

CAES IBC Bi-annual Meeting July 24th, 2025

In Attendance

Dr. Doug Brackney (chair)(CAES)
Dr. Quan Zeng (CAES)
Dr. Blaire Steven (CAES)
Dr. Neil Schultes (CAES)
Dr. Philip Armstrong (CAES)
Dr. Caitlin Hanlon (outside committee member) (Quinnipiac University)

Absent

Dr. Rachel Jeffreys (outside committee member) (Southern Connecticut State University)

Dr. Brackney motion to open meeting 9:07 (seconded by Dr. Schultes)

Infectious Agents Proposals

PI Name: Dr. Washington da Silva

Infectious Agent: Potato Y virus strains Nwi, NTN, O and N

Training Status: Satisfactory

Risk Group: 1

Containment Conditions: BSL2

Risk Assessment: This infectious agent poses no threat to human or animal health and is a native plant pathogen in Connecticut. It will be used for standard laboratory experiments infecting potato plants via mechanical and vector transmission.

Notes:

- Committee recommends changing risk group from 2 to 1
- Committee asks for more specifics on the autoclave protocol
- Dr. Armstrong questions whether UV is appropriate for surface decontamination. Is chemical inactivation (70% EtOH or 10% bleach) more appropriate?

Committee Decision: Unanimously approved with minor edits

PI Name: Dr. Sara Nason

Infectious Agent: untreated wastewater; pathogen presence unknown

Training Status: Committee requests more details on how laboratory personnel will be trained and in which techniques.

Risk Group: 2

Containment Conditions: BSL2

Risk Assessment: PI is planning on collecting untreated wastewater and using it to detect and track illicit drugs within the wastewater treatment facility catchment area. These will be environmental samples and are thus deemed as diagnostic until proven to be contaminated with a pathogen. Pathogen testing and/ or isolation is not proposed. To avoid

potential contamination of the laboratory or the aerosolization of wastewater material the committee recommends filtering the water samples in the field.

Notes:

- Committee requests providing more detail in the protocol specifically for volumes of water to be sampled.
- Committee notes that samples cannot be both chemically treated and autoclaved. The proposal currently states chemical treatment and/ or autoclaving. This should be changed to “or”.
- Committee requests clarification on disposal. The proposal currently states waste will be disposed of normally. More details are needed.
- Committee request more details on how personnel will be trained and in which techniques.

Committee Decision: Unanimously approved pending edits to the initial proposal

PI Name: Dr. Raquel Rocha

Infectious Agent: *Escherichia coli* strains DH5α and TOP10 and *Agrobacterium rhizogenes* MSU440

Training Status: Satisfactory

Risk Group: 1

Containment Conditions: BSL2

Risk Assessment: Bacterial agents will be used to generate transient and stable composite tomato plants expressing RNAi against virulent proteins in root nematodes. Infectious agents pose no threat to human or animal health.

Notes:

- Committee recommends editing protocol to explain how work areas will be sterilized either by 70% EtOH, 10% bleach, or UV.

Committee Decision: Unanimously approved pending edits to the initial proposal

Recombinant and Synthetic Nucleic Acids Proposals

PI Name: Dr. Raquel Rocha

Project Title: Tobacco Rattle virus-based virus-induced gene silencing of plant parasitic root-knot nematodes in plants

Training Status: Satisfactory

Applicable NIH Guidelines Section: III-D-1-a and III-E-2-a

Containment Conditions: BSL2

Risk Assessment: This protocol proposes to clone fragments of virulence genes from nematodes into bacterial vectors to be used to generate transient and stably transformed tomato plants expressing the DNA fragments in the form of anti-sense RNA molecules

targeting the nematodes associated with tomato plants. Virulence genes will be cloned from *Meloidogyne incognita* and *M. hapla* into bacterial expression vectors and transformed into *E. coli* DH5α and TOP10 strains as well as *Agrobacterium rhizogenes* MSU440. This work poses no threat to human or animal health and procedures are in place to properly dispose of any recombinant DNA.

Notes:

- Committee recognized that the proposal will be using transgenic plants which may need APHIS review.
- Committee requests PI to add the use of transgenic plants to Question 17 on the form.

Committee Decision: Unanimously approved with minor edits

PI Name: Dr. Hany Dweck

Project Title: Dweck laboratory DNA bacterial transformation protocol

Training Status: Satisfactory

Applicable NIH Guidelines Section: III-D-1-a

Containment Conditions: BSL2

Risk Assessment: This protocol proposes to perform routine bacterial transformations with DNA derived from olfactory and gustatory receptor genes from *Drosophila suzukii* and *Lycorma delicatula* (spotted lantern fly). The bacterial strain to be used is the common laboratory strain of *Escherichia coli*, DH5α. This work poses no threat to human or animal health and procedures are in place to properly dispose of any recombinant DNA.

Committee Decision: Unanimously approved with no concerns



7-24-2025



Caitlin D Hanlon

July 24, 2025



Philip Atreya

Neil Schultes

July 24, 2025

Quan Zeng

July 24, 2025