IBC Meeting Minutes

05/20/2024

1:00 PM Southern Writers Room, ZOOM

I. Call to Order 1:04 PM

II. Roll Call

Members present: Jose Barbosa, Peggy Kovach, Rardy Spratt, Davy Giles, Jennifer Cunningham
Members absent: Brad Harris, Pam Riggs-Gelasco, Darrell McGraw
Ex officio: Cheryl Murphy, Alexa McClellan, Bob Jackson,
Visitors:

III. Approval of past minutes – 03/25/2024, 04/22/2024

1. Motion to approve: Spratt. 2nd: Jackson. Approved: 6. Opposed: 0. Abstain: 2

IV. Old Business

1. Inspections conducted:
    1. Dungey Lab Inspection – Grote 105 - 05/16/2023
2. Updates on registrations in progress
    1. 24-01 – Barbosa – Action Form sent 03/26. Resubmitted 05/20
    2. 24-02 – Bathi - Action Form sent 03/26
    3. 24-04 - Yang – pre-review Action Form sent 05/02/2024
3. Updates on old business items
    1. Shipping subcommittee meeting 05/17/2024

V. New Business –

1. **IBC Protocol #23-08, Keenan Dungey "Atomic Force Microscopy of bacteria E. coli and the antibiotic response" – Annual Review with Modifications**
    1. TRAINING:
        1. Dungey – CITI training EXPIRED 05/19/24 – PI notified 05/14/24
        2. Dominick – CITI training EXPIRED 01/17/2024 - PI notified 05/14/24
        3. Kylie Flores – completed 02/05/2025
    2. BSL1 Containment
    3. Dr. Dungey will be studying the biophysical properties of cells of bacteria *Escherichia Coli* and the antibiotic response by measuring cell size and cell elasticity using the Atomic Force Microscope. *E.Coli K12* has a risk level of 1 hazard to humans. The research falls under *NIH Guidelines* Section III-E

Miscellaneous-Other and Appendix C-II. PI will be cloning samples of *E.coli K12* to introduce plasmid DNA that will convey ampicillin resistance as a positive control. Vectors to be used are plasmids from DNASU repository and the genes to be cloned are "commonly cloned genes, such as amp/car and GFP." All constructs were previously cloned and obtained from DNASU as part of the BASIL Starter Pack V1. These plasmids are designed for use in teaching laboratories participating in the BASIL curriculum.

4. Additional committee concerns/corrections
    1. The DNASU BASIL Starter Pack V1 has 10 different clones included. Which of these clones will be utilized in the research?
    2. Is "appropriate PPE" sufficient? For BSL1, Yes.
    3. A statement should be included in the description (G.6., page 10) acknowledging that the possibility exists that this research could create a strain that is antibiotic resistant and your considerations to contain that likelihood.
5. Motion to approve contingent on clarification of the additional committee concerns listed above and reviewed by IBC Chair and completion of training requirements: Rardy. 2nd: Kovach. All in favor: 6 Opposed: 0. Abstained: 2

2. **IBC Protocol # 24-03, Davy Giles "Determining the antibacterial efficacy of novel cobalt compounds" – New Registration**
    1. Giles excused himself from the meeting.
    2. Training:
        1. Giles – CITI training completed: 11/01/2023
        2. Grant – CITI training completed: 05/14/2024
    3. BSL2 Containment
    4. This research project investigates the antibacterial efficacy of novel cobalt compounds (generated in the laboratory of Dr. John Lee [UTC Chemistry]). The Giles laboratory will be performing minimum inhibitory concentration assays with these compounds against both Gram positive and Gram negative bacteria. Routine protocols involving BSL-2 agents will involve preparation of broth and agar cultures using aseptic technique. The general procedure for these experiments is 1) media preparation, 2) inoculum preparation, 3) growth of bacteria, 4) preparation of antimicrobial dilutions, 5) collection of grown bacteria and preparation of inoculum, 6) setting up MIC assay in the Biological Safety Cabinet, 7) incubation of the 96-well plate, 8) analysis of the plate using a microplate reader, and 9) decontamination of the cultures in the 96-well plate.
    5. Infectious agents to be utilized are:
        1. Vibrio cholerae C6706 (El Tor) – RL2 to humans and animals
        2. Escherichia coli MG1655 – RL2 to humans and animals
        3. Pseudomonas aeruginosa PAO1 – RL2 to humans and animals

4. Staphylococcus aureus – RL2 to humans
5. Bacillus subtilis – RL1

6. Additional committee concerns/corrections
    1. Holt 108 (Biohazardous Waste Room) needs to be added as location
    2. Include culture sources in Section D.1-5.
    3. The committee discussed the appropriateness of the common practice of decontaminating liquid cultures before pouring them down the sink. It was suggested that liquid cultures be autoclaved to avoid the possibility of plasmids being introduced into community wastewater, or disinfected and mixed with vermiculite and disposed of in biohazard bags. Further research into best practices will be undertaken by Jennifer Cunningham, Cheryl Murphy.
7. Motion to approve contingent on clarification of the additional committee concerns listed above and reviewed through Administrative Review: Spratt. 2nd: Barbosa. Approvals: 5. Opposed: 0. Abstention: 2

3. **Additional items for discussion**
    1. Giles returned to meeting.
    2. Giles sent emails sent to Richards, Symes, Francesca, Beasley, and Walker regarding upcoming expected registrations.
    3. Spratt: Invited to participate in middle school STEM video this next week discussing Microbiology. This will involve bringing 2 middle schoolers and additional production staff into his BSL2 lab. Visitors will be supervised at all times, will observe only, and will not manipulate any biohazardous substances.
        1. Committee agreed that visitors will not be required to complete CITI training, although it was suggested that they are given general instructions on lab best practices, including what to do in an emergency. They will also sign general liability paperwork.
        2. UTC policies on Minors in Labs and Minors Participating in Programs will apply. Bob Jackson will facilitate appropriate paperwork and contacts.

VI. **Next Meeting** – June 24 – 1:00 PM

VII. **Adjournment** – 2:00 PM