

INSTITUTIONAL BIOSAFETY COMMITTEE MEETING

July 20, 2022

3:00 PM, IAMM 306 & Zoom Meeting

MEMBERS PRESENT: Vice Chair- Deidra Mountain, Paul Dalhaimer, Lezlee Dice, George Dizikes, Doris D'Souza, Reza Hajimorad, Brittany Isabell, Jun Lin, Jae Park, Jessica Vélez, Ling Zhao

Ex-Officio – Bryan Cranmore, Caleb Cummings, Carolina Dolislager, Ahmad Mitoubisi, Sarah Pruett, Brian Ranger, Daniel Thomas, Jessica Woofter

MEMBERS ABSENT: Chair-Elizabeth Fozo, Marc Caldwell, Feng Chen, Lori Cole

OTHERS PRESENT:

Opening:

The IBC Vice Chair called the meeting to order at 3:04 PM. The minutes for June 15, 2022, IBC Meeting were reviewed and approved pending correction of the attendance list.

Full Member Review IBC Registrations:

#IBC-10-352-2 (Elizabeth Fozo) Human Derived Materials, Infectious Agents, & Recombinant DNA, III-D-1-a, 3-year rewrite

Dr. Fozo's research investigates the role that genes encoding small regulatory RNAs (sRNAs), small proteins, and membrane fatty acids play in the Risk Group 2 pathogens *Escherichia coli* O157:H7 and *Enterococcus faecalis*; specifically, their role in survival/growth under extreme environmental conditions and in inducing disease. Briefly, mutants will be generated using standard recombinant DNA/molecular techniques (e.g., temperature-sensitive recombination systems; constructs to generate fatty acid gene deletions in *E. faecalis* delivered via conjugation) to disrupt the target genes with selectable marker genes. Similarly, fluorescent reporter genes (e.g., mCherry) will be used to replace the target gene so gene expression can be monitored. Mutants will then be examined for growth defects compared to wild-type organisms. Genes of interest may also be overexpressed in *E. coli* MG1655 under native or inducible promoters. The containment level was established at BSL-2. The committee approved the registration pending the correction of minor typographical errors. There was one abstention.

#IBC-13-404-1 (Steven Wilhelm) Recombinant DNA, III-D-2-a, 3-year rewrite

Dr. Wilhelm's registration covers his research using the insertion of a gene cassette encoding the cyanobacterial toxin, microcystin (from *Microcystis aeruginosa*), to *E. coli* Nissle1917 (B-strain) as well as the cyanobacterium *Synechococcus* PCC 7942 to examine the effects of heterologous expression in cells that do not make this toxin. Experiments involving potentially infectious and toxin-producing agents will be conducted using BSL-2 precautions and procedures in a BSC. The committee approved the registration through Designated Member Review pending the addition of detail on how the effect of microcystin affects the physiology of cells in the Nontechnical Summary; additional detail regarding aspects of the research in the Technical Summary; an update of autoclave validation dates; and the correction of minor typographical errors. There was one abstention.

Old Business:

Administrative Report

i. Contingencies

Following up on June 15, 2022, IBC Meeting, Dr. Feng Chen's registration (#05-238-2) was corrected to clarify if VOCs are secondary metabolites, the addition of a statement clarifying that the study covers a wide range of taxa, selecting an appropriate NIH review classification (III-D-4-a), identification of synthetic promoters and gene IDs, an update to the biosafety cabinet certification dates, and clarification if the registration will involve import or interstate movement of plant pathogens, plant pests, or noxious weeds. Dr. Elena Shpak's registration (#07-131-1) was corrected to clarify the EPFL (epidermal patterning factor/EPF-like) function in the non-technical summary, the addition of promoters of EPFL genes and EPFL genes, and an update of the spill response. Dr. Jae Park's registration (#07-315-1) was corrected to clarify abbreviations and the rewrite of the non-technical summary in lay terms; clarification of the use of sharps and injections; and the completion of question 12.1 for animal carcasses and pathological waste. Dr. Jiangang Chen's registration (#10-408-2) was corrected to clarify downstream applications in the technical summary. Dr. Tarek Hewezi's registration (#13-398-1) was administratively corrected for minor typographical errors.

ii. Administrative Approvals

Dr. Tim Sparer's registration (#06-277-2) was amended to include updates to personal and the addition of HEK293 and Expi239F as hosts. The amendment was approved by the Biosafety Officer on 6/21/2022. Dr. Heidi Goodrich-Blair's registration (#16-442-2) was amended to include the addition of *Streptococcus agalactiae* and *Haemophilus influenzae*. The amendment was approved by the IBC Chair on 6/22/2022. Dr. Girish Neelakanta's registration (#21-560-2) was amended to include the addition of GFP and mCherry insert genes and *A. phagocytophilum* transformed to express GFP and mCherry. The amendment was approved by the IBC Chair on 7/19/2022.

iii. Administrative Terminations

None.

iv. Administrative Exemptions:

None.

v. Accidents, Injuries/Exposures:

None.

vi. Laboratory Report:

None.

vii. iMedRIS Update, Manual Reviews, & System Orientation:

None.

New Business:

Review of Charter & SOPs

Brian notified the committee that the Charter and SOPs were last approved and reviewed in July 2019. A periodic review is due for the next IBC meeting. Jessica will add the documents to the IBC Teams group for members to review before the next meeting. Brian also notified the committee that the IBC registration with the NIH Science Policy is due in late July. No significant changes will be made, but Dr. Kania will be removed as the Vice-Chair and replaced by Dr. Deidra Mountain. Brian will also formalize the addition of Dr. Jessica Vélez to the committee.

The meeting adjourned at 3:46 PM. The next meeting scheduled is for September 14, 2022, from 1:00 – 2:00 PM EST via Zoom.