


Online course:

Biosafety for containment and handling of mosquitoes and other biting insects
30 May – 24 June 2022

Deadline for application: 15 May 2022

Teacher:
 Eva Veronesi, PhD
 Scuola Universitaria Professionale della Svizzera Italiana (SUPSI)
 Institute of Microbiology, Bellinzona, Switzerland

FREE OF CHARGE



Logos: SUPSI (Scuola universitaria professionale della Svizzera italiana), HSeT (Health Sciences e-Training Foundation), European Union flag, infraVec2.

Working with biting arthropods requires laboratories with special design to prevent their escape. Not least, infected arthropods must be handled in special infrastructures for pathogen containment (biocontainment) to protect the users and the environment (biosafety). This course will provide you a deep understanding on best practices, and methodologies required for working under biocontainment laboratories with biosafety level from 1 to 3 (CL 1-3 / BSL 1-3). It also includes waste management, risk assessment as well as accident response bound to safely run activities.

Course description and goals

The course is fully online and is constituted of webinars, videos, quizzes, protocols, case studies, documents and forums to interact with the teacher and other students.

The course comprises two modules, one on theoretical concepts and the second module on practical activities:

- Module 1: CL 1-3 / BSL 1-3 access, operation and management of biocontainment (4 webinars).
- Module 2: Mosquito infection step-by-step procedures with RG3 pathogens (3 webinars).

Each webinar is completed by a quiz to help learn key concepts and each module includes a case study to apply concept to real-life situations. The course lasts 4 weeks and is expected to require approximately 6 hours of work per week.

Target audience

The course is intended for biosafety practitioners responsible for facilities housing arthropods, researchers working with arthropods wanting an overview of the biosafety requirements working with biological agents within arthropods, engineers, designers, facility managers requiring an understanding of the management and biosafety requirements for housing arthropods.

Registration process

The course is free of charge. The number of students is **limited to 30**. If you are interested, please answer a few motivation questions on the [Application Form](#) **before May 15**. The course will take place **between May 30 and June 24, 2022**.

Learning objectives

Module 1: Access, operation and management of biocontainment

- Understand the issues related to animal and human health as well as environmental protection, that should be considered when designing and/or assessing the safety of a facility used to rear infected arthropods and associated pathogens they may carry.
- Get a practical view on the operation and management of such facilities including the management of waste, and the response to incidents and emergencies.

Module 2: Mosquito infection with Risk Group 3 pathogens

- Identify and understand the biohazards and risk associated with infected arthropods
- Practicing the infection of arthropods with animal and human pathogens in accordance with biosecurity regulations.

Learning outcomes

At the completion of the course, the participants should be able to:

- Identify the level of biosafety required for your laboratory according to the status of infection of your arthropods and pathogen group risk level
- Identify and understand the biohazards and risk associated with infected arthropods.
- Understand the issues related to animal and human health as well as environmental protection, that should be considered when assessing the safety of a facility used to rear infected arthropods and associated pathogens they may carry.
- Infect arthropods with animal and human pathogens in accordance to biosecurity regulation.
- Dissect mosquitoes' body parts (including salivary glands)
- Homogenize mosquitoes' body parts and their storage until further investigation for pathogen detection and its quantification
- Get a practical view on the operation and management of such facilities including the management of waste, and the response to incidents and emergencies.

Contact

For further information contact the course teacher at course-manager@infravec2.eu.