. Because there are human cells it is a BSL-2 project. There is no rDNA work and no biosecurity risks. But they should be offered the hepatitis vaccine. The committee voted to approve this project unanimously.

2023-3-1 Lopes, Patricia. The effects of high disease risk on uninfected animals

- *Lopes (BUA) - The effects of high disease risk on uninfected animals*
- *Lopes Exposure Control Plan – 2023*

The goal of this project is to understand how healthy birds are affected by being around sick birds. The hypothesis is that experiencing disease risk will activate the immune response of uninfected birds leading to faster recovery when infected, and a change in reproductive investment. The pathogen is *Mycoplasma gallisepticum,* and the domestic canary is the animal model. Birds will be singly housed in cages and inoculated in their palpebral conjunctiva. The pathogen load will be determined from DNA extracted from eye swabs for both infected and non-infected birds but there will also be some culturing. The transcriptome in uninfected birds will be compared between those observing healthy vs infected birds. Then, the birds from the two groups — each having observed a different type of bird — will be infected with *Mycoplasma gallisepticum* and the infection followed. The reproductive parameters of the two bird groups will be studied. Because *M gallisepticum* is not a human pathogen the main risk is to the environment by birds escaping or infecting wild birds. *M. gallisepticum* is BSL-2 so this is an RG-2 project. There is no rDNA work but this is a possible biosecurity risk which was discussed by the committee. The committee unanimously approved this with the following stipulations:

1. Page 1 – the BUA (2023-3-1) be added.
2. The Exposure Control Plan will need to be updated before work starts.

2023-9-2 Sun, Yang. Screening APE/Ref-1 and nNOS inhibitors for the treatment of human melanoma

- *Yang (BUA) - Screening APE/Ref-1 and nNOS inhibitors for the treatment of human melanoma*

The purpose is to develop novel APE/Ref-1 and nNOS inhibitors for use in human cutaneous melanoma disease. These chemical inhibitors will be provided by collaborators from both Chapman and other locations and will be first used in cell culture. DNA, RNA and protein samples will be analyzed during exposure to determine the mechanism of action of inhibition. Human and/or mouse melanoma cells will be injected into normal and nude mice and the effect of these inhibitors on melanoma growth and invasion will be determined. These genes will also be inhibited by siRNA and shRNA in cell culture and mice. A CRISPR-Cas9 system will be used to target APE/Ref-1 and nNOS. NIH classification III-F. Because of the

human cells this is a BSL-2 project. There are no major biosecurity risks. The committee voted to approve this project unanimously.

2023-9-2 Zhang, Miao. Regulation of SK channels, polycystin channels, taste receptors, and Ca2+ pump

- *Zhang (BUA) - Regulation of SK and polycystin channels by Ca2+*

The genes for human SK, polycystic-2 channels and Sarcoendoplasmic Reticulum Calcium ATPase (SERCA) pump will be cloned into *E. coli*. These Bacmids will be transfected into Sf9 insect cells to produce baculovirus. These baculovirus will be used to transduce human HEK293 cells to produce the channel proteins. The cells will then be harvested and the protein extracted and purified. This work involves rDNA work and is classified as III-D. Because of the human cells and baculovirus it is a BSL-2 project. There are no biosecurity issues. The committee unanimously voted to approve the project with the following stipulations:

1. Page 1 – the BUA (2023-9-1) be added.
2. Question 2 - Please expand on question 2. No risk was identified.
3. Question 36 – This question refers to shipping from Chapman and should probably be no.

2024-9-3 Yamaki, Jason and Elshahawi, Sherif. Developing Drug-Leads to Inhibit *Clostridioides difficile* Bacterial Infection

- *Yamaki (BUA) - Developing Drug-Leads to Inhibit difficile Bacterial Infection*
- *Yamaki C.diff Exposure Plan 2024*

Two derivatives of daptomycin have been developed and will be tested for their activity against *Clostridioides difficile* in mice. The mice will first be exposed to a cocktail of 5 antibiotics, kanamycin, gentamicin, colistin, metronidazole, and vancomycin in their drinking water followed 4 days later with an intraperitoneal injection of clindamycin. *C. difficile* will be grown in the lab and transported to the vivarium and the mice will be infected orally with *C. difficile* spores. After that the mice will be treated with vancomycin, or the two test daptomycin analogs. Stool samples will be collected and transported back to the lab to be plated for growth over the course of the experiment. One strain used will be metronidazole resistant. *C. difficile* is Risk Group 2, and no rDNA work is proposed. This is classified as BSL-2. The main biosecurity focus is on protecting lab workers. Jason provided a brief description of the work and answered questions. He then left the meeting so the committee could further discuss and vote. The committee unanimously voted to approve the project with the stipulation that the room number in question 23 be corrected and Table 66 be updated.

VII. OTHER BUSINESS

VIII. NEXT MEETING

Next meeting is scheduled for December 8, 2025, at the Rinker campus