

Beginner Rat Biomethodology Wet Lab – ACS891
University of Florida Animal Care Services Training Core

Target Audience: Research Staff and PIs with limited experience in mouse handling
Course Type: 1hr contact wet lab

Course Description:

This course is designed to cover basic rat biomethodology and handling. While general information regarding rat biology, use of equipment, and needle safety are discussed, humane handling of mice to facilitate health evaluation and basic research techniques is the primary focus.

Enrollment in the UF animal contact program is required prior to course sign up. Students are expected to have an understanding of the primary techniques they will be performing as part of the approved animal use protocol.

Course Goals:

Personnel who complete this course successfully will be able to perform and demonstrate:

- Acclimation of rats utilizing the rat tickling technique
- Basic restraint utilizing the two most common techniques; the C-hold and the V-hold
- Subcutaneous injection (dorsal-lumbar/intrascapular)
- Intraperitoneal injection (two-person technique)

Personnel who complete this course successfully will be able to discuss proper techniques for:

- Body condition scoring in rats
- Reporting animal health concerns to the veterinary staff
- Reporting animal welfare concerns anonymously (whistleblower policy)
- Cage handling and proper disinfectant use with specific pathogen free animals
- Proper needle safety and asepsis when working with animals
- CO₂ euthanasia and secondary physical methods for confirming euthanasia (thoracotomy)
- Methods for obtaining additional training in research techniques

Prerequisite Courses:

- [Mouse and Rat Biomethodology \(UF_ACS845_OLT\)](#) – online course

Definitions:

- **Discussion** – course instructors will briefly discuss associated procedures/policy
- **Demonstration** – course instructors will demonstrate techniques; however, participants will not be required to practice or verify skills
- **Hands-on** – course instructors will demonstrate techniques and assist participants in practicing the technique utilizing live animals

- **Verification** – participants will be required to demonstrate proficiency with the skill/technique to complete training

Topic	Discussion	Demonstration*	Hands-on*	Verification*
Handling a microisolator cage	X	X		
Use of disinfectants when working with SPF animals	X	X		
Acclimation of rats to handling	X	X	X	
Porphyrin	X			
Recognition of normal rat behavior (bright, alert, responsive)	X			
Reporting of sick animals to veterinary care staff	X			
Basic handling – body condition scoring	X	X	X	
Basic handling – C- Hold	X		X	X
Basic handling – V-Hold / Full body restraint	X		X	X
Research techniques – needle/syringe asepsis and use	X		X	
Research techniques – subcutaneous injection in rats	X		X	X
Research techniques – intraperitoneal injection in rats (if approved in protocol)	X		X	X
Research techniques – CO ₂ euthanasia in rats**	X			
Research techniques – secondary physical assurance of euthanasia (thoracotomy)**	X			
Reporting of animal welfare concerns anonymously (whistleblower policy)	X			
Requesting additional training on specific rat techniques	X			

*All participants will be instructed to wear the proper PPE required for working with rats prior starting any activity with live animals

** Euthanasia demonstrations will utilize animal models (no live animal demonstrations)

Participant Evaluation

If participants are unable to demonstrate proficiency with the skill/techniques listed for “Verification,” they are marked as “did not pass” in myTraining within the UF training system and a one-on-one training session to review the techniques will be scheduled. The IACUC office will be notified of the secondary training session schedule. If the second training session does not result in a “pass,” the IACUC office and a clinical veterinarian will be notified for additional training.