CHAPMAN UNIVERSITY | Environmental Health and Safety

Institutional Biosafety Committee
Meeting Minutes
Date: **Monday, June 9, 2025**
Time: 12:00 pm
Location: Teams online RK-94 130

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.	EHS / Biosafety Officer
Karen Swift, B.S.	Manager, EHS, 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
Trinka Adamson	IACUC veterinarian
Kimberly Muth	Vivarium manager
Gio Bravo	Vivarium supervisor
Excused	
Miao Zhang, Ph.D.	Assistant Professor, School of Pharmacy
Marco Bisoffi, Ph.D.	Associate Program Director of Chemistry and Biochemistry, Associate Professor of Biochemistry and Molecular Biology
Bill Peacher MS CLS	Community 2
Hagop Atamian, Ph.D.	Assistant Professor of Biology, Schmid

I. MEMBERSHIP ISSUES

Gio Bravo will serve as an alternate member for Kimberly. He attended this meeting.

II. REVIEW OF MINUTES of March 3, 2025

Approved with no corrections.

III. IBC CHAIRPERSON REPORT

Nothing to report

IV. BIOSAFETY OFFICER REPORT

Elshahawi, Sherif (2025-3-1) Developing drugs using chemoenzymatic methods. Added 2 new strains

Montazeri, Hamid (2023-12-2) RNA interference against Respiratory Syncytial Virus (RSV). Removed a student and added another.

To meet the transparency aims of the NIH Guidelines, on June 1, 2025, we will now post the minutes from the IBC meetings on the Chapman website. We will also post the roster of the IBC including the names and roles of the people on the committee with the contact information for the IBC Chair, Biological Safety Officer, and IBC Contact.

The registration of the IBC with NIH was approved.

V. INITIAL PROJECT REVIEWS

2025-6-1 Totonchy, Jennifer. KSHV infection in human tonsil

- *Totonchy (BUA) - KSHV infection in human tonsil*
- *Totonchy KSHV Virion Prep protocol.2025*
- *Totonchy Laboratory Bloodborne Pathogen Exposure Control Plan.2025*
- *Totonchy Gene list.2025*

This research uses human cells derived from tonsil tissue to examine the processes of early Kaposi's sarcoma herpesvirus infection (KSHV). They isolate the primary cells from them using irradiated mouse L cells as feeder cells. Human and viral genes are cloned into *E. coli*. They are transfected into human cells with adenoviral and lentiviral vectors which are all replication defective. A major proposal is to create mutant forms of KSHV by 2 different approaches. One is the KSHV will be cloned as a Bacterial Artificial Chromosome in *E coli*, generate mutations and transfect human cell lines to produce infectious virus particles. The other is to use CRISPR-Cas9 to mutagenize viral genomes in human cells. Both WT KSHV and defective vectors are used, and this is thus classified as III-D and requires IBC approval before initiation. There are primary human cells and human and mice cell lines. Project is classified as RG-2. The biggest risk is FACS analysis with virus. There was a discussion of the FAC procedure, its location in the BSC and the description of sanitation. KSHV is an oncogenic herpesvirus so any gene of interest has the potential to be an oncogene. KSHV is mostly a problem in people with a weakened immune system so the risk of infection is low. The project was approved unanimously with the following stipulations:

1. Page 1 – This is a new project not a renewal.
2. Questions 16 needs answers.
3. Question 18 – in question 18c you say that any of your genes of interest could be oncogenic so question 18 should be yes.
4. Question 39 – check the box for the outside company for waste pickup.
5. Question 31 – because cells are taken to the vivarium this should be checked yes.

2025-6-2 Miklavcic, John. Extracellular Vesicles from Enterocytes are Mediators of Inflammation in IBD

- *Miklavcic (BUA) Extracellular Vesicles from Enterocytes are Mediators of Inflammation in IBD*

The central hypothesis is that extracellular vesicles (EVs) produced by inflamed enterocytes trigger inflammatory signaling, increase intestinal permeability, and

impair enterocyte migration which are hallmarks of active IBD. This project aims to (1) Identify the miRNA signature of EVs. Human C2BBe1 cells will be grown on transwell inserts to produce the upper apical and bottom basolateral compartments. Then treated with the TLR4 agonist LPS to induce inflammation which mimics IBD. After 24 hrs, to induce the TLR4 signaling pathway the media will be collected to characterize the extracellular vesicles from the apical and basolateral membranes. The EVs will undergo transcriptomics for mRNA. (2) Determine how the EV induce hallmarks of IBD. EVs will be used to treat other C2BBe1 cells and measure the production of inflammatory mediators. The project was approved unanimously.

VI. CONTINUING PROJECT REVIEWS

2022-3-2 Elshahawi, Sherif. Natural Products Isolation and Characterization

- *Elshahawi (BUA) - Natural Products Isolation and Characterization*
- *Elshahawi Exposure Control Plan.2025*

This involves isolating antibiotic producing bacteria from soil samples from unique environments. Crude extracts will be made and spotted on a variety of microbes to see if there is any growth inhibition. Extracts will also be tested on human cancer cells. No rDNA work so no NIH classification required. Categorized as an RG-2 project. The project was approved unanimously with the following stipulation: Question 14 and 1 say there is no rDNA work, but question 14 a, b, c says rDNA work will be performed. This conflict needs to be resolved.

2023-6-2 Citterio, Cintia. Thyroid Physiology and Disease

- Citterio (BUA) - Thyroid Physiology and Disease

This project attempts to understand human thyroid hormone imbalance and will focus on thyroglobulin made by the thyroid gland. Expression of complete mouse thyroglobulin, or the C terminal domain will be expressed in human embryo kidney HEK 293T or rat thyrocyte PCCL3 cells to study expression and secretion. A previously created transgenic mouse strain with a thyroglobulin knock-in that expresses mutant mouse protein will also be used. This project is classified as RG-2 because of the human cells, and NIH III-E and F.
The project was approved unanimously with the following stipulations:

1. Table 11e – *E. coli* can be infectious by the fecal/oral route.
2. Question 20 – III-D should not be checked.
3. Question 36 – if you will not be shipping biological samples to anyone this should be checked 'no'.
4. Table 66 – All your workers should be listed along with training and signatures.
5. Table 22, 23, and 24 should list room numbers.
6. Question 63 – Should also include the room number.

2023-6-1 Glineburg, Rebecca. Generation of plasmids for transgenic *Drosophila* line creations

- *Glineburg (BUA) - Generation of plasmids for transgenic Drosophila line creations*

The main focus of this research is a highly conserved pathway called the Integrated Stress Response, that allows cells to survive and recover from things like viral infection, nutrient deprivation, and heat shock. The model system is *Drosophila melanogaster*. Plasmid vectors will be constructed in *E. coli* with the purpose of

creating transgenic fruit flies. The actual construction of the flies will be done offsite at a company called BestGene. The project is low risk and RG-1 but uses rDNA. Because it uses GFP in a different animal it is III-D. As genetically modified animals they must be killed and incinerated.
The project was approved unanimously with the following stipulations:

1. Page 1 – this is a renewal project, not new.
2. Question 6b and c need answers
3. Question 14e – Should be yes since fruit flies are animals for the IBC although not regulated by the IACUC.
4. Question 20 – should be III-D.
5. Question 36 – should be yes since the DNA to make the GMO fruit flies is biological materials.

2024-6-2 Owens, Cedric. Improving Sunflower Protein Functionality and Quality By Modulating Polyphenol-Protein And Thiol-Protein Conjugation

- *Owens Were (BUA)* - Improving Sunflower Protein Functionality and Quality By Modulating Polyphenol-Protein And Thiol-Protein Conjugation

Sunflower meal is a promising product but because of interactions between proteins and phenolic compounds is not commercially viable. The goal is to manipulate the chemical composition of sunflower protein to enhance its functional and nutritional suitability for food processing. Esterases cloned from *Lactobaccillus helviticus* and *Lactobacillus johnsonii* will be used to treat sunflower meal. This is classified as III-F. and is Risk Group 1. The project was approved unanimously with the following stipulations:
Question 20 – this project is III-F not E.
Question 38 – remove the reference to carbon monoxide.
Question 63 – should be 'yes' for UV light since EtBr in mentioned in question 52.

2022-3-1 Yang, Sun. Effects of nNOS inhibitors on melanoma-induced immunosuppression

- *Yang (BUA) Effects of nNOS inhibitors on melanoma-induced immunosuppression*

This project will test the effects of nNOS inhibitors on T cell-mediated immunotherapy in melanoma. Human blood is purchased from commercial sources and $CD3^+$ T cells are isolated. These will be incubated with human melanoma cells to mimic the tumor microenvironment. The T cells will again be isolated, and their response analyzed. No rDNA issues. The human cells are risk group 2 so this is a risk group 2 project. The project was approved unanimously with the stipulation that question 39 include disposal with an outside company.

2024-6-1 Parang, Keykavous. Evaluation of antibacterial and antifungal activities of peptides

- *Parang (BUA)* - Evaluation of antibacterial and antifungal activities of peptides
- *Parang Exposure control plan*

The project involves the characterization of a novel antimicrobial peptide that they have created. To evaluate its antibiotic properties, a standard (MIC) (MIC) test will be conducted against a diverse range of microbial species, including both bacteria and fungi. A tetrazolium assay will be done to test the peptide's toxicity on human cells. The primary pathogen is *Candida auris* a significant concern for immunocompromised patients due to its resistance to most antifungal treatments.

No rDNA work but *C. auris* is Risk Group 2. Because Jason is part of the project he gave a brief discussion of his role, answered questions and then left before the committee discussed and voted. The project with approved unanimously with the following stipulations:

1. Page 1 – This is not a new project, and the BUA number should be added.
2. Table 11 – The 3 fungi are listed as antibiotic resistant but no details are given. If this is natural resistance the answer should be no. If they are acquired, then the antibiotic should be listed.
3. Table 66 - Jason Yamaki should be listed.

VII. OTHER BUSINESS

None

VIII. NEXT MEETING

Next meeting is scheduled for September 8, 2025, at the Orange campus