Friday, October 4

8:00-8:50am
**Humane Intervention Points**
Wendy O. Williams, BA, Honors BSc, DVM, DACLAM, Cornell University
This session provides a review of the definitions and legal requirements relevant to minimizing pain and distress in research animals. Many of the resources useful in setting humane endpoints will be discussed. Potential options to improve animal survival to the scientific endpoint will be presented through the use of examples. Cornell University’s approach to humane endpoints will be introduced along with convincing rationale for incorporating the term “humane intervention points” into the IACUC vocabulary.

9:00-9:50am
**Fish Diseases in Research Settings**
Paul R. Bowser, PhD, Cornell University
During this lecture, gross and microscopic images will be shown to demonstrate disease presentations that are commonly found in fish maintained in a research laboratory setting. Diseases will include infectious and non-infectious conditions which may be seen in fish maintained for research, including the most common concerns in zebrafish. An emphasis will be placed on the most common diseases anticipated as well as those with zoonotic potential.

10:00-10:50am
**Rodent Fur Mites: Current Trends**
Rodolfo J. Ricart Arbona, DVM, DACLAM, Rockefeller University/Memorial Sloan Kettering Cancer Center/Weill Cornell Medical College
This lecture will discuss old and novel trends in rodent fur mite detection and treatment.

11:10am-12:00pm
**Impact of Cage Size in Regards to Animal health and Reproductive Efficiency for Trio-Bred Mice**
Rohit Rajoria, DVM, Cornell University
The focus of this talk is to investigate the impact of cage size in regards to animal health & reproductive efficacy of mice bred for research purposes. This lecture will describe the variable factors that may influence the breeding paradigm for an investigator or vendor. Another component is to discuss how performance based studies can help reinforce an institution’s specific breeding conditions to supplement the National Research Council’s spatial recommendations for mice breeding.

12:10-1:00pm
**Agricultural Facilities for Research and Teaching: A Historical and Regulatory Perspective**
Todd J. Pavek, BA, DVM, DACLAM, Cornell University
This presentation will review the history of agricultural animal use at Cornell, looking at the progression of both facilities and research goals, and the challenges of maintaining Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC) accreditation at an institution which includes large, decentralized agricultural facilities.

2:10-3:00pm
**Overview of Controlled Substance Laws and Regulations for Researchers**
Debra M. Hotaling, B.S., R.Ph, NYS Department of Health, Bureau of Narcotic Enforcement
Timothy Dewey, NYS Department of Health, Bureau of Narcotic Enforcement
The lecture will include a review of regulations specific to a research license with respect to inventory and storage of controlled substances.
4:20-5:10pm
*USDA Inspections*
Keri Lupo, DVM, USDA Animal Plant Health Inspection Service
Lecture will describe USDA inspections of laboratory animal facilities.

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**Saturday, October 5**

8:00-8:50am
*Emergency Preparedness in Veterinary Medicine: Pets to Colonies*
Susan Prattis, VMD, PhD, MSNMP, DACLAM
This seminar will discuss several models that have been used to develop emergency response plans for academic institutions and hospitals, and core principles of emergency management response plan development. This talk should serve as an introduction to this field and will assist private practitioners and laboratory animal veterinarians in reviewing the considerations that go into developing a robust animal emergency plan for their facilities.

8:00-8:50am
*LAB: Tips for Rodent Fur Mite Detection Techniques (Limited to 10 Participants)*
Rodolfo J. Ricart Arbona, DVM, DACLAM
In this wet lab attendees will be exposed to various cage side techniques commonly used to detect fur mites in rodents. We will conduct 60 minute didactic and hands-on training session for veterinarians, veterinary technicians, or medical technologists who want to improve their sampling and diagnostic methods.

9:00-9:50am
*Establishing a University-Wide Animal Emergency Management Program*
Mary E. Martin, DVM, MPH, DACLAM
This presentation outlines the steps taken to develop a campus-wide Animal Emergency Management Plan for a diverse animal care and use program, spread out in multiple facilities with a variety of managers and reporting relationships. This plan is also integrated into the university’s overall Emergency Operations Plan (EOP), following best practices from the National Incident Management System.

9:00-10:50am
*LAB: Introduction to Laboratory Mouse Procedures (Limited to 10 Participants)*
Erin Jeannotte, LVT, RLATG, SRA
More mice are used in laboratory settings each year than any other research animal species. The intention of this live animal wet-lab is to familiarize new laboratory animal technicians with basic mouse handling and procedures. This session is also appropriate for those mouse users that would like to refresh their skills. Class size is limited in order to provide individualized instruction within the group setting. We will begin with a discussion regarding physical examination and health check at the cage level. Three types of restraint (mechanical, physical and chemical) will be demonstrated and practiced. Instruction will be provided for the following techniques: sexing of males and females, identification (ear notch/punch, ear tag application, and tail...
snip), subcutaneous and intraperitoneal injections, and both the maintenance and monitoring of rodent anesthesia. We will also review species specific methods of humane euthanasia.

10:00-10:50am
*Disaster Preparedness, Response and Recovery*
Jennifer K. Pullium, MVB, DACLAM

11:10-12:00
*Pain Recognition in Laboratory Animals: Clinical and Scientific Methods*
Larry Carbone, DVM, PhD, DACLAM
This video-and-lecture session will review the current state of knowledge of clinical pain diagnosis in common laboratory animal species. Basic methods of analgesiometric research will be reviewed with a focus on using this literature to improve laboratory animal care. Information shared at this session will help laboratory animal veterinarians develop better animal use protocols, investigator training, and clinical interventions.

11:10am-12:00pm
*LAB: Advanced Laboratory Mouse Procedures (Limited to 10 Participants)*
Erin Jeannotte, LVT, RLATG, SRA
As we strive to meet our goal of refinement in laboratory animal procedures, it is becoming increasingly important for technicians to receive training in advanced techniques. The intention of this live animal wet-lab is to familiarize laboratory animal technicians with advanced mouse procedures. This session is also appropriate for those mouse users that would like to refresh their current skills. Class size is limited in order to provide individualized instruction within the group setting. We will begin with a brief review of handling and restraint techniques. Instruction will be provided for the following procedures: intramuscular, intravenous, and retro-orbital injections, blood collection (lateral tail, lateral saphenous, and submandibular), and oral gavage.

12:10-3:20pm
*Pain Management in Laboratory Animals: Ethical and Scientific Issues*
Larry Carbone, DVM, PhD, DACLAM
This session will review the legal and ethical obligations for scientists and their veterinarians to identify, categorize, manage, prevent and report pain in laboratory animals. Criteria for categorizing and justifying "Category E" (pain that is left untreated for scientific necessity) will be discussed. Information at this session will help laboratory animal veterinarians better discuss how analgesics and untreated pain can both affect experimental outcomes.

2:30-3:20pm
*Pain Management in Laboratory Animals: Evidence-Based Use of Analgesics and Adjunctive Pain Management*
Larry Carbone, DVM, PhD, DACLAM
This session will focus on specific analgesic agents available for use in laboratory animals. Use of balanced anesthesia, preventive and multi-modal analgesia will be emphasized. Attendee veterinarians will update their knowledge of anecdotal and literature-based pain management. Areas in need of further research (and resident/trainee research projects) will also be highlighted.

2:30-3:20pm
*Magnetic Resonance Imaging in Laboratory Animals*
Sarah L. Pownder, DVM, DACVR
This lecture will introduce Magnetic Resonance Imaging (MRI) pulse sequences available for laboratory animal species ranging from rats to horses. Difficulty with preparation and coil selection will be discussed. Qualitative and quantitative techniques will be reviewed including pulse sequence selection for specific musculoskeletal research at clinically relevant field strengths of 1.5T and 3.0T.
3:30-4:20pm
*Euthanasia of Laboratory Animals: New Science and New AVMA Guidelines*
Larry Carbone, DVM, PhD, DACLAM
The AVMA guidelines on animal euthanasia were updated in 2013, with several changes in the recommendations for euthanasia of laboratory animals. The guidelines and updates will be reviewed, including the new standards on carbon dioxide inhalation, physical methods for rodent and fish euthanasia, and requirements for training and for scientific justification.

4:50-5:40pm
*Environmental Influence on Animal Health and Study Outcomes: Case Study and Current Knowledge*
Todd J. Pavek, BA, DVM, DACLAM
The topic will be introduced by covering an actual case in which facility design features affected animal health (chickens) and experimental outcomes for an infectious disease study. Current literature and knowledge will be covered to provide a comprehensive review of what is currently known about common environmental stressors across differing species of laboratory animals. Conclusion will emphasize that both knowledge and awareness are necessary to minimize the impact of environmental stressors on laboratory animals.

Classes marked in PURPLE are approved for veterinarian credit only.