

## MORNING

### WORKSHOPS

#### ★ W-01 Thawing and Surgically Transferring Mouse Embryos

7:15 a.m.–12:30 a.m.

Room: Offsite

Leader: Jennifer J Corrigan

Faculty: Jennifer J Corrigan, Andree Lapierre, Joseph Gile, Leanne York

Workshop Fee: \$250

Workshop Limit: 20

The Jackson Laboratory strives to efficiently distribute more than 2,800 strains of JAX Mice to the biomedical research community. Some of these strains exist as live colonies on the shelf, while others are cryopreserved and are therefore amenable to supplying researchers with frozen embryos rather than live mice. Because only a limited number of institutions are trained in the necessary techniques to ensure successful production of live mice from frozen embryos, we have developed a hands-on training program to acquaint new users with the appropriate methods to thaw, handle, and recover cryopreserved mouse embryos. These measures will reduce the failure rate among laboratories receiving cryopreserved embryos for the first time and will help speed the adoption of this very efficient approach for shipping and importing mouse strains. This workshop covers the generation of pseudopregnant recipient females, how to thaw mouse embryos, and how to conduct mouse embryo transfer surgery.

*This workshop is sponsored in part by The Jackson Laboratory.*

#### ★ W-02 Primer for Positive Reinforcement Training

7:15 a.m.–12:30 p.m.

Room: Offsite

Leaders: Ginny L Price, Susan M Hart

Faculty: Susan M Hart, Jennifer L Wheatley

Workshop Fee: \$250

Workshop Limit: 20

This workshop will include an overview of the basic principles of positive reinforcement (operant conditioning) using the clicker. Hands-on practice for animal care staff, veterinary, and research technicians will be accomplished. A session on training laboratory rats to perform “agility” tasks is also scheduled. This will be followed with discussions on how to apply skills learned with other common laboratory species.

*This workshop is sponsored in part by Harlan.*

#### ★ W-03 QuadSpeak: How to Speak In, Out, Up, and Down Effectively

8:00 a.m.–12:00 p.m.

Room: 102

Leader: Paul McKellips

#### 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: 8:30 a.m.–5:00 p.m., Exhibit Hall**
- **Career Center: 8:00 a.m.–5:00 p.m., Rm 109**
- **Exhibit Hall: 8:30 a.m.–5:00 p.m. (opening ceremony 8:30 a.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**
- **Poster set-up by presenting author: 7:30 a.m.–8:30 a.m., Exhibit Hall**

Faculty: Matthew R Bailey

Facilitator: Tamara Goodman-Kuhel

Workshop Fee: \$100

Workshop Limit: 20

Professionals working on all fronts of humane and responsible animal research continually face communications challenges. Valid or not, everyone has an opinion about animal research, and those working in the industry often find themselves in a position where they have to speak to those industry issues. This workshop is designed to empower and equip professionals with the communication skills and techniques necessary to perform four speaking objectives flawlessly. These objectives are: 1) Speak in: How do we effectively communicate the frontiers of our profession within our own social circles? How do we speak “in” to our friends, neighbors, and colleagues without disguising our jobs or apologizing for being on the frontlines of medical research? 2) Speak out: In some cases, we will find ourselves with a microphone in our face and the camera turned on. What do we say? How do we say it? Why does our body language say one thing when our lips are saying something else? How do we effectively speak “out” to the media? 3) Speak up: Professionals need to learn how to effectively prepare and speak “up” to internal stakeholders in order to best position the organization prior to an animal activist event or a media situation; 4) Speak down: Many professionals have the opportunity to speak to public school classrooms, school tours, and extra-curricular youth clubs. We are speaking to an audience that has

already been influenced by animal activist groups. We are speaking down in years to a much younger audience. But how do we speak “down” without speaking down? How can we get the “passionate puppy people” to understand and accept the role of humane and responsible animal research? This workshop will provide on-camera training and will equip each participant with the skills necessary to speak in, out, up, and down. Each participant will role-play with a reporter and cocktail party “friend” on camera both before and after training. The target audience is anyone in the laboratory research field.

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

8:00 a.m.–12:00 p.m.

Room: 105

Leader/Faculty: Martin Seidenfeld

Facilitator: Aubie A Gaudette

Workshop Fee: \$130

Workshop Limit: 50

(also offered on Tuesday, November 11, 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-05 Item Writing for the Technician Certification Examination

8:00 a.m.–12:00 p.m.

Room: 103

Leader: Marc S Hulin

Faculty: Marc S Hulin, Larry L Barbour, Sally A Westlake

Facilitator: Spencer D Bridges

Workshop Fee: Free

Workshop Limit: 50

Writing test questions for the technician certification exams has long been the responsibility of the AALAS Certification and Registry Board (CRB). In the past, this responsibility has been split between the committee members and an outside consultant. As the best questions come from content experts, the CRB has decided to reach out to the AALAS membership for assistance with this important task. One-third of the session will be an introduction to item writing. The remaining time will be spent writing questions in small groups and evaluating the effectiveness of the items generated by the group. This workshop will fulfill the training requirement to become an approved item-writer for the CRB. It will also provide attendees with skills that can be used in training programs at their home institutions. Participants will also earn CEUs that can be used for the Certification Registry. The target audience includes program directors, facility managers, supervisors, and LAT- and LATG-certified technicians.

*This workshop is sponsored in part by the AALAS Certification and Registry Board (CRB).*

## SEMINARS

### **Animal Models of Substance and Addiction: Implications for Science, Animal Welfare, and Society**

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 3

Leader/Moderator: Patricia L Foley

Facilitator: Dawn N Nines

This seminar will review commonly used animal models for studying substance abuse and addiction with a focus on rodent and nonhuman primate models. Different perspectives on this area of animal research will be presented. The distinctions between drug addiction, substance abuse, and physical dependence will be defined and explained in the context of appropriate animal models for studying these separate but related clinical problems. Clinical management and husbandry concerns associated with maintaining these models, animal welfare issues, and public concerns with some of these models will all be addressed. Recent advances resulting in more effective treatments and enhanced understanding of the pathophysiology of drug addiction will be also be presented.

#### Speakers/Topics:

8:00	Patricia L Foley	Welcome and Introductions
8:15	Wendy J Lynch	Animal Models of Substance Abuse and Addiction
8:55	Mario E Dance	Veterinary and Husbandry Issues Associated with Substance Abuse Research
9:35	Katherine L Nicholson	Ethical Considerations Related to Substance Abuse Research

### **Animal Welfare, Stress Management, and Current Telemetric Physiological Monitoring Methods**

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 2

Leaders: Klaas Kramer, Dan Huetteman

## Meetings & Events

- **AALAS Foundation Silent Auction: 8:00 a.m.–5:00 p.m., across from Registration**
- **Allentown Inc.: 8:00 p.m.–10:00 p.m., Hilbert Circle Theatre**
- **ATA New Product Showcase: 8:30 a.m.–5:00 p.m., between Exhibit Hall entrances**
- **Covance Meeting: 9:00 a.m.–11:00 a.m., Rm 111**
- **District 1 Membership Meeting: 6:00 p.m.–7:00 p.m., Wabash Ballroom 2**
- **District 2 Membership Meeting: 6:00 p.m.–7:00 p.m., Rm 103**
- **District 3 Membership Meeting: 6:00 p.m.–7:00 p.m., Wabash Ballroom 1**
- **District 4 Council: 8:00 a.m.–10:00 a.m., Rm 113**
- **District 4 Membership Meeting: 6:00 p.m.–7:00 p.m., Rm 102**
- **District 5 Council: 2:45 p.m.–4:45 p.m., Rm 111**
- **District 5 Membership Meeting: 6:00 p.m.–7:00 p.m., Wabash Ballroom 3**
- **District 6 Membership Meeting: 6:00 p.m.–7:00 p.m., Rm 105**
- **District 7 Membership Meeting: 6:00 p.m.–7:00 p.m., Rm 123**
- **District 8 Membership Meeting: 6:00 p.m.–7:00 p.m., Rm 120**
- **General Membership Corporate Foundation—Contributors Photography: 4:00 p.m.–4:30 p.m., Rm 210**
- **General Membership Meeting: 5:00 p.m.–6:00 p.m., Sagamore Ballroom 4**
- **Spouse's Hospitality: 8:00 a.m.–11:00 a.m., Marriott, Santa Fe**
- **Technician Fun Fair: 8:30 a.m.–5:00 p.m., CTAD Booth**
- **Technician Lunch & Learn (pre-registration required): 12:30 p.m.–2:30 p.m., Rm 209**

Moderator: Klaas Kramer

Facilitator: Justine Lucas

Radiotelemetry provides an alternative means of obtaining physiological measurements from awake and freely moving laboratory animals, without introducing stress artifacts. Totally implantable miniaturized radiotelemetry systems are valuable for animal models in biomedical and animal welfare research studies because these systems enable the acquisition of otherwise unavailable experimental data while also presenting substantial reduction and refinement alternatives. Traditionally, a variety of techniques have been employed to obtain physiological measurements in the laboratory. With the exception of studies on anesthetics and certain other types of experiments, it is generally demonstrated that the quality of such measurements, when collected from conscious animals, are superior, since they best represent the normal state of the animal and are most predictive of the results that

would be achieved in human beings. Long-term measurements of physiological parameters, like ECG, heart rate, body temperature, and BP, in freely moving laboratory animals with current high-fidelity radiotelemetry techniques are nowadays a valuable tool in pharmacological, toxicological, physiological, behavioral, and animal welfare study. The participants will learn information regarding the use of modern wireless monitoring methods that will be presented in a context of animal welfare, improved science, and the 3Rs. Participants will get a clear understanding of the utility of telemetric methods in assessing stress and will gain insight into effects of routine laboratory methods on subject animal well-being.

*This seminar is sponsored in part by Data Sciences International and Harlan Netherlands.*

#### Speakers/Topics:

8:00	Klaas Kramer	Welcome and Introductions
8:05	Klaas Kramer	Radiotelemetry in Small Laboratory Animal Research
8:35	Daniel Huetteman	From Mice to Minipigs: An Overview of Telemetry Implantation Procedures
9:05	Janneke Arts	Transportation as a Major Life Event in Rats: Effects on Welfare and Limits of Adaptation
9:35	Ingrid Schlij	Telemetric Monitoring of Right Ventricular Pressures in Rats

#### \* Concerns of the Animal Facility Director

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 5

Leader: Ravi J Tolwani

Moderator: Robert H Quinn

Facilitator: Julie Walls-Honeycutt

This presentation will center around issues most often addressed at the level of facility director. Attendees will learn ways to maximize the potential of their employees, create a positive working environment, and balance the books at the same time. This session is intended for anyone

## Refreshment Break

Exhibit Hall Lounge

- **8:30 a.m.–10:30 a.m.**  
(sponsored by NEPCO)

in a management position requiring them to deal with personnel issues, work environment, or the financial aspects of running an animal facility.

*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	Robert Quinn	Welcome and Introductions
8:10	Ravi Tolwani	Human Resource Arbitrage: Leveraging Your Staff to Achieve a High-performance Organization
9:00	Gary L Borkowski	Assessing Your Employees: Are They Engaged?
9:30	Dana E Weir	A "Grassroots" Approach Developed to Enhance Colleague Engagement in the Workplace
9:45	Mark J Zimmerman	TRIO (Teamwork, Recognition, Ideas, and Ownership): A Team for Work Culture Change
10:00	Pamela A Straeter	Can a Vivarium Manager Influence Organization Effectiveness?

#### \* Tuberculosis in Nonhuman Primates

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 4

Leaders: Joe H Simmons, Nick W Lerche

Moderator: Joe H Simmons

Facilitator: M Lynn Loney

Tuberculosis (Tb) is one of the most important bacterial diseases of nonhuman primates (NHPs) due to its high prevalence in the human population, its ability to rapidly spread from animal to animal via respiratory droplets, its high case fatality rate in many species of NHPs, and its zoonotic potential. Tb in NHPs can be caused by infection with either *Mycobacterium tuberculosis* or *M. bovis*. Once infected with either of these mycobacteria, NHPs develop a broad spectrum of disease including subclinical (latent) infection, chronic primary tuberculosis, rapidly progressing fulminant disease, or reactivation tuberculosis. While accurate diagnosis of tuberculosis infection in NHPs is of critical importance, the primary method for screening NHPs for Tb infection is the tuberculin skin test (TST), developed 100 years ago and relatively unchanged since. Unfortunately, recent studies have demonstrated that *M. tuberculosis*-infected macaques are only transiently TST positive, which complicates diagnosis of infected animals, and has led to the development of a variety of new diagnostic testing methods. The relative merits of the various Tb diagnostic tests will be discussed in the context of an overall diagnostic testing paradigm. This program will cover the basic biology and pathogenesis of tuberculosis in NHPs, including clinical disease, basic immunology, and both classic and novel approaches to Tb diagnosis.

*This seminar is sponsored in part by the Association of Primate Veterinarians (APV).*

#### Affiliate Events

- AAALAC International Emeritus/Council Networking Reception (invitation only): 6:00 p.m.–8:00 p.m., Westin, House
- ACLAM Certification Oversight: 8:00 a.m.–12:00 p.m., Westin, Congress II
- ACLAM Committee: 3:00 p.m.–5:00 p.m., Westin, Congress I
- ACLAM Continuing Education: 4:00 p.m.–5:30 p.m., Westin, Caucus
- ACLAM Exam Review: 1:00 p.m.–5:00 p.m., Westin, Congress II
- ASLAP Annual Lunch: 12:00 p.m.–2:00 p.m., Westin, Capitol I
- ASLAP Meeting - Vet Student Liaison Committee: 5:00 p.m.–5:30 p.m., Westin, Cabinet
- LAMA Foundation: 1:00 p.m.–3:00 p.m., Westin, Cabinet
- LAWTE Business Meeting: 1:00 p.m.–3:00 p.m., Marriott, Santa Fe

#### Speakers/Topics:

8:00	Joe H Simmons	Welcome and Introductions
8:05	Joe H Simmons	Review of MTb Complex Bacteria
8:35	David B Elmore	Clinical MTb Infections
9:05	Philana L Lin	Macaque Models of Human Tb
9:35	Nicholas W Lerche	New Approaches to Tb Diagnostics
10:05	Gale Galland	CDC Tb Review and Tb Consortium

## PLATFORM SESSIONS

### \* Laboratory Investigations I

8:00 a.m.–10:45 a.m.

Room: Wabash Ballroom 2

Moderator: Pete C Smith

Facilitator: Christine A Bosgraaf

- |       |                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:00  | PS1 Decrease in <i>Helicobacter hepaticus</i> Titers over Time in BALB/c Mice<br>CM Nagamine*, Z Ge, ME McBee, KA Knox, AB Rogers, JG Fox, DB Schauer                                                                                                                                                            |
| 8:15  | PS2 Lower Transmission of Mouse Minute Virus by In Vitro-produced Embryos Due to Cumulus Cells<br>E Mahabir Brenner*, D Bulian, R Schmöller, J Schmidt                                                                                                                                                           |
| 8:30  | PS3 Absence of Germline Transmission after Blastocyst Injection with Murine Embryonic Stem Cells Cultured with Mouse Hepatitis Virus and Mouse Minute Virus<br>E Mahabir Brenner*, K Reindl, J Mysliwicz, J Needham, D Bulian, K Markoullis, J Schmidt                                                           |
| 8:45  | PS4 Mycoplasmas Affect Cell Parameters of Murine Embryonic Stem Cells, Germline Transmission, and the Resulting Chimeric Progeny<br>K Markoullis, D Bulian, G Hölzlwimmer, L Quintanilla-Fend, H Zitzelsberger, K Heiliger, J Mysliwicz, CC Uphoff, HG Drexler, T Adler, DH Busch, J Schmidt, E Mahabir Brenner* |
| 9:00  | PS5 Comparing Mouse Parvovirus Infection of Susceptible BALB/c and Resistant C57BL/6 Mice Using Quantitative Polymerase Chain Reaction and Serologic Assays<br>KS Henderson, CL Perkins, LA Banu, SM Jennings, WR Shek*                                                                                          |
| 9:30  | PS6 Comparison of Side Effects between Buprenorphine and Meloxicam Used Postoperatively in Dutch Belted Rabbits ( <i>Oryctolagus cuniculus</i> )<br>CS Cooper*, KA Pate, C Barat, L Swarthout, J Anastasio, D Scorpio                                                                                            |
| 9:45  | PS7 Identification of a Novel Low-pathogenicity Rabbit Calicivirus in a Spontaneous Disease Outbreak in the United States<br>IL Bergin*, SR Bolin, M Kiupel, RK Maes, TP Mullaney, AG Wise                                                                                                                       |
| 10:00 | PS8 Role of the Gastrointestinal Microbiome in Cholesterol Gallstone Pathogenesis<br>JJ Fremont*, JG Fox, MC Carey, KJ Maurer                                                                                                                                                                                    |
| 10:15 | PS9 Single Nucleotide Polymorphisms that Differentiate Common Inbred Strains and Substrains of Mice<br>GW Bothe*, JL Seymour, JL Moran, SM Festin                                                                                                                                                                |
| 10:30 | PS10 Mouse Parvovirus Infection of Immunodeficient Mice<br>JD Macy*, PC Smith, J Wilson, SR Compton                                                                                                                                                                                                              |

### \* Husbandry/Management I

8:00 a.m.–10:45 a.m.

Room: Sagamore Ballroom 7

Moderator: Valerie A Hamlin

Facilitator: David J Disselhorst

- |      |                                                                                                  |
|------|--------------------------------------------------------------------------------------------------|
| 8:00 | PS11 New Solutions for Management and Husbandry: RFID Census and Wash Cycle Tracking<br>B Scher* |
| 8:15 | PS12 The Team Effect and Technician Efficiency<br>M Scribner*                                    |

- 8:30 PS13 Developing Meaningful Training in Laboratory Animal Science: An Educational Methodology  
SM Pack, P Clifford\*
- 8:45 PS14 Refining Rodent Paralysis Models through Animal Care Staff Involvement  
AD Heiser\*, E Westhoven, RJ Hurley, DM Jarrell
- 9:00 PS15 Development of Team Leaders in a Team-oriented Organization  
C Gibbons\*, J Fuller, DM Jarrell
- 9:30 PS16 Retaining Your Top Animal Care and Cage Wash Performers  
C Kilcullen-Steiner\*
- 9:45 PS17 Developing and Implementing a Program for Standardizing and Harmonizing Training Requirements and Records for a Global Organization  
MA Butler\*, I Garrod, G Ma, M Defeo, SA Drinen, SE Deboer, R Burke, KJ Rogers, CF Fox
- 10:00 PS18 Ergonomic Improvements through Equipment Updates in a Laboratory Animal Facility  
RL Starr\*, N Montero, C Fuzzi, J Nolan, A Kopec, M Hargaden, L Singer
- 10:15 PS19 No-cost Solutions for Ergonomic Improvements in a Laboratory Animal Facility  
CJ Fuzzi\*, M Hargaden, L Singer
- 10:30 PS20 Development and Implementation of a Quality Control Program for Animal Care Activities  
NM O'Callaghan\*, R Palmisano

**SPECIAL TOPIC LECTURES**

**\* Animals in Research: What Makes It Right?**

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 4  
 Speaker: Richard E Fish  
 Moderator: Kari L Koszdin  
 Facilitator: Donna H Kronstadt

Although strong arguments have been made that there are no morally relevant differences between humans and animals, a majority of the public support the use of animals in research. There is an element of self-interest in such a view, but there is also a strong sense by many that there are differences that justify traditional uses of animals by humans. This lecture will present data from surveys of first-year veterinary students at the North Carolina State University College of Veterinary Medicine, obtained as part of an introductory course in veterinary ethics. Survey questions were intended to help students think about the differences between animals and humans, and to provide a basis for discussion of how animals are used in

research and teaching, and the distinctions between animal rights and animal welfare. Key points from these discussions will be presented, including the logistical difficulties in insisting that animals have no rights. Discussion also will include an overview of both organizational (such as the American Veterinary Medical Association) and administrative (for example, the Animal Welfare Act) regulations, policies, and principles that guide the use of animals in research. The target audience is anyone interested in the ethical dimensions of research animal use.

**\* Biosafety 101**

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 2  
 Speaker: James W Klenner  
 Moderator: Nancy S Figler  
 Facilitator: Rebecca A Benz

Biological safety, or biosafety for short, is a discipline based on determining the procedures to ensure the safe use and containment of microorganisms, infectious particles, and toxins of biological origin. The main focus is on risk assessment and how that relates to specific research programs. The topics to be discussed will include the definition of biosafety levels and the groups of biohazards assigned to each. A focus on risk assessment considers the infectiousness of individual agents and how they may be transmitted to humans or other colonies. Preventing this transmission involves the use of personal protective equipment (PPE) and secondary devices, such as biosafety cabinets. These will be described and how their use protects individuals by minimizing the risk of exposure. Decontamination requirements and differences, and the rationale for observance of basic biological safety precautions, will be included in the session and examples given to help illustrate this topic. Specific agents (including xenotransplantation issues) of particular interest to animal handlers will be discussed and why particular containment is essential. A final discussion will involve a brief overview covering the changes in the new version of Biosafety in Microbiological and Biomedical Laboratories (BMBL 5th Edition). The target audience includes any researcher or technician with a risk of occupational exposure to biohazardous materials used in research protocols.

**Charles C Hunter Lecture**

**\* The Human–Animal Bond: Are We All Secret Dr. Dolittles?**

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 5  
 Speaker: Melissa R Shyan-Norwalt  
 Moderator: Julia A Granowski  
 Facilitator: Janine M Davenport



Hunter Lecturer • November 10

**Hunter Lecturer  
 Melissa Shyan-Norwalt**

Dr. Melissa Shyan-Norwalt will present this year's Hunter Lecture, "The Human-Animal Bond: Are We All Secret Dr. Dolittles?" She received her MS in Experimental Psychology from the Illinois Institute of Technology and her PhD in Comparative Cognition from the University of Hawaii. She worked on dolphin communication and conducted cognition research at the Kewalo Basin Marine Mammal Lab in Hawaii. Her postdoctoral fellowship was at the University of Texas Health Sciences Center at Houston, where she studied memory and problem-solving skills in rhesus monkeys. She taught for two years at Southwest Texas State University before moving to Butler University in Indianapolis, where she taught for 13 years. She currently studies the human-animal bond; cat and dog behavior; monkey, dolphin, and elephant cognition and behavior; environmental and social enrichment; and animal welfare and well-being in non-home environments.

In addition to her numerous journal articles, Dr. Shyan-Norwalt writes behavior problem resolution articles for a cat shelter newsletter. She has appeared in a BBC/PBS Discover documentary and the syndicated TV show "At The Zoo." She is an invited speaker at research centers and veterinary colleges throughout the world. She has been certified by the Animal Behavior Society as an applied animal behaviorist and is an affiliate member of the American Veterinary Society of Animal Behavior. She owns Companion Animal Problem Solvers, Inc., where she works with owner-clients to resolve pet and companion animal behavior problems. She has also served as a consultant for modifying and designing a no-kill cat shelter.

"If I could talk to the animals," ponders Dr. Dolittle (Rex Harrison, 1967) in the famed film. What sorts of relationships do we develop with our animal research participants? Do we love them, disdain them, or respect them? What sorts of relationships do they develop with us? Do they fear us, find comfort with us, or ignore us? These are all questions about the human-animal bond. The nature of this bond in research facilities has been of great interest in recent years. Facilities involved in the more invasive forms of research often seek to protect their staff from heartache and burn-out by fostering a professional distance, emotionally, from their research animals. This lecture will present one model describing different types of relationships with specific examples of these relationships with laboratory monkeys, dolphins, elephants, and other research animals with which the speaker has worked. These examples will demonstrate that, even when we are not aware of the depths our relationships, situations occur in which the animals teach us. We have choices about the nature of our human-animal bonds with our research subjects, from distant to close. It behooves us to make conscious decisions about these relationships, for the sake of the animals, the quality of our research, and our own well-being. This lecture will be of interest to anyone in the laboratory animal science field.

*This special topic lecture is sponsored in part by the AALAS Committee on Technician Awareness & Development (CTAD) and the Charles C Hunter Fund.*

### 🐾 Searching for a Cure of Fatal Neurodegenerative Diseases: Cats' Gift of Life to Children

11:00 a.m.–12:00 p.m.

Room: Sagamore Ballroom 3

Speaker: Henry J Baker

Moderator: TBA

Facilitator: Rebecca D Hyzer

The gangliosidoses are a subset of more than 40 metabolically and clinically distinct inherited human and animal diseases resulting in relentlessly progressive nervous system degeneration and premature death. After a century of study, there is no successful therapy for these diseases. The molecular era ushered in exciting new prospects for gene replacement and stem cell therapy that have great promise, but which must be thoroughly validated in animal models. Progress has been made by

testing therapeutic methods in mouse models, but interpretation of these results is limited by disease characteristics unlike that seen in humans and a brain size that erroneously favors success. Naturally occurring mutations causing gangliosidoses in non-rodent animals provide opportunities for therapeutic trials in models resembling the human diseases and which more closely mimic therapeutic challenges. The feline gangliosidoses have been thoroughly characterized and have evolved as one of the best animal analogs which can accurately predict therapeutic success in children. For 30 years our laboratory has discovered, characterized, and studied several feline gangliosidoses that constitute four different mutations and three distinct clinical presentations resembling analogous human variants of these diseases. Advantages of cats for this work include high breeding potential needed for expression of recessive traits, ease of maintaining healthy cats in a breeding colony environment, the wealth of knowledge about feline experimental neurology, predictable progression of clinical disease, application of most diagnostic and clinical procedures used in children, brain size that approximates the challenge of distributing therapeutic genes and cells widely enough to correct global nervous system diseases, non-lethal methods to assess therapeutic success sequentially over long periods, and an extensive knowledge about the unique characteristics of several mutations, each of which offer advantages for particular research objectives. Caring for endearing kittens, which undergo progressive disabling neurological disease, engenders a strong emotional response, which is mitigated only by the image of children suffering the same fate and the gift of life that may result from these studies.

### Refreshment Break

#### Exhibit Hall Lounge

- 1:00 p.m.–3:00 p.m.  
(sponsored by Siemens Building Technologies)

## AFTERNOON

### PANEL DISCUSSIONS

#### ✳️ Cardiopulmonary Bypass in Sheep

12:00 p.m.–1:30 p.m.

Room: Wabash Ballroom 3

Leader/Moderator: Patricia A Weber

Facilitator: Shelley Butler

Panelists: Pamela L Broussard, Jane M Olin, Jim Conley, Dick Bianco

This presentation will include a discussion of the use of sheep in cardiovascular research and the performance of cardiopulmonary bypass in sheep with associated complications. The panel members will present information on model development, surgical procedures, perfusion, and pre- and post-operative care. A discussion of the complications that can occur during surgical procedures will include the effect on animal hemodynamic stability, perfusion parameters, as well as the ability to come off bypass and move the animal into the recovery phase. The target audience is technicians, veterinarians, and research scientists. Participants will learn techniques to improve outcomes in cardiopulmonary bypass surgery, refinements to surgical procedures, and care and husbandry of sheep pre and post-operatively.

*This panel discussion is sponsored in part by the International Heart Institute of Montana Foundation, Edwards Lifesciences, and the University of Minnesota.*

#### ✳️ Pathology Quiz Bowl 2008

12:00 p.m.–1:30 p.m.

Room: Wabash Ballroom 1

Leaders/Panelists: Cynthia L Besch-Williford, Craig L Franklin

Moderator: Cynthia L Besch-Williford

Facilitator: Maria E Lehto

This panel discussion will consist of an informal review of the pathology of laboratory animals, primarily rodents, in the form of an image-based quiz. Topics will include lesions of well-described infectious and non-infectious diseases, pathological manifestations of emerging diseases, and selected phenotypic characteristics of important genetically engineered animal models. The images will be educational and challenging to laboratory animal specialists at all levels of pathology expertise. Participation is required. For participants in comparative medicine training programs, answers will be graded and scores will be tabulated. The individual with the highest score will be recognized at the ACLAD luncheon on Tuesday, November 11th with a plaque and cash prize. Participants will learn gross and histologic pathology of laboratory animals. The target audience includes comparative medicine trainees, laboratory animal veterinarians, pathologists, and scientists.

*This panel discussion is sponsored in part by RADIL and American Committee on Laboratory Animal Diseases (ACLAD).*

#### ✳️ Publishing in Comparative Medicine, JAALAS and Tech Talk: What You Need to Know

12:00 p.m.–1:30 p.m.

Room: 123

Leader/Moderator: Julie Watson

Facilitator: Christopher O Meshida

Panelists: Linda A Toth, Susan R Compton, John Farrar, Patricia L Denison, Ravi Tolwani, Melissa Bagaglio

### Receptions

- **Careers at Wyeth Reception: Current/Future Opportunities:** 4:30 p.m.–6:30 p.m., Westin, Capitol I
- **Harlan Annual Reception (invitation only):** 6:00 p.m.–9:00 p.m., Union Station

Getting published can be a daunting prospect. However, it's the best way to share your unique information with a wider audience, gain recognition in your field, and advance laboratory animal science. It has other advantages too—it's a great way to get to know new people and add to your store of knowledge. This panel discussion is intended for technicians, veterinarians, and others who would like to publish in laboratory animal medicine-focused publications. It is an opportunity to ask questions and find out how to get started. Scientists and editorial staff who are responsible for the three AALAS publications will discuss the advantages of becoming a published author and explain how to select the right publication among *JAA-LAS*, *Comparative Medicine*, or *Tech Talk*. Panelists will explain the differences between article categories, such as original research, overviews, and case reports, and define each publication's focus. Editorial staff will demonstrate how to format text, tables, and graphics for electronic submission and describe the editorial review process. Suggestions will be offered for how to respond to critical reviewer comments. Potential *Tech Talk* authors are encouraged to attend. They will be pleased to learn that the Tech Talk Editorial Committee provides mentoring and help with developing articles for publication.

## WORKSHOPS

### ★ W-06 Jugular Blood Collection from the Unanesthetized Rat

12:15 p.m.–5:30 p.m.

Room: Offsite

Leader: Carolyn M Dugan

Faculty: Andrew J Attwood, Brian L Colbeck

Workshop Fee: \$250

Workshop Limit: 20

This is a hands-on workshop to learn rat jugular sample collection technique on unanesthetized animals. The participants will receive step-by-step instruction for blood sampling via the jugular vein in rats. The target audience includes technical staff. Previous handling experience is preferred.

*This workshop is sponsored in part by Harlan.*

### ★ W-07 Advanced Surgical Techniques in Mice

12:15 p.m.–5:30 p.m.

Room: Offsite

Leaders: Andree Lapierre, Bonnie Lyons

Faculty: Jennifer J Corrigan, Joseph C Gile

Workshop Fee: \$250

Workshop Limit: 20

The Jackson Laboratory will conduct a workshop on vascular catheterization in the mouse. This hands-on workshop will focus on jugular vein and carotid artery cannulations. Regional mouse anatomy, catheter selection, lock solutions, and catheter maintenance will also be covered. Participants should have basic surgery knowledge and the ability to work under a dissecting microscope.

### ★ W-08A How to Motivate Employees

1:00 p.m.–5:00 p.m.

Room: 105

Leader/Faculty: Martin Seidenfeld

Facilitator: M Sharon Rand

Workshop Fee: \$130

Workshop Limit: 50

(also offered Tuesday, November 11, 1:00–5:00 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 impor-

## Committee Meetings

- **Aquatics Stakeholders:** 8:00 a.m.–12:00 p.m., Rm 114
- **Certification & Registry Board:** 2:00 p.m.–5:00 p.m., Rm 113
- **Government Relations Committee:** 7:00 a.m.–9:00 a.m.
- **International Relations Advisory Council:** 9:00 a.m.–11:00 a.m., Rm 112
- **Leadership Development sub-committee:** 2:00 p.m.–3:00 p.m., Rm 112

tant 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-09 Are Your Knots Holding? Suturing Skills Training Workshop

1:00 p.m.–5:00 p.m.

Room: 106

Leader: Jan E Bernal

Faculty: Dan Huetteman, Heather M Bogie, Rene Remie, Marcel Perret-Gentile, Mike Talcott

Facilitator: Stephen W Dennis

Workshop Fee: \$130

Workshop Limit: 20

This workshop is intended for those who wish to learn fundamentals or advance their skills with suture handling, instrument manipulation, and knot-tying skills. Suture materials and application issues will be reviewed in detail. Various methods and approaches to tissue handling and suture knot creation will be demonstrated and taught with instruments and various suture materials. This dry suture laboratory workshop is intended as a review that will support improved daily suturing skills. Methods and tips from experienced and accomplished instructors will be shared and discussed. Each student will have instruments and suture material for their own use during the session.

*This workshop is sponsored in part by the Academy of Surgical Research, Harlan NL, and Washington University.*

### ★ W-10 Preparing for an AAALAC International Site Visit

1:00 p.m.–5:00 p.m.

Room: 104

Leader: Sandy L Dexter

Faculty: Darlene B Brown, Jim R Swearingen, Heather B Breighner, Lauretta W Gerrity, AAALAC Council on Accreditation members

Facilitator: Rebecca D Hyzer

Workshop Fee: \$100

Workshop Limit: 50

When an institution makes the decision to follow the high standards that accreditation requires, much of the responsibility for ensuring that these standards are met day to day falls upon the veterinarians, facility managers, and technical staff. In this workshop, representatives from AAALAC International (current and former members of the Council on Accreditation and Executive office staff) will share ideas on how to prepare for an AAALAC site visit. Sharpen your skills as a "site visitor" during the virtual facility tour. Workshop faculty representing accredited companies, universities, government agencies, and hospitals will engage in discussions of mock AAALAC site visit situations. This session will be interactive, so bring plenty of questions and issues for these AAALAC veterans!

*This workshop is sponsored in part by the Association for Assessment & Accreditation of Laboratory Animal Care (AAALAC) International.*

## SEMINARS

### 🐭 Behavior Testing in Rodents

2:15 p.m.–5:00 p.m.

Room: Sagamore Ballroom 2

Leader: Julie Watson

## Posters

- Judging: 8:30 a.m.–2:00 p.m.
- Winners Announced: 5:00 p.m.–6:00 p.m., General Membership Meeting

Moderator: Kelly A Pate  
Facilitator: Roger Mohan

Neurobehavioral tests are commonly used to demonstrate rodent phenotypes and to determine experimental outcomes. However, obtaining valid

results requires a detailed knowledge of how to perform the tests and correctly interpret the findings. Speakers in this seminar describe how a number of the most commonly used behavioral tests in rodents are selected, conducted, and interpreted using examples from their own research. Talks will be geared towards technicians, veterinarians, and researchers who are interested in using behavioral testing in rodents or who wish to know more about the field. Attendees will gain an understanding of how these tests are carried out, the potential pitfalls and limitations of these tests, and some areas of scientific research where behavioral testing is used. Areas covered will include motor function testing, the use of neurobehavioral testing to determine endpoints in rodent ischemic stroke models, tests of spatial learning, and genetic and environmental confounders of behavioral testing. Examples will be drawn from drug testing, phenotyping of genetically engineered mice, rodent ischemic stroke models, and research on environmental neurotoxins. Tests described will include rotarod, open field, gait analysis, grip strength, cylinder test, passive avoidance, novel object recognition, and the Morris water maze. Advantages and disadvantages of the different tests will be discussed, and suggestions will be made for additional tests that can be used to validate a phenotype, to distinguish between alternative causes (such as reduced motor functions due to depression), or to differentiate treatment effects on neurobehavioral outcomes.

*This seminar is sponsored in part by Mouse Specifics and Clever Systems Inc.*

### Speakers/Topics:

2:15	Julie Watson	Welcome and Introductions
2:20	Julie Watson	Environmental and Genetic Cofounders of Behavioral Testing in Rodents
2:55	Stephanie J Murphy	Behavioral and Functional Assessments in Rodent Ischemic Stroke Models
3:30	Laura A Conour	Assessment of Motor Phenotypes: Paradigms for Evaluation
4:05	Jennifer Dziedzic	Environmental Enrichment Reverses Neurotoxicant-induced Learning and Neurochemical Deficits in Young Adult Rats

### \* Integration of Zebrafish Laboratories into an Institution's Animal Care Program

2:15 p.m.–5:00 p.m.

Room: Sagamore Ballroom 3  
Leader: Karen L Krueger  
Moderator: Christian Lawrence  
Facilitator: Marie A Ortega

Over the past several decades, zebrafish have become mainstream laboratory animals, and are now part of the great majority of biomedical research programs in the U.S. and beyond. Despite this, zebrafish are typically not very well integrated into institutional animal care programs. Zebrafish facilities in many institutions are still commonly being run by investigators, as independent entities, with little involvement in the animal care program. As both the number of investigators using the model and the array of sophisticated techniques with which to employ them increases, there is a growing need to close the gap in care and oversight between traditional mammalian model animals and zebrafish. In this seminar, panelists from five different institutions in the U.S., each employing different strategies of incorporating zebrafish into their animal care programs, will present overviews of their respective approaches. The seminar will be designed to facilitate lively discussion and participation by the audience so that the strengths and weaknesses of each management style can be highlighted

by real-life examples, and movement towards a common strategy can be initiated. The panelists will give 20-minute presentations that provide an overview of how zebrafish are integrated into their institutional animal care programs. A template for this presentation, based upon the *Guide for the Care and Use of Laboratory Animals*, will be developed and employed to ensure that presentations differ only in their depictions of the programs themselves.

### Speakers/Topics:

2:15	Karen L Krueger	Welcome and Introductions
2:20	Christian Lawrence	Overview
3:00	Doreen H Bartlett	Zebrafish program at NIH
3:20	George E Sanders	Zebrafish Program at the University of Washington
3:40	Diana Baumann	Zebrafish Program at the Stowers Institute for Medical Research
4:00	Amy Koeber	Zebrafish Program at Washington University
4:20	Joseph T Newsome	Zebrafish Program at the University of Pittsburgh

### \* International Uniformity in Health and Genetic Monitoring

2:15 p.m.–5:00 p.m.

Room: Sagamore Ballroom 5  
Leaders: Lela K Riley, Patri Vergara  
Moderator: Patri Vergara  
Facilitator: Aubrie A Gaudette

The objective of this seminar is to present and discuss the health and genetic programs ICLAS is developing to promote high quality of laboratory animals used in research. The current needs of high-quality science and its globalization make it essential to have effective programs to guarantee both health and genetic monitoring of laboratory animals. To facilitate this objective, ICLAS created a Network for the Laboratory Animal Quality Promotion in 2006 that includes experts from international diagnostic laboratories. From these efforts, a new program for self-assessment of health monitoring assays by research animal diagnostic laboratories has been established and sample distribution has been initiated on an international scale. This program provides a mechanism to assist research animal diagnostic laboratories worldwide in assessing the accuracy of their health surveillance services, which will ultimately improve the quality of laboratory animals used in research. The details of this program will be presented, along with presentations that discuss the difficulty of standardization of health monitoring results and possible solutions to overcome this problem. The final speaker in the program will describe a proposal for development of a similar self-assessment program for genetic monitoring of laboratory animals. Attendees will learn about the new ICLAS-sponsored Performance Evaluation Program for assessment of health monitoring assays in Research Animal Diagnostic Laboratories. In addition, issues regarding interpretation of diagnostic health monitoring results and appropriate sentinel monitoring strategies will be discussed from an international perspective. A proposal for developing a similar program for genetic testing evaluation will be described. The target audience includes anyone who is interested in health and genetic monitoring for laboratory mice and rats.

### Speakers/Topics:

2:15	Lela K Riley	Welcome and Introductions
2:20	Patri Vergara	ICLAS Laboratory Animal Quality Programs
2:45	Lela K Riley	ICLAS's Newly Established Performance Evaluation Program (PEP) for Health Monitoring Assays
3:00	William R Shek	PEP: Reagent Preparation, Quality Control and Record Keeping

- 3:15 Naoko Hayashimoto Self-Assessment of Microbiological Monitoring Methods with Test Samples Supplied by ICLAS PEP Program
- 3:40 Esther Schoondermark Universal Interpretation of Diagnostic Testing Results: Differences Between a Screening Report and a Health Report
- 4:05 Werner Nicklas Choosing the Optimal Sentinel Animal: Sampling Strategies
- 4:30 James R Fahey Recommendations for a Genetic Performance Evaluation Program
- 2:30 PS22 Persistent Leukocytosis and Hemorrhagic Discharge in a Gilt C Zegre-Cannon\*
- 2:45 PS23 Abdominal Masses in Nude Mice on a Human Breast Cancer Study  
VK Lee\*, P Sharma-Reddy, A García, DK Taylor, S Jean, DM Mook
- 3:00 PS24 Skin Discoloration in a Diabetic Cynomolgus Macaque (*Macaca fascicularis*)  
JM Wilson\*, J Baxter, F Hankenson
- 3:15 PS25 Abdominal Distention, Respiratory Distress, and Head Tilt in an Aged Male Syrian Hamster (*Mesocricetus auratus*)  
KP Yamada\*, K LaPerle
- 3:45 PS26 Abdominal Distention in a Louvain Rat  
MK Lucas\*, J Zahorsky-Reeves, GW Lawson
- 4:00 PS27 Fever of Unknown Origin in a Class B Dog  
K Brock\*, KL Rogers
- 4:15 PS28 Nasal Pathology in an Aged Rat  
CM Alvarado\*, K Rogers, K Eaton, J Wilkinson
- 4:30 PS29 An Acutely Recumbent Pigtail Macaque (*Macaca nemestrina*) with Diarrhea and Progressive Hepatomegaly  
KA Pate\*, TL Southard, C Morrell, RJ Adams
- 4:45 PS30 Hematuria and Preputial Discharge in a Young Dog  
JT Tubbs\*

## PLATFORM SESSIONS

### \* What's Your Diagnosis?

2:15 p.m.–5:00 p.m.

Room: Wabash Ballroom 2

Moderator: Craig L Franklin

Facilitator: Richard Padilla

- 2:15 PS 21 Diarrhea and Wasting in a Research Ferret (*Mustela putorius furo*)  
MM Patterson\*, RP Marini, JJ Fremont, S Muthupalani