

## MORNING

### WORKSHOPS

#### ★ W-11 Advanced Microsurgery Training

7:15 a.m.–12:30 p.m.

Room: Offsite

Leader: Robert F Hoyt Jr

Faculty: Michele D Allen, Tanya H Burkholder, Randall R Clevenger, Kelly E Cole, Tim J Hunt, Kenneth R Jeffries, Karen J Keeran, Shawn M Kozlov, Bernardo J Rosa, Hong San, Danielle A Springer, Arthur D Zetts, Gayle J Zywicke

Workshop Fee: \$250

Workshop Limit: 20

Microsurgery has gained increased popularity in recent years because it enables researchers to perform often complex procedures on small laboratory animals, including rodents. This workshop will focus on expanding and refining the microsurgical skills taught during the Introduction to Microsurgery workshop. The techniques taught during this workshop will include needle-holding position (forehand or backhand), the use of hydraulic dissection (for separating arteries, veins, and nerves), the use of microvascular clips for placement and removal of catheters from arteries, vessel repair following catheter removal, and others as time permits. Each of these skills will be taught using both training aids and live animals. Participants are encouraged to review the skills previously learned so as to optimize time for mastering all of the new techniques from this workshop.

*This workshop is sponsored in part by Lone Star Medical, OR Specialties, and Instech Solomon.*

#### ★ W-12 Implantation Techniques for Osmotic Minipumps

7:15 a.m.–12:30 p.m.

Room: Offsite

Leader: Peg Murphy-Hackley

Faculty: Paul A Johnson, Stacy Y Kanno, James G McCabe, Mark R Pettus, Jose R Gadea, Peg Murphy-Hackley

Workshop Fee: \$250

Workshop Limit: 20

Osmotic minipumps are used to continuously deliver a wide variety of agents over time. This workshop will give hands-on experience implanting osmotic minipumps into laboratory animals. Pump demonstrations will include subcutaneous and intraperitoneal implantations, IV cannulations, and, tentatively, ICV cannulations. Participants will learn the functionality of the pumps, benefits of infusion over injection, and pump implantation and cannulation techniques in rats and mice.

*This workshop is sponsored in part by DURECT Corporation, Charles River, and VetEquip.*

#### Key:

- ★ Animal Welfare, Regulatory Compliance, and Public Education
- ✱ Biomedical Research, Medicine, and Methodology
- ✱ Facility Design, Management, and Operation
- ⌘ Neurobehavioral Sciences

#### At a Glance

- **AALAS Bookstore: 9:00 a.m.–5:00 p.m., Exhibit Hall**
- **Career Center: 8:00 a.m.–5:00 p.m., Rm 109**
- **Exhibit Hall: 9:00 a.m.–5:00 p.m.**
- **Learning Resource/Technology Center: 8:00 a.m.–5:00 p.m., Rm 122**
- **Registration: 7:30 a.m.–5:00 p.m., Maryland Street Lobby**
- **Speaker Ready Room: 7:30 a.m.–4:00 p.m., Rm 212**

#### ★ W-04B Preparing a Laboratory Employee for Management

8:00 a.m.–12:00 p.m.

Room: 105

Leader/Faculty: Martin Seidenfeld

Facilitator: Julie Walls-Honeycutt

Workshop Fee: \$130

Workshop Limit: 50

(also offered on Monday, November 10, 8:00 a.m.–12:00 p.m.)

Laboratory managers may wish to promote employees who are excellent at their work to supervisory positions. This workshop will focus on the three most crucial principles managers must inculcate in their candidates for promotion if those employees are to become effective supervisors, and will cover mentoring new supervisors to help them avoid common mistakes.

#### ★ W-13 Primate Enrichment and Training

8:00 a.m.–5:00 p.m.

Room: 102

Leader: Steven J Schapiro

Faculty: Steven J Schapiro, Mollie A Bloomsith, Jaine E Perlman, Margaret Whittaker

Facilitator: Marsha J Sowers

Workshop Fee: \$250

Workshop Limit: 50

This 8-hour workshop presents an intermediate- to advanced-level discussion of environmental enrichment and positive reinforcement training. The three main goals of the workshop are to present the most recent advances in the application of environmental enrichment and positive reinforcement training to the behavioral management of captive primates, to provide a provision of an essentially complete guide to resources concerning environmental enrichment and training for nonhuman primates, and to present advanced techniques for solving difficult behavioral management problems using environmental enrichment and training techniques as tools.

The same faculty that teaches the Primate Training and Enrichment Workshops (PTEW) offered at the Department of Veterinary Sciences of the University of Texas M. D. Anderson Cancer Center in Bastrop, TX will teach this workshop.

*This workshop is sponsored in part by Primate Products, Harlan Teklad, Lomir, Priority One Services, LabDiet, Bio-Serv, and A.P.E.S.*

#### ★ W-14 Effective Scientific Writing for Tech Talk and Research Reports: Basic Course

8:00 a.m.–12:00 p.m.

Room: 103

Leader: Julie Watson

Faculty: Sarah L Poynton, Julie Watson

Facilitator: Ingrid Weterings

Workshop Fee: \$100

Workshop Limit: 15

Effective scientific writing is a key skill for all scientists, including technicians, yet typically there are few instructional opportunities in the art of writing for the scientific arena. This half-day workshop will address the needs of individuals wishing to write articles for *Tech Talk* and similar publications. The workshop will comprise didactic elements and interactive

exercises. Participants will learn how to develop a content plan, structure their article, develop an effective title, and write from the perspective of the reader. Numerous examples will be used to demonstrate common strengths and weaknesses in titles, introductions, methods, conclusions, table layout, figures, and legends. The basic principles of scientific editing, for content, form and style, will also be introduced. This allows authors to anticipate potential critiques from reviewers and editors and revise and polish their work accordingly. Participants will receive a workbook and handouts of reference material. Participants are encouraged to submit a draft article to the workshop leader two weeks in advance of the conference in order to receive individual feedback and guidance on their writing style. The workshop leader is Sarah Poynton, PhD, associate professor of molecular and comparative pathobiology at Johns Hopkins University School of Medicine in Baltimore. Dr. Poynton conducts research, diagnosis, and teaching in laboratory animal medicine, especially parasitology. She is a highly regarded teacher of scientific communication skills, a reviewer for scientific journals, and a freelance scientific editor. Teaching with Dr. Poynton will be Julie Watson, MA, VetMB, DACLAM, assistant professor of molecular and comparative pathobiology at Johns Hopkins. Dr. Watson is the director of rodent medicine and surgery programs at Johns Hopkins. She currently serves on the Tech Talk Editorial Committee and mentors authors writing for *Tech Talk*.

### Affiliate Events

- **AAALAC Consultant/Specialist Orientation: 8:00 a.m.–10:30 a.m., Westin, Capitol I**
- **ACLAD Trainee Luncheon: 2:00 p.m.–2:00 p.m., Westin, Capitol I**
- **ACLAM Autotutorial Committee: 1:00 p.m.–3:00 p.m., Westin, Congress I**
- **ACLAM Credentials Committee: 9:00 a.m.–11:00 a.m., Westin, Congress II**
- **ACLAM General Business Meeting: 5:00 p.m.–7:00 p.m., Rm 123**
- **ACLAM Planning Committee: 1:00 p.m.–5:00 p.m., Westin, Congress II**
- **ACLAM Publications: 1:00 p.m.–5:00 p.m., Westin, Senate I**
- **ACLAM Recertification: 1:00 p.m.–5:00 p.m., Westin, House**
- **ACLAM Training Program Recognition: 8:00 a.m.–12:00 p.m., Westin, Senate I**
- **ASLAP/USDA Preceptorship: 1:00 p.m.–3:00 p.m., Westin, Boardroom**
- **ICLAS Animal Quality Network: 10:30 a.m.–2:00 p.m., Westin, Chamber**
- **ICLAS Int'l Consortium: 9:30 a.m.–11:00 a.m., Rm 113**
- **ILAR Meeting: US–Japan: 2:00 p.m.–4:30 p.m., Westin, Cabinet**

## SEMINARS

### ★ Current Considerations for Rodent Cage Density

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 5  
 Leader/Moderator: John P Long  
 Facilitator: Cathy Kendra

This seminar will address historical and current perspectives surrounding cage density issues for rodents, particularly three key issues relative to rodent housing considerations: historical and current perspectives on rodent housing, as well as regulatory considerations; determining optimal rodent caging density and space; and physiologic responses of rodents to differing housing and space paradigms. The target audience is any laboratory animal personnel responsible or involved in rodent husbandry.

*This seminar is sponsored in part by the American College of Laboratory Animal Medicine (ACLAM) and the American Society of Laboratory Animal Practitioners (ASLAP).*

#### Speakers/Topics:

8:00 John P Long Welcome and Introductions

8:10	Robert C Dysko	Historical and Current Considerations Relating to Rodent Caging Densities
8:55	Julia W Whitaker	Performance Considerations in Evaluating Rodent Caging Density
9:40	David M Lawson	Physiologic Response of Rodents to Cage Density and Space

### ★ Mouse Trek, the Next GEMMeration: New Technology Frontiers in Developing a Mega-production Facility

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 3  
 Leader: Rhonda Wiler  
 Moderator: Tamara Franzman  
 Facilitator: Jack Metterville

This session will introduce the audience to innovative, scalable solutions that the Mouse Genetics Department designed, developed, and implemented in order to serve customers' expanding needs for genetically engineered mouse models (GEMMS). We will describe how we managed the challenges of high complexity, scalability, a compressed timeline, the need for flexibility, and low-risk tolerance through a highly collaborative process. To set the stage, an overview of the mouse genetics operation and how we arrived at the decision to build a mega-production facility located two hours from the main campus will be discussed. Next, we will show you how industrial engineering methodologies were used in the design of the material handling systems for this large facility. Finally, we will describe how we approached the design, development, and implementation of a novel colony management system using wireless technology. The target audience includes technicians, managers, veterinarians, directors, architects, IT professionals, and researchers.

*This seminar is sponsored in part by Genentech Inc/Mouse Genetics.*

#### Speakers/Topics:

8:00	Rhonda Wiler	Welcome and Introductions
8:05	David Brian Lucid	Destination Automation—Methods in Moving Matter
8:55	Rhonda Wiler	To Go Where No Mouse House Has Gone Before
9:55	Erik Bierwagen	Creating Command Central

### ★ The Regulations and Requirements: A Primer for Technicians

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 2  
 Leader/Moderator: B Taylor Bennett  
 Facilitator: Tamara Goodman-Kuhel

USDA, OLAW, and AAALAC are acronyms that almost every technician has heard and some have learned quite a lot about in preparing for the AALAS certification examinations. This seminar consists of a review of the Animal Welfare Act, the PHS Policy, and the AAALAC process for technicians. It is designed to demystify the legislative and regulatory process and compare and contrast the various requirements of the regulatory, funding, and accrediting agencies, with an emphasis on the role that the technicians play in assuring institutional compliance. A question-and-answer format will be used during part of the seminar to stimulate audience involvement and to emphasize the key points in the material covered.

*This seminar is sponsored in part by the National Association for Biomedical Research (NABR).*

#### Speakers/Topics:

8:00	B Taylor Bennett	Welcome and Introductions
8:05	B Taylor Bennett	The Regulations and Requirements: A Primer for Technicians

## Rowe Lecturer Linda Toth

Many people suffer from a variety of infectious and non-infectious disorders that are associated with fatigue, non-restorative sleep, and excessive daytime sleepiness. Excessive sleepiness and fatigue reduce the individual's quality of life and cause significant economic loss in terms of increased error rates, reduced productivity, and diminished employment capability. The growing importance of fatigue in our society has stimulated a need to expand our understanding of this debilitating symptom. A considerable body of research documents strong interactions among immune or inflammatory challenge and fatigue, excessive sleepiness, and poor sleep. Dr. Linda Toth will present this year's Rowe Lecture, "Sleep and Fatigue during Infectious and Inflammatory Disease: The Crossroads of Immunology and Behavior," which will illustrate how mice can be used to identify genes and mechanisms that contribute to fatigue and disturbed sleep.

Dr. Toth is the associate dean for Research and Faculty Affairs, a professor in the Department of Pharmacology at Southern Illinois University School of Medicine, and editor in chief of Comparative Medicine and JAALAS. She recently completed an analysis of genetic contributions to altered sleep patterns in influenza-infected mice, which revealed that quantitative trait locus, *Sr1p1*, that accounts for large and consistent differences in influenza-related alterations in sleep in different strains of inbred mice. Future work will build on that finding by using genetic mapping and a candidate gene strategy to identify the genetic and pathologic mechanisms that mediate sleep responses to influenza infection and other types of microbial challenges.



Rowe Lecturer • November 11

### Wearing Two Hats: Infectious Agents in Neuroscience Research

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 4  
Leader/Moderator: Susan E Erdman  
Facilitator: James W Magrath

Infectious agents have the potential to interface with behavioral and neuroscience research in many ways. Bacteria, viruses, and parasites may be applied strategically to investigate interrelated roles of environment, host immunity, and behavior. Infectious agents may also be an uninvited factor and confounder in scientific investigations involving learning, memory, and behavior. These talks will discuss the variety of implications for bacterial, viral, and parasitic infections in the neuroscience research setting.

*This seminar is sponsored in part by the American Committee on Laboratory Animal Diseases (ACLAD).*

#### Speakers/Topics:

8:00	Susan E Erdman	Welcome and Introductions
8:05	Gregory E Demas	To Everything There is a Season: Neuroendocrine Mechanisms Underlying Seasonal Changes in Diseases
8:35	Dmitry V Zaretsky	Mental Disorders and Toxoplasmosis: What We Can Learn from Rodents
9:05	Joseph P Garner	Immune Function, Stress, and Mouse Enrichment: Why Should We Care?
9:35	Susan E Erdman	Social Defeat Stress, Bacteria, and Cancer

## PLATFORM SESSIONS

### \* Clinical I

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 7  
Moderator: Deborah M Mook  
Facilitator: Stephen W Dennis

8:00	PS31 Spontaneous Acute Tumor Lysis Syndrome in Swiss Webster Mice with Spontaneous Leukemias and Lymphomas
	S Rasmussen*, K LaPerle, S Couto, J White, V Gillespie, FR Wolf
8:15	PS32 Clinical and Pathological Characterization of Xenogeneic Graft-versus-host Disease in NOD- <i>scid</i> <i>IL2Rγ<sup>null</sup></i> Mice
	HN Burr*, JC Markley, JR White, SS Couto
8:30	PS33 Incidence, Evaluation of Sampling Techniques, Isolate Diversity, and Antibiotic Susceptibility of <i>Corynebacterium bovis</i> in Immunodeficient Mice
	HN Burr*, NS Lipman, A Toma, FR Wolf

8:45	PS34 Abnormally High Serum Potassium Levels in Laboratory Guinea Pigs and Rodents Caused by CO <sub>2</sub> Euthanasia-Induced Respiratory Acidosis
	P Cowley, B Hayes, A Greene, WR Shek*
9:00	PS35 Poliomyelitis in SCID Mice Following Injection of Basement Membrane Matrix Contaminated with Lactate Dehydrogenase-elevating Virus
	JA Carlson*, R Garg, SR Compton, C Zeiss, E Uchio
9:30	PS36 Spontaneous Lymphoma in Glutamic Acid Decarboxylase T-cell Receptor Transgenic Mice
	AJ Burich*, PM Treuting, JA Gebe, TL Brabb
9:45	PS37 Development and Implementation of Multimedia Content for Web-based Rodent Microsurgery Courses
	S Baran*, J Kehler, E Johnson, F Hankenson
10:00	PS38 Cesarean-derived SPF Sheep for Biomedical Research
	RJ Hurley*, JJ Hurley
10:15	PS39 Clinical Complications in Watanabe Heritable Hyperlipidemic Rabbits on a High-cholesterol Diet
	LD Gallagher*, C Forrider, S Stone, L Wancket, D DaCunha, S Lewis, B Farrar, M Kariisa, S Rajagopalan
10:30	PS40 Use of Tricaine Methanesulfonate for Euthanasia of Reptiles
	NE Hahn*

### Neurobehavioral Sciences

8:00 a.m.–10:45 a.m.

Room: Wabash Ballroom 2  
Moderator: Thea L Brabb  
Facilitator: Dorothy Loud

8:00	PS41 Does Sex Matter in a Rhesus Macaque ( <i>Macaca mulatta</i> ) Model of Focal Stroke?
	SJ Murphy*, JR Kirsch, W Zhang, M Grafe, PD Hurn
8:15	PS42 Characterizing the Neurological Phenotype of the Spontaneous Mutant Ataxic OFA Rats
	ST Chou, KL Walter*, E Ahearn, A Harper, R Driscoll, LA Conour
8:30	PS43 Normal Feeding and Body Weight in Fischer 344 Rats Lacking the Cholecystokinin-1 Receptor Gene
	J Blevins, J Overduin, J Fuller, D Cummings, K Matsumoto, DH Moralejo*
8:45	PS44 Novel Neonatal Non-invasive Motor Function Test with Potential Application for Neuromuscular Diseases
	CS Pater*, S Ramboz, M Winberg, A Chen, N Edgar, B El-Khodor
9:00	PS45 Validation of Chronic Mild Stress in Rodents as a Translational Model of Clinical Depression
	TA Swanson*, G Lessard, K Muravnick, RP Giovanelli, L Badura, PA Seymour, S McLean, M Moalli

### Refreshment Break

Exhibit Hall Lounge

- 9:00 a.m.–11:00 a.m. (sponsored by Rees Scientific Corporation)

- 9:30 PS46 Establishment of a Reproducible Surgical Stroke Model in the Nonhuman Primate  
M Sasaki, J Kocsis, S Rubino\*
- 9:45 PS47 Role of Positive Reinforcement Training in Creating a Reproducible Surgical Stroke Model  
S Rubino\*, M Sasaki, J Kocsis
- 10:00 PS48 Establishment of a Nonhuman Primate Cognition Laboratory  
JA Vivian\*, JL Basile, MR Tinsley, R Morris, N Poy, D Brandt, C Waugh, L Santarelli

## SPECIAL TOPIC LECTURES

### \* Building Sustainability and Reducing Your Facility's Carbon Footprint

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 2  
Speaker: Christopher M Trent  
Moderator: Peter R Brown  
Facilitator: Jose D Chinchilla

The mission of our Green Campus Initiative is to “make the university a living laboratory and learning organization for the pursuit of campus sustainability.” In keeping with this mission statement, application was made to fund an energy-savings initiative that would examine, implement, and evaluate energy conservation in the newest campus animal facility. With programs for the recycling and composting of paper and animal cage waste, the incorporation of energy-efficient lighting, and the use of process-chilled water for cooling of autoclaves in place, a three-phase program for additional conservation of campus steam, chilled water, and electricity was implemented. Phase I data showed an annualized decrease in energy usage/cost of 11.5% or \$33,480 for electricity, 18.5% or \$56,920 for steam consumption, and 35.2% or \$99,558 for chilled water usage. More complete data comparing overall facility usage during the first baseline year of operation and subsequent years of occupancy following the implementation of the energy reduction program will be presented. The target audience includes managers, directors, engineers, and architects. Participants will learn about cost savings associated with incorporating green strategies in all aspects of animal facility planning and operation.

### Charles River Foundation Ethics and Animal Welfare Lecture

#### \* Animal Behavior: A Hard Sell of a Not-So-Soft Research Discipline

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 5  
Speaker: Georgia J Mason  
Moderator: Marilyn J Brown  
Facilitator: Deborah S Gaffney

The evolution of behavior is responsible for animals' complex nervous systems and for phenomena like learning, affect (emotions), and consciousness. Observing animal behavior plays a key role in husbandry, veterinary diagnoses, objective animal welfare assessment, and many research disciplines (such as behavioral neuroscience). Yet despite this, studying behavior is often denigrated as “soft,” even anthropomorphic. Why? Is this justified? And how can concerns about vagueness or subjectivity be reconciled with the real need for behavioral data? This presentation will argue that the main reason for the

“soft” slur is that, typically, ethological research does not involve intimidating jargon or expensive technology: poor ethological research is therefore immediately easier to detect than is, say, poor research reliant on microarrays, and furthermore, the unspecialized or untrained can easily dabble in ethology. Behavioral research is, however, often done superbly, with clear hypotheses, the careful control for confounds, and flawless statistical analyses; examples and methodological pointers for those keen on improving their abilities to conduct or critique ethological studies will be presented. Participants will learn why the founding fathers of ethology, Konrad Lorenz and Niko Tinbergen, were awarded Nobel Prizes for Medicine their work on the behavior of geese, gulls, and other animals, and what their legacy is today, particularly the aims and methods of behavioral ecology and comparative cognition—two inspiring fields at the forefront of modern ethological research. The most inspiring examples of superb research on the evolution of behavior in wild animals, on nonhuman cognitive abilities, and also on animal welfare and relate these to laboratory animals will be presented. Finally, an overview of how to conduct behavioral research well versus poorly, including how to avoid poorly defined terms, observer effects, recording biases, and excessively noisy data, will be presented.

*This special topic lecture is sponsored in part by the Charles River Foundation.*

### \* The Effects of Physical Crowding on Job Satisfaction and the Risk of Injury in Laboratory Animal Technicians

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 4  
Speaker: Tonya R Hargett  
Moderator: Bruce W Kennedy  
Facilitator: Christie L Hart

Does working in crowded animal rooms influence job satisfaction and increase the risk of injury in laboratory animal technicians? Laboratory animal technicians (LATs) working in animal rooms for the purpose of caring for biomedical research animals may have limited space, depending on the size of the room, to maneuver around animal racks, storage racks, and a work hood. At times, the LAT may have to remove equipment and animal caging from the room in order to work efficiently. Research conducted to assess effects of human crowding mostly notes adverse effects and suggests that individuals working in this type of environment for short periods of time demonstrate behaviors such as aggression, lower task performance, poor memory, and anxious feelings. This presentation will introduce the findings of an IRB-approved study conducted to assess

the effects of physical crowding on job satisfaction and the risk of increased injuries in LATs. For the purpose of the study, physical crowding is defined as a perceived physiological feeling that is a result of the density of inanimate objects such as animal racks, laminar flow hoods, and storage racks within the work environment. Several AAALAC-accredited programs in North Carolina granted permission for their LATs to complete an online survey and participate in a focus group. Analysis revealed that physical crowding has a statistically significant impact on job satisfaction, predicting that as physical crowding increases, job satisfaction decreases; as the years of experience increases, perceived physical crowding decreases; and as perceived physical crowding increases, number of injuries increase which was also shown to have a statistically significant impact on job satisfaction. It is important to understand how crowded animal rooms affect technicians because their performance can directly or indirectly affect the animal and, sequentially, the research. The well-being of animals used in biomedical research depends on the people who care for them. The implications of this study are relevant for an audience of managers, directors, and technicians from animal care programs.

## Meetings & Events

- **AALAS Foundation Silent Auction: 8:00 a.m.–5:00 p.m., across from Registration**
- **Affiliates Meeting/Breakfast (invitation only): 7:30 a.m.–9:00 a.m., Marriott, Denver**
- **AREA Teachers Program: 9:00 a.m.–2:00 p.m., Rm 116**
- **ATA New Product Showcase: 9:00 a.m.–5:00 p.m., between Exhibit Hall entrances**
- **Branch Leadership Meeting: 5:00 p.m.–6:00 p.m., Wabash Ballroom I**
- **Editorial Review Board Meeting: 10:00 a.m.–11:00 p.m., Rm 111**
- **Editorial Staff Meeting: 8:00 a.m.–10:00 a.m., Rm 111**
- **Lab Animal Breeders Meeting: 7:30 a.m.–8:30 a.m., Westin, Capitol III**
- **New England Branch Breakfast: 7:00 a.m.–9:00 a.m., Marriott, Ballroom 4**
- **Spouse's Hospitality: 8:00 a.m.–11:00 a.m., Marriott, Santa Fe**
- **STERIS 5K Run: 6:00 a.m., Westin Lobby**
- **Technician Branch Representative (TBR) Meeting: 7:30 a.m.–9:00 a.m., Rm 140**
- **Technician Fun Fair: 8:30 a.m.–5:00 p.m., CTAD Booth**
- **VAVMO & VMU Supervisors Business Meeting: 12:00 p.m.–2:00 p.m., Westin, Cameral**

### Wallace P Rowe Lecture

#### 88 Sleep and Fatigue During Infectious and Inflammatory Disease: The Crossroads of Immunology and Behavior

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 3

Speaker: Linda A Toth

Moderator: Susan E Erdman

Facilitator: Christine A Bosgraaf

Many people suffer from a wide variety of disorders that can be associated with fatigue, non-restorative sleep, and excessive daytime sleepiness. The causes of these conditions can be infectious (such as viral hepatitis, human immunodeficiency virus, herpesviruses) or non-infectious (such as renal failure, autoimmune diseases, cancer), and encompass not only the disease itself but also the associated therapies. Excessive sleepiness and fatigue, particularly when persistent, reduce the quality of life of affected individuals and also cause significant economic loss in terms of increased error rates, reduced productivity, and diminished employment capability. The growing importance of fatigue in our society has stimulated a need to expand our understanding of this debilitating symptom. A considerable body of research documents strong interactions among immune or inflammatory challenge and fatigue, excessive sleepiness, or poor sleep. This presentation will illustrate how mice can be used to identify genes and mechanisms that contribute to fatigue and disturbed sleep during infectious disease.

*This special topic lecture is sponsored in part by the American Committee on Laboratory Animal Disease (ACLAD) and Research Animal Diagnostic Investigative Laboratory (RADIL).*

## AFTERNOON

### PANEL DISCUSSIONS

#### ★ Diversity: Issues in Laboratory Animal Science

12:00 p.m.–1:30 p.m.

Room: 120

Leader: Leanne C Alworth

Moderator: William A Hill

Facilitator: Christopher O Meshida

Panelists: Lisa Greenhill, Carlos Campoy, Krystal L Ardayfio, Patrick E Sharp

This panel discussion will focus on personnel diversity issues in the laboratory animal science field. General topics will include the benefits of diversity in the lab animal workplace, challenges of diversity, and how research institu-

tions and individuals can address diversity issues. Specifics may include different cultural attitudes about animals and their use; language barriers during communication among researchers, animal care staff, and the IACUC; how diverse ideas can benefit an institution or animal care and use program; and tips for successfully addressing diversity challenges. This discussion will be addressed to a wide target audience. Any member of the lab animal field may benefit from attending. Participants will learn about issues of diversity in the laboratory animal field, and gain insight into why diversity matters, how diversity benefits the lab animal work environment, what challenges diversity may bring, and how those challenges can be successfully addressed.

#### ★ Getting the Most Out of Your AALAS Membership

12:00 p.m.–1:30 p.m.

Room: Wabash Ballroom 3

Leaders: Stacy L Pritt, Todd A Jackson

Moderator: Stacy L Pritt

Facilitator: Tamara Goodman-Kuhel

Panelists: Michael F Gliganic, Debra D Lust, Christie L Hart, Marc S Hulin, Linda K Fulton, Leta D Eng

This panel discussion will address general questions and concerns of the general membership regarding issues that can affect every AALAS member. Issues to be addressed include certification and registry, timelines for new certification manuals, and how to become CMAR certified. Panelists will consist of AALAS committee members and staff, and will highlight professional development, leadership, and networking opportunities available within AALAS at all levels. Included will be a brief presentation on how committees are structured, who appoints members, and how to get involved or mentor another member's involvement. The goal of this panel discussion is to emphasize how membership involvement is the driving force behind the organization. This panel discussion will benefit all AALAS members and those who are interested in membership.

*This panel discussion is sponsored in part by Professional Development Coordinating Committee (PDCC).*

#### ★ AALAS Grants for Laboratory Animal Science

12:00 p.m.–1:30 p.m.

Room: Wabash Ballroom 1

Leader: Daniel D Myers Jr

### Past Presidents' Luncheon

12:00 p.m.–2:00 p.m., Marriott, Denver

### Charles River Foundation Lecturer Georgia Mason

Prof. Georgia Mason is a behavioral biologist interested in the chronic effects of standard housing on brain, behavior, and welfare; the objective assessment of welfare; and the factors that allow some individuals or species to cope with captivity more easily than others. She has a PhD in animal behavior from Cambridge University, where she also held a post-doctoral research fellowship. Her presentation, entitled "Animal Behavior: A Hard Sell of a Not-So-Soft Research Discipline," will provide an overview of the aims and methods of behavioral ecology and comparative cognition as well as tips on how to conduct behavioral research well. She will also present the most inspiring examples of superb research on the evolution of behavior in wild animals, on nonhuman cognitive abilities and constraints, and on animal welfare in relation to laboratory animals.

Prof. Mason taught comparative anatomy and animal behavior in Oxford University's Zoology Department. She is currently a research chair in the Animal Sciences department at the University of Guelph and a visiting professor in welfare physiology at the Royal Veterinary College in London. Her laboratory animal projects have included investigating the effects of early enrichment on later welfare in mice, different cage-cleaning regimes on rat and mouse welfare, and weaning age on mouse anxiety. In 2005 she received the Charles River Excellence in Refinement Award sponsored by Charles River and the John Hopkins University's Center for Alternatives to Animal Testing.



Charles River Lecturer • November 11

Moderator: Sylvia I Gografe  
Facilitator: Maria E Lehto  
Panelists: Sherril L Green, Diana G Scorpio, Debra L Hickman

The AALAS Scientific Advisory Committee (SAC) oversees the Grants for Laboratory Animal Science program (GLAS), established by AALAS in 2006 to enhance scientific knowledge in laboratory animal health and welfare through research and to further promote collaborative efforts by the AALAS membership within the broader scientific community. Current AALAS members are invited to apply for one-year grants of up to \$25,000. The principal investigator must be an AALAS member; however, AALAS membership is not required for collaborators. Principal investigators (veterinarians, technicians, research scientists) are encouraged to include collaboration with other researchers in their proposals. A panel of SAC members and a recent grant awardee will present an overview and an update of the program and invite discussion. Topics to be presented include the review process, timeline for submissions of proposals, funding priorities, previously funded awards, and award budget.

*This panel discussion is sponsored in part by the AALAS Scientific Advisory Committee (SAC).*

### ★ The Capacity of Animal Holding Rooms for Rodent Caging: Is More Always Better?

12:00 p.m.–1:30 p.m.

Room: 123  
Leader/Moderator: Mike McGarry  
Facilitator: Roger Mohan  
Panelists: Jerry Percifield, Michael J Huerkamp, Stacy A LeBlanc

The number of mouse cages that can be placed in an animal holding room is a function of many different variables. For maximum revenue generation, cages per square foot are maximized. To the facility manager and the animal care technicians responsible to change cages, access to the racks with clean cages and other service equipment is a limiting factor. Health technicians would like to be able to see animals in each of the cages without moving heavy racks, and investigators may or may not want ready access to the room. There is a practical limit to the number of researchers that can effectively share the same holding room. Some may prefer or require dedicated rooms. Procedure space may or may not need to be provided within the holding room. This panel discussion will address the impact of these sometimes conflicting perspectives, with emphasis on their importance in facility design and operation. The target audience includes those involved in the design and operation of rodent facilities, cage and rack manufacturers, and administrators who oversee revenue generation from animal holdings. Attendees will learn the major variables that affect decisions for holding room size and the density of cages within rooms. Conflicting priorities can affect operational efficiencies and user-friendliness. Consideration of these variables should lead to a better understanding of the needs of all those involved in the design and use of the mouse holding room.

### Committee Meetings

- **Nominations Committee: 9:00 a.m.–11:00 a.m., Rm 112**
- **Professional Development Coordinating Committee: 2:00 p.m.–5:00 p.m., Rm 113**
- **ad hoc Vet Tech Committee: 3:00 p.m.–5:00 p.m., Rm 112**

## WORKSHOPS

### ★ W-15 Introduction to Microsurgery

12:15 p.m.–5:30 p.m.

Room: Offsite  
Leader: Robert F Hoyt Jr  
Faculty: Michele D Allen, Tanya H Burkholder, Randall R Clevenger, Kelly E Cole, Tim J Hunt, Kenneth R Jeffries, Karen J Keeran, Shawn M Kozlov, Bernardo J Rosa, Hong San, Danielle A Springer, Arthur D Zetts, Gayle J Zywicke

Workshop Fee: \$250  
Workshop Limit: 20

Microsurgery is one of the most rapidly advancing techniques in human surgery. Using the operating microscope, human surgeons can now routinely perform procedures on very small structures that were impossible only a few decades ago. The use and impact of microsurgery in biomedical research, especially with the emerging genetically engineered rodent models, is only beginning to be realized. This workshop will provide an introduction to the basic techniques, equipment, and general applications of microsurgery in biomedical research. Following the overview presentation, the participants will be divided into small groups, each with their own instructor, for hands-on training. Training will be conducted in two

### Receptions

- **Poster Reception: 3:00 p.m.–5:00 p.m. (presenting authors present), Exhibit Hall, poster area**
- **Lab Products Reception: 6:30 p.m.–8:30 p.m., Marriott, Marriott Ballroom**

phases: teaching students to develop technical skills by performing exercises using the operating microscope with microsurgical instruments, and applying these skills to perform simple surgical procedures using mice.

*This workshop is sponsored in part by Lone Star Medical Products, OR Specialities, and Instech Solomon.*

### ★ W-08B How to Motivate Employees

1:00 p.m.–5:00 p.m.

Room: 105  
Leader/Faculty: Martin Seidenfeld  
Facilitator: William T Gietz  
Workshop Fee: \$130  
Workshop Limit: 50  
(also offered Monday, November 10, 1:00 p.m.–5:00 p.m.)

Employees do things for their own reasons, not necessarily for the reasons the organization would like. This workshop will cover the 10 most important factors that motivate workers to feel happy and content and willing to give their best. We will focus on how to identify each employee's most important motivators (not all employees are motivated by the same things!) and how to use that knowledge to selectively reinforce desired behavior. Participants will have the opportunity to consider the special motivational techniques they will use with their actual employees.

### ★ W-16 Effective Scientific Writing for Veterinary Staff and Scientists: Intermediate Course

1:00 p.m.–5:00 p.m.

Room: 103  
Leader: Julie Watson  
Faculty: Sarah L Poynton, Julie Watson  
Facilitator: Chandra D Williams  
Workshop Fee: \$100  
Workshop Limit: 15

This half-day workshop will address the needs of the veterinary staff and scientists who are establishing their publication presence in *Comparative Medicine*, *JAALAS*, *Lab Animal*, and similar peer-reviewed journals. The workshop will comprise didactic elements and interactive exercises, with use of numerous examples. Participants will learn the fundamentals of different types of manuscripts such as original research reports, case reports, and management case reports, and the factors to consider in selecting their target journal. They will learn the basic structure of a scientific paper and how to write effective titles, abstracts, introductions, methods, results, and discussions. Emphasis will be placed on the parts of a paper that are typically the most challenging for the novice author, such as clearly explaining goals and hypotheses. The peer-review process will also be introduced, thereby allowing novice authors to anticipate cri-

## Refreshment Break

### Exhibit Hall Lounge

- 1:00 p.m.–3:00 p.m. (sponsored by Priority One)

sections of a draft paper to the workshop leader two weeks in advance of the conference in order to receive individual feedback and guidance on their writing style. The workshop leader is Sarah Poynton, PhD, associate professor of molecular and comparative pathobiology, at Johns Hopkins University School of Medicine in Baltimore. Dr. Poynton conducts research, diagnosis, and teaching in laboratory animal medicine, especially parasitology. She is a highly regarded teacher of scientific communication skills, a reviewer for scientific journals, and a freelance scientific editor. Teaching with Dr. Poynton will be Julie Watson, MA, VetMB, DACLAM, assistant professor of molecular and comparative pathobiology at Johns Hopkins. Dr. Watson is the director of rodent medicine and surgery programs at Johns Hopkins.

*This workshop is sponsored in part by Harlan Teklad.*

### \* W-17 A User's Guide to Transgenic Mice: How to Maximize Production and Minimize Frustrations

1:00 p.m.–5:00 p.m.

Room: 104

Leaders: Sonja T Chou, Chris S Aitken

Faculty: Laura A Conour, Sonja T Chou

Facilitator: Dawn M Nines

Workshop Fee: \$130

Workshop Limit: 50

This workshop is targeted towards laboratory animal technicians and managers involved in rodent production colonies and aims to provide a background for better understanding the trials and tribulations inherent in breeding genetically manipulated mice. A notebook will be provided to each workshop attendee that covers topics on rodent genetics, reproductive biology, transgenic technologies, genotyping principles, and background and phenotypic effects on breeding. The first segment of the workshop will consist of lectures reviewing basic knowledge necessary to working with transgenic mice. The second segment of the workshop will be interactive scenario-based learning that covers the maintenance of production colonies based on project goals, and the troubleshooting of mouse production colonies. Workshop attendees are encouraged to bring their own transgenic production issues and successes for discussion by the group. A friendly, team-based game show format will be used to review workshop contents during the final segment of this workshop. Participants will learn how to interact with investigators by learning transgenic terminology and technology concepts, how to establish transgenic rodents in breeding colonies to meet investigators' study needs, and how to troubleshoot common problems related to breeding genetically manipulated mice.

## SEMINARS

### \* Improving Operational Efficiency in Animal Resource Management Using Lean Thinking

2:15 p.m.–5:00 p.m.

Room: Sagamore Ballroom 4

Leader: Karen L Rogers

Moderator: Howard G Rush

Facilitator: Kelly M Hugunin

Animal care is a labor-intensive service industry. In fact, direct labor is the largest factor in determining the costs associated with animal care, representing 50% to 65% of the cost structure in animal research, according to

techniques from journal reviewers and editors and to respond to reviews accordingly. Participants will receive a workbook and handouts of reference material. Participants are encouraged to submit selected

the National Research Council. In labor-intensive industries, a wide range of strategies are used to contain labor costs. Three common approaches are to replace direct labor with automation, increase operational efficiencies, and improve employee performance. Lean thinking is a management system developed by Toyota to improve the quality and efficiency of automotive manufacturing. Often called the Toyota Production System, lean thinking is widely applied in manufacturing and non-manufacturing industries as a means to increase operational efficiencies. It has recently been applied in the health care industry. The core goals of lean thinking are to create value for customers and reduce waste. In animal resource management, customers can be external, such as investigators using animals in research, or internal, such as technicians, supervisors, and veterinarians. Waste can be defined as any activity or step in a process that does not add value for the customers. Thus, lean thinkers must identify and eliminate non-value-added steps in the process being reviewed. The participants will learn about the lean thinking principles and tools used in evaluating a process at their institution. Participants are also given an overview of several processes at three different institutions that underwent evaluation. Speakers will discuss the process they evaluated, conclusions drawn, and provide an evaluation of how use of these principles and tools assisted with implementation and revision of processes. The discussion will be aimed at all levels of a laboratory animal organization (veterinarians, technicians, administrators, supervisors) and any process within an organization that could benefit from use of the tools.

#### Speakers/Topics:

2:15	Karen L Rogers	Welcome and Introductions
2:20	Howard G Rush	What Do Building Cars and Changing Mouse Cages Have in Common?
2:35	Jim Luckman	Transformation Using Lean Principles and Practices
3:05	Karen L Rogers	Analysis of Rodent Medical Issues at the University of Michigan
3:35	Donna M Jarrell	Establishing an Empowering Organization to Support Lean's Principle of Continuous Improvement
4:05	Nancy S Figler	Use of Agile Processes to Gain Efficiency in Husbandry Practices in Industry

### \* Laboratory Animal Science Associations and Federations around the World: Their Members, Programs, and Meetings

2:15 p.m.–5:00 p.m.

Room: Sagamore Ballroom 3

Leader/Moderator: Patricia J Sikes

Facilitator: Kerri A Swigart

This seminar will give an overview of the laboratory animal science associations around the world. There are many national associations, but also international federations. Speakers will each give a 20-minute overview of their organization's history, membership, objectives, and programs and highlight differences and similarities with AALAS. The target audience for the seminar includes administrators, animal technicians, facility managers, IACUC members, and veterinarians.

*This seminar is sponsored in part by the International Relations Advisory Council (IRAC).*

#### Speakers/Topics:

2:15	Patricia J Sikes	Welcome and Introductions
2:20	TBA	AALAS Overview
2:40	Denna M Benn	Canada (CALAS/ACSL)
3:00	Javier Guillen	Europe (FELASA)
3:20	Malcolm France	Australia/New Zealand (ANZLAA)
3:40	Tsutomu Kurosawa	Asia (AFLAS)
4:00	Eugenia Aguilar Najera	Mexico (AMCAL)
4:20	Sylvia B Ortiz	Brazil (COBEA)

✱ Regulations and Requirements: What's New and What's in the Works

2:15 p.m.–5:00 p.m.

Room: Sagamore Ballroom 2

Leader/Moderator: B Taylor Bennett

Facilitator: Heather D Boreighner

When it comes to the regulations and requirements that govern the care and use of laboratory animals, it seems that things are constantly changing. These changes can come about because of changes in statutory language such as what took place with the requirements of the Office of Management and Budget's (OMB) Final Bulletin for Agency Good Guidance Practices. They can be the result of proposed changes in existing regulations, like what has recently occurred with the transportation standards for animals. They can be the result of updates of a significant guidance document or the release of new ones, such as is occurring at the Institute for Laboratory Animal Research with the release of the Distress Panel report and with the new effort to update the *Guide*. Keeping up with these changes and being prepared to make appropriate programmatic revisions requires an ongoing dialogue with the regulatory, funding, and accrediting agencies, as well as with those who monitor the legislative process. This seminar will provide attendees with an opportunity to hear from representatives of the USDA, OLAW, AAALAC, ILAR, and NABR and to discuss with those representatives issues that impact the environment in which we work. Question for the panelist can be submitted to [tbennett@nabr.org](mailto:tbennett@nabr.org).

**Speakers/Topics:**

2:15	B Taylor Bennett	Welcome and Introductions
2:30	Betty Goldentyer	Update from Animal Care
3:00	Patricia A Brown	Update from OLAW
3:30	James R Swearingen	Update from AAALAC
4:00	Joanne Zurlo	Update from ILAR
4:30	Matthew R Bailey	Update from NABR

✱ Rodent Microbial Flora (Mouse Bugs): Good Bugs, Bad Bugs, and Emerging Issues

2:15 p.m.–5:00 p.m.

Room: Sagamore Ballroom 5

Leader/Moderator: Cory F Brayton

Facilitator: Mia M Nettik

What microbes (bugs) do you want to have in your mice? What microbes should you expect? What microbes should concern you, and when? What are Schaedler's flora, and why should you know? Why do we test for so many agents when our mice are not sick? What agents are commensal, opportunist, or pathogens? Are FELASA or other testing recommendations relevant to you? What should you know about them? This seminar aims to demystify concepts of normal flora; commensal, opportunist, and pathogenic agents; and testing recommendations; and to highlight some of the issues relevant to mouse import and export. The presentation targets all persons who work with research mice—scientists, veterinarians, and research and technical staff.

*This seminar is sponsored in part by Charles River, Research Animal Diagnostic Investigative Laboratory (RADIL), and Taconic.*

**Speakers/Topics:**

2:15	Cory F Brayton	Welcome and Introductions
2:20	Roger P Orcutt	Good Flora: Schaedler's Cocktails and Flora You Want to Have
2:55	Werner Nicklas	Opportunists & Pathogens: An EU Perspective
3:30	Craig L Franklin	Opportunists & Pathogens: A US Perspective
4:05	Charles B Clifford	Emerging Disease Issues in Mice and Rats