

# Workshop Descriptions

October 3–6, 2011

## ■ W-01 Advanced Microsurgery Training

Monday, October 3, 7:15 a.m.–12:30 p.m.

Offsite

Leader: Robert F Hoyt Jr

Faculty: Tanya H Burkholder, Randy R Clevenger, James Hawkins, Timothy J Hunt, Kenneth R Jeffries, Karen J Keeran, Shawn M Kozlov, Ronald Naawu, Audrey C Noguchi, Gayle Nugent, Kristen Rodrigues, Hong San, Robin L Schwartzbeck, Arthur D Zetts

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 sponsored in part by OR Specialties, Instech Soloman, and Sharppoint.*

## ■ W-02 Animal Facility Design, Processes, Decisions, and Technology

Monday, October 3, 8:00 a.m.–12:00 p.m.

Leader: Mark A Corey

Faculty: Erik W Terry, Steven G Frei, Laura Halverson

Facilitator: TBN

This session will benefit those involved with animal facility design and operations by describing the processes, decisions, and technologies involved in the design, construction, and management of animal facilities. The group will begin with a discussion of the facility design process, including who should be involved, the level of effort by stakeholders, milestone decisions to be reached, and anticipated durations of the various phases of the process. This will include a detailed discussion of the different planning and procurement options for vivarium equipment and the impacts they can have on the project. Next, current trends in the industry will be explored through a series of case studies. The studies will include discussions of planning schemes; interior construction and finishes; operational impacts; and mechanical, electrical, and piping decisions and their outcomes. What is working and why? These lessons learned will help enable participants to make more informed decisions as they develop their own facilities. Finally, planning energy and resource efficient facilities is no longer a trend or an option, but rather an integral driver in facility planning. We will discuss sustainability strategies regarding energy and water that are being effectively implemented in animal facilities and the long-term benefits derived from each.

## ■ W-03 Developing You, the Leader **SOLD OUT**

Monday, October 3, 8:00 a.m.–12:00 p.m.

Leader: Tonya R Hargett

Faculty: Tonya R Hargett, William L Singleton

Facilitator: TBN

Have you been placed in a position of leadership and find it to be difficult? Or do you desire to lead but don't know how? The workplace is changing at a dramatic pace, and ineffective leadership escalates the challenges. As many are challenged to take on more with fewer resources, it takes an effective leader to direct, inspire, and motivate a team in completing its mission successfully. Leadership roles and processes, which facilitate setting direction, creating team alignment, and maintaining commitment in groups of people who share common work, are obtainable skills. Understanding the principles of leadership and how to develop leadership skills is vital for effective leadership. In laboratory animal science, leaders are present in every facet of the industry, and although leaders are thought to be ones with titles that infer leadership, the truth is, leaders can be found at all levels of the organization, in all types of positions. Leader development—expanding a person's competence to be effective in leadership roles and processes—is the essence of successful or effective leadership. This interactive workshop will approach coaching the basics of leader development by assisting the participants to define effective leadership; contrast the difference between leadership and management; examine five core competencies which all leaders must demon-

**KEY**

■ Animal Welfare, Regulatory Compliance, & Public Education    ■ Biomedical Research, Medicine, & Methodology  
■ Facility Design, Management, & Operation    ● Neurodegenerative Diseases

All events in San Diego CC unless otherwise noted.

strate; assess their strengths in those five core competencies; demonstrate their leadership skills through activities; and devise a plan for continued leader development and practicing effective leadership. This session is ideal for new, aspiring, or seasoned directors, managers, and supervisors looking to develop as a leader through understanding the processes and practices of leadership. In addition this workshop will allow participants to sharpen leadership skills needed for both personal and professional growth.

■ **W-04 Dosages, Calculations, and Measurements: How to Calculate, Prepare, and Administer Compounds, Drugs, Fluids, and Constant Rate Infusions**

Monday, October 3, 8:00 a.m.–12:00 p.m.

Leader: Jeanne Green  
Faculty: Lori L Mattox  
Facilitator: TBN

This workshop is geared toward technicians who need to calculate mixtures, dilutions, drug dosages, fluid maintenance, and/or constant rate infusions. We will cover the math concepts needed to easily calculate chemical dilutions/mixtures, ratios, drug dosages, and how much to give both rodent and large animal species; which syringes to use, including both regular and specialty syringes; and how to set up and maintain syringe and fluid pumps. In addition, compounding basic buffers, measuring pH, weighing chemicals, and pipetting techniques will be discussed. Participants will be given the opportunity to practice calculating a dose; measuring, weighing, and mixing the compound; and drawing it up and administering a compound. Discussion will also cover some common drug doses and mixtures.

■ **W-05A/B Coping with Difficult, Uncooperative, and Resistant Employees**

W-05A Monday, October 3, 8:00 a.m.–12:00 p.m.  
W-05B Monday, October 3, 1:00 p.m.–5:00 p.m.

Leader/Faculty: Martin Seidenfeld  
Facilitator: TBN

This workshop is designed for managers who want to remain vibrant and enthusiastic about their work, even when having to deal with employees who they find very difficult. Such employees get under their skin and may be uncooperative, resistant, or downright hostile. Participants will learn to better understand what motivates such employees and will then develop strategies to change their behavior and reduce their own frustration. They will also see how their own psychological needs reduce their ability to cope with such difficult employees.

■ **W-06 Implementing the Guide, 8th edition: Animal Facilities Management, IACUC Administration, and Training**

Monday, October 3, 8:00 a.m.–12:00 p.m.

Leader: Melissa Hunsley, Paula A Clifford  
Faculty: Melissa Hunsley  
Facilitator: TBN

This workshop will focus on some of the common challenges institutions are facing when implementing the standards of the 8th edition of the *Guide for the Care and Use of Laboratory Animals*. We will target many of the recommendations in the *Guide* that focus on animal facilities management, IACUC administration, and training. Working in groups, we will develop some practical strategies for applying the new guidelines to your program, including ideas and resources for implementing social housing, defining ways to modify IACUC protocol applications to fit the new guidelines, outlining specific training topics that should be added to investigator and animal care staff training programs, and brainstorming ideas for generating buy in from investigators. Participants should bring to the table some specific challenges

their institutions face, and they should take home some specific ideas, plans, or outlines that will help address those issues. Mock scenarios may also be implemented if time allows. The target audience is animal facility managers and directors, veterinary care staff managers, IACUC administrators, trainers, and veterinarians with management responsibilities.

■ **W-07 Introduction to Microsurgery**

Monday, October 3, 12:15 p.m.–5:30 p.m.

Offsite  
Leader: Robert F Hoyt Jr  
Faculty: Tanya H Burkholder, Randy R Clevenger, James Hawkins, Timothy J Hunt, Kenneth R Jeffries, Karen J Keeran, Shawn M Kozlov, Ronald Naawu, Audrey C Noguchi, Gayle Nugent, Kristen Rodrigues, Hong San, Robin L Schwartzbeck, Arthur D Zetts

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 has been expanding in recent years, especially with the emerging genetically engineered rodent models. This workshop will provide an introduction to the basic techniques, equipment, and general applications of microsurgery in biomedical research. Following an overview presentation, the participants will be divided into groups of two, each with their own instructor and operating microscope, for hands-on training. The training will be conducted in two phases: 1) teaching students to develop technical skills by performing exercises using the operating microscope with microsurgical instruments; and 2) applying these skills to perform simple surgical procedures using mice. The course will provide both basic and applied microsurgery training for a maximum of 20 students per workshop session. One experienced faculty member will assist two students assigned to each of the 10 stations equipped with dual-headed operating microscopes. Workshop participants typically vary from investigators to veterinarians to technicians, with experiences ranging from no prior training or experience to extensive training or experience with either mice or surgical techniques. As such, we have greatly enhanced the teacher to student ratio for this workshop to increase its success.

*This workshop sponsored in part by OR Specialties, Instech Soloman, and Sharp-point.*

■ **W-08 Unanesthetized Sublingual Blood Collection in Rats**  
**SOLD OUT**

Monday, October 3, 12:15 p.m.–5:30 p.m.

Offsite  
Leader/Faculty: Doreen J Kohlert  
Unanesthetized sublingual blood collection in rats is a fairly new procedure to the industry. For this procedure, the technician will place the rat in a restraint similar to a basic gavage hold, exposing both of the sublingual veins. This restraint technique is essential for the welfare of the animal and to obtain a quality sample. The mouth is rinsed using saline water and then dried with gauze. Using a straight needle, the sublingual vein is punctured and blood will immediately flow. Blood is collected via drip method into the appropriate collection tube. Pressure is then applied to collection site with gauze to arrest blood flow. The target audience for this type of blood collection is primarily research associates or technicians, or anyone in the veterinary or animal research arena that may need to collect blood from rodents. Some rodent handling experience is preferred to take part in this workshop. Participants will learn the restraint technique, which also can be used for oral gavage, as well as the proper way to collect the blood, and how to appropriately restrain the animal to arrest blood flow. Instructional and informational material will be distributed during this workshop that details the technique, as well as advantages to using this type of blood collection.

### ■ W-09 A User's Guide to Transgenic Rodents: How to Maximize Production and Minimize Frustrations

Monday, October 3, 1:00 p.m.–5:00 p.m.

Leader: Kathleen R Pritchett-Corning

Faculty: Kathleen R Pritchett-Corning, Sonja T Chou, Laura A Conour

Facilitator: TBN

This workshop will help participants to better understand the trials and tribulations inherent in breeding genetically manipulated rodents, focusing primarily on mice, but also addressing rats. Each workshop attendee will receive a notebook that covers rodent genetics, reproductive biology, transgenic technologies, genotyping principles, and background and phenotypic effects on breeding. The first portion of the workshop will review basic knowledge necessary to working with transgenic rodents. The second portion of the workshop will be interactive scenario-based learning that covers the maintenance of production colonies based on project goals and the troubleshooting of rodent production colonies. Participants are encouraged to bring their own transgenic production issues and success for discussion by the group. A friendly, team-based game-show format will be used to review workshop contents during the final portion of this workshop. Participants will learn how to interact with investigators using transgenics by learning terminology and technology concepts, how to establish transgenic rodents in breeding colonies to meet investigator's study needs, and how to troubleshoot common problems related to breeding genetically manipulated rodents. The target audience is laboratory animal technicians and managers.

*This workshop sponsored in part by Charles River.*

### ■ W-10 Working Alongside International Colleagues and Employees in the American Workplace

Monday, October 3, 1:00 p.m.–5:00 p.m.

Leader/Faculty: Linda L Stegmeyer

Facilitator: TBN

Biomedical research, much like the United States, has long been a magnet for the people of the world, attracting to its ranks immigrants representing every continent and language. These immigrants are your employees and colleagues; they bring learning opportunities, as well as learning challenges, to the workplace. This workshop is designed for native English speaking American employers and staff members interested in gaining a better understanding of, and more effective interactions with, their international colleagues and employees. Participants will engage in games of translation, perspective, and personal as well as national identity. Through this hands-on, highly interactive workshop, participants will experience—if only temporarily—what it means to be foreign. They will be introduced to the process of immigration and the emotional and psychological realities facing the immigrant employee. In addition, participants will learn to recognize language and behavioral coping strategies, determine when a communication problem is cultural rather than behavioral, and communicate more effectively with international coworkers and employees. It will offer immediately applicable tips on how to improve communication with non-native English speakers. Finally, through demonstrating a new perspective, this workshop will leave participants with a fresh empathy and compassion towards their international colleagues.

### ■ W-11 Developing a Cost Accounting System for Your Animal Facility **SOLD OUT**

Monday, October 3, 1:00 p.m.–5:00 p.m.

Leader/Faculty: David G Baker

Facilitator: TBN

The workshop will begin with a brief lecture on cost accounting in animal facilities followed by presentation of an example of a functional system. Participants

will then develop their own cost accounting system using their data. Participants will receive instruction prior to the workshop regarding data to collect and bring. Using data from their own facility, participants will learn how to develop a working cost accounting system. Target audience includes persons tasked with the financial operation of the animal facility.

*This workshop sponsored in part by Louisiana State University.*

### ■ W-12 Preparing for an AAALAC International Site Visit

Monday, October 3, 1:00 p.m.–5:00 p.m.

Sandy L Dexter, Darlene B Brown, John F Bradfield

Dorcas P O'Rourke, AAALAC Council on Accreditation members

Facilitator: TBN

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!

### ■ W-13 Hands-on Implantable ECG and BP Telemetry Surgical Techniques for Mice

Tuesday, October 4, 7:15 a.m.–12:30 p.m.

Offsite

Leader: Cindy M Argue, Steve W Hachtman

Faculty: Heather Bogie, Dan Huetteman, Gerry Sanabria

This implantable telemetry workshop emphasizes the hands-on learning of microsurgical telemetry implantation techniques with mice. The implantation and use of a recently developed miniature telemetry device combining BP and ECG-monitoring capabilities will be demonstrated. Attendees will then have the opportunity to implant training modules of this BP/ECG telemetry device in mice. Workshop instructors will demonstrate proper telemetry system set-up, automated digital data collection and computerized analysis of real time physiologic data to attendees. The live surgical demonstration and discussions will review mouse telemetry microsurgical implantation techniques and the most recent proven research approaches. Emphasis will be on learning practical skills and methods from experienced instructors. Prior lab animal surgical experience is required. Each attendee will have a surgical station, a microsurgical instrument set, and an individual microscope for their personal surgical training use.

*This workshop sponsored in part by Data Sciences International and Charles River.*

### ■ W-14 Rodent Inhalation Anesthesia Workshop

Tuesday, October 4, 7:15 a.m.–12:30 p.m.

Offsite

Leader/Faculty: Shannon M Luboyeski

Rodent anesthesia offers unique challenges that are infrequently encountered in other laboratory settings. In the case of general anesthesia, there are many disadvantages to using injectable anesthesia in rodents. These injectable anesthesia agents require mathematical calculations and dilutions prior to use, as well as proper restraint technique that may cause undue stress to the animal. Furthermore, several injectable agents cause irritation upon injection, and once a dose is administered, it cannot be altered. Duration and depth of anesthesia may be highly variable between animals that otherwise appear identi-

cal. By contrast, inhalation anesthesia offers many advantages opposite to the problems mentioned above. Today's most common inhalant anesthetic agent is isoflurane. Although safer than many other available agents, it still requires proper equipment for safe and controllable delivery to the animal subject. This workshop is for participants who may already be using inhalation anesthesia and wish to create safer, faster, and more cost-effective anesthetic protocols. Participants interested in incorporating isoflurane anesthesia into their institutions will learn basic equipment operation and safety and how to easily apply inhalant anesthesia to the procedures and models they currently use. Attendees will gain working knowledge of how to do a pre-operative safety check of a rodent anesthesia system, learn oxygen tank safety, flowmeter functionality, be able to differentiate between various types of fresh gas adaptors, and learn the advantages/disadvantages of each. Using live rodent models, participants will view several clinical stages of inhalant anesthesia, learn how to monitor vital parameters, maintain a surgical plane of anesthesia, and apply key critical care techniques vital to recovery periods. Proper waste gas elimination will be demonstrated and attendees will assess how to incorporate either active or passive evacuation systems into various procedural, laboratory, or surgical areas. In addition, there will be a working calculation session on determining isoflurane and oxygen use rates, minute tidal volumes between species, MAC values, and effect of variable factors in laboratory settings, such as flow rates, room temperatures, and vaporizer dial settings. The target audience is veterinarians, veterinary technicians, research technicians, rodent users, and facility managers.

### ■ W-15 IACUC Protocol Review Challenges

Tuesday, October 4, 8:00 a.m.–12:00 p.m.

Leader: MJ Shepherd

Faculty: Eileen M Morgan, representatives from USDA and AAALAC, plus one other regulatory expert

Facilitator: TBN

Workshop participants will be asked to submit a copy of their institution's protocol and at least one protocol review challenge that has either occurred at their institution or that they wish to discuss. Panelists will consist of representatives from OLAW, USDA, and AAALAC International, along with several other experts. The participants will be divided into small groups to discuss certain challenges and they will then be asked to share their recommendations with the whole group. The comments from each group will then be put up for discussion. Panelists will interact with each group on an individual basis to assist them in developing methods to deal with difficult situations involving the IACUC. Situations likely to be discussed include pain categories, rationale for species and numbers of animals, literature review acceptability, difficult investigators, humane endpoints, and training issues. If time allows, protocol design will then be discussed using workshop attendees' protocols. Participants should leave with a more thorough knowledge of IACUC issues. The targeted audience is veterinarians, IACUC members, unaffiliated IACUC members, technicians, and investigators.

### ■ W-16 Knots So Fast—Suturing Techniques that Your Granny Never Taught You

Tuesday, October 4, 8:00 a.m.–12:00 p.m.

Leader: Marcel Perret-Gentil

Faculty: Marcel Perret-Gentil, Szczepan W Baran, Emily L Miedel, Michael W Hart, Laurie Long

Facilitator: TBN

Rough tissue handling and prolonged tissue exposure to room air increases surgical trauma. This in turn affects post-operative recovery and data outcome. During this course, participants will learn commonly used suture and knot-tying techniques, among other things. The workshop will focus on appropriate hand-eye coordination to quickly improve skills. Students will have an opportunity to learn techniques that will lead to gentle handling while completing suturing tasks at incredible speeds. This workshop is de-

signed for individuals who have minimal or no suturing skills, but is also a great opportunity to upgrade skills for those with considerable experience.

### ■ W-17 Management Coaching in Laboratory Animal Science: The Why, the When, and the How

Tuesday, October 4, 8:00 a.m.–12:00 p.m.

Leader: Michael D Kastello

Faculty: Joel A Goldberg

Facilitator: TBN

Developing effective managers and leaders is as important to animal care and use organizations as it is to any other business organization or group. Management coaching has proven to be an effective tool for management and leadership development, but unfortunately, this tool is seldom used to help and guide those responsible for animal care and use programs. These programs exist within diverse and dynamic environments that range from the mundane function of waste disposal to the burnishing of the institution's reputation for a sensitive activity such as animal research. Leadership and management are difficult in this complex environment and sometimes involve responsibility without authority. Training, knowledge and experience of people are a given in a quality program but the management of staff and the interactions with scientists, administrators, regulators, and the public involve interpersonal relationships and the art of communication. Management coaching can help to ensure that animal care and use program managers can effectively apply those and other critical skills. As a result of this workshop, participants will, among other things, be able to identify the benefits of management coaching; describe the roles and responsibilities of a management coach; define the circumstances in which coaches can and should be used; explain the pros and cons of an internal vs. an external coach; identify the characteristics of an effective coach; identify the characteristics of an effective coaching program; describe ways to follow up on coaching to ensure ongoing application; and assess the impact of coaching. Participants will be involved in interactive discussion regarding relevant successful coaching situations and their personal experiences with coaches and coaching programs. The target audience includes all that have significant responsibility for animal care and use programs.

### ■ W-18 Practical Methods for Improving Your Security Culture—A Proactive Response to the Animal Rights Threat

Tuesday, October 4, 8:00 a.m.–12:00 p.m.

Leader/Faculty: Norman Mortell

Facilitator: TBN

This workshop explores the animal rights environment and looks at practical ways that organizations can raise security awareness. Often it is true that the biggest threat to your security is your own people, and this workshop has been designed to help research facilities develop a security culture to counter complacency by using real life examples of tactics used by animal rights extremists. The workshop is entertaining and interactive in format, with many useful and practical hints and tips. The target audience is anybody working within a research institution, but in particular facility managers, security personnel, and those concerned about the animal rights threat. Attendees will learn to put threats into perspective while developing key practical actions that each person can take to develop security awareness and will leave understanding that security is everybody's responsibility and complacency is dangerous.

*This workshop sponsored in part by Agenda Security Service.*

### ■ W-19 Hands-on Stereotactic Placement of EEG and EMG Telemetry Leads in the Rat

Tuesday, October 4, 12:15 p.m.–5:30 p.m.

Offsite

Leader: Cindy M Argue  
Faculty: Richard H Mills, Heather Bogie, Dan Huetteman, Steve W Hachtman

This workshop on implantable telemetry emphasizes the hands-on learning of advanced implantation techniques. Attendees will learn use and manipulation of stereotactic instrumentation to locate and implant telemetric EEG electrode recording leads into the rat skull. Attendees will participate in cortical electrode site determination, drilling, and fixation of electrodes, as well as EMG lead placement. Instruction will include demonstration and use of current stereotactic apparatus in the telemetry lead location and implantation procedure. Current stereotactic instrumentation and current telemetry data collection equipment will be demonstrated and operated by attendees. Telemetry system set-up and computerized collection of EEG and EMG data will be demonstrated. Cortical lead implantation technique demonstrations and surgery techniques discussion will review current small animal telemetry surgery approaches and recent research applications. Emphasis will be on learning practical skills and proven methods from experienced instructors. Prior small animal surgical experience is required.

*This workshop sponsored in part by Data Sciences International, Stoelting Company, and Charles River.*

### ■ W-20 Stereotaxic Surgery in Rodents

Tuesday, October 4, 12:15 p.m.–5:30 p.m.

Offsite

Leader: Guy B Mulder  
Faculty: Yiyang Luo, Elton J Machholz, Jeremy R Perales, Mary J Little, additional surgeon TBD

This workshop will focus on the surgical procedures and fundamental techniques used when stereotaxic equipment is required to perform surgery in the rat model. Included in this workshop will be basic instruction on operating a stereotaxic machine, a video demonstration of cannula placement in the lateral ventricle, training on the intraventricular cannula (IVC) placement using cadaver rats, handling and dosing of pre-instrumented brain cannula animals, a necropsy of brain cannulated animals following euthanization, and injection of dye through the cannula to visualize circulation and tip placement. Discussions will cover the necessary surgical supplies, stereotaxic equipment, pre-operative preparation, surgical techniques, the unique challenges faced when performing stereotaxic surgery, post-operative care, and a question and answer period. Each attendee will gain hands-on experience in the surgery, handling/dosing, and necropsy portions of the workshop. The target audience for this workshop is the beginner to intermediate skilled surgeon.

### ■ W-21 Tips for Developing Online Training to Support Your Hands-on Training Program **CANCELED**

Tuesday, October 4, 1:00 p.m.–5:00 p.m.

Leaders/Faculty: Paula A Clifford, Britannia V Robinson  
Facilitator: TBN

Attendees will obtain the tools needed to begin the development of an online course to improve the effectiveness of a current hands-on training course. Methods to develop online courses, as well as using courses and features currently available in the AALAS Learning Library, will be included. This session will provide details and techniques for creating online courses and developing effective quizzes and evaluations. Examples of online courses, prerequisites, quizzes, evaluations, and beneficial outcomes will be presented. The faculty will also discuss approaches for developing post-course evaluations and the value they provide in assessing student learning and course effectiveness. Attendees should come prepared with one hands-on course outline that they would like to support with an online training prerequisite. Trainers, course developers, and anyone responsible for developing animal-related training will benefit from attending this session.

### ■ W-22 Introduction to Basic Principles of Rodent Laparoscopy

Tuesday, October 4, 1:00 p.m.–5:00 p.m.

Leader: Szczepan W Baran  
Faculty: Szczepan W Baran, Marcel I Perret-Gentil, James Kehler  
Facilitator: TBN

Laparoscopic procedures offer several advantages over laparotomies. Laparoscopy is less invasive (thus decreasing the need for research-inducing variables like analgesics or antibiotics) and results in an earlier return to oral intake and normal physiological status. Laparoscopy is a powerful diagnostic tool for examining the abdominal cavity and for the collection of intrabdominal biopsies to detect inflammatory, neoplastic, and many other pathologies. Furthermore, laparoscopy is commonly utilized for the treatment of gastrointestinal and reproductive diseases, as well as for assisted reproductive technology procedures. Laparoscopic procedures are quickly gaining popularity in a variety of animals, including rodent species. This surgical modality allows for the examination of the abdominal cavity and collection of serial biopsies from the same individual animal, while allowing the animal to serve as its own control. The first portion of this session will include a review of basic laparoscopic principles, techniques, complications, anesthetic considerations, and the proper selection of laparoscopic instruments and equipment. The second portion will provide participants the opportunity to handle rodent-appropriate laparoscopic instruments and equipment while working with inanimate trainers. By the end of this workshop, participants should have basic understanding of laparoscopic equipment, as well as applications of laparoscopy in biomedical research models. This workshop will consist of 2.5 didactic hours followed by 1.5 hours of hands-on lab with inanimate trainers to introduce the participant to basic laparoscopic techniques. Further training beyond this course is recommended before performing laparoscopic procedures in live animal subjects. The target audience is veterinarians, veterinary technicians, and research staff as a basic introduction to laboratory animal applications of laparoscopy in large animals and rodents.

*This workshop sponsored in part by Biovision Technologies.*

### ■ W-23 Preparatory Session for the AR Portion of the CMAR Exams

Tuesday, October 4, 1:00 p.m. –5:00 p.m.  
(continues Wednesday, October 5, 1:00 p.m. –5:00 p.m.)

Leader/Faculty: Cindy A Buckmaster, Camellia M Symonowicz  
Facilitator: TBN

We are heroes to millions of people and animals, and our work makes a profound difference in this world. As leaders, we have a responsibility to support and drive our employees and operations effectively, efficiently, and compassionately. CMAR certification provides us with a unique set of knowledge and tools to do what we do better than ever, but so many of us are still procrastinating. We're unsure about the time commitment. We're concerned about taking four exams. We'd get it done if we could get some guidance and real help preparing for the exams, something to get us rolling successfully. The Laboratory Animal Management Association (LAMA) has developed workshops for all four exams designed for your success! Please join us for our preparatory workshop for the Animal Resources (AR) exam. Topics will include effective management styles and motivating the workforce; training and education for laboratory animal professionals; managing physical resources; policy development; managing budgets; and, managing compliance with federal, state, and local regulations.

*This workshop sponsored in part by Certified Manager Animal Research (CMAR) Committee.*

## ■ W-24 Staying in the Comfort Zone! Monitoring the Environment in Animal Rooms and Cage Systems

Tuesday, October 4, 1:00 p.m.–5:00 p.m.

Leader: Jim Wallace, Gianpaolo Millite  
Faculty: Gianpaolo Millite, Jim Wallace  
Facilitator: TBN

Controlled environmental conditions in animal facilities are essential, as significant variations can affect the physiological responses, behavior, and disease susceptibility of the animals, which in turn impacts animal welfare and scientific studies. The 8th edition of the *Guide for the Care and Use of Laboratory Animals* specifies a range of tolerable temperatures, humidity, noise, and light for different species which are appropriate according to the different species and caging systems involved. The *Guide* also recommends monitoring environmental conditions in animal holding spaces in order to detect excursions from the norm. This workshop focuses on demonstrating practical techniques and instrumentation used to monitor the macro- and micro-environment of animal rooms and cage systems. Allergen monitoring methods and microbiological contamination detection are also demonstrated. Emphasis will be placed on understanding the need for a controlled environment and the risks of variation and of inadequate or infrequent sampling protocols. Attendees will have the opportunity to participate in practical demonstrations and use equipment for monitoring the room (macro) and cage system (micro) environment. The rationale behind the standards for ventilation, temperature, Rh, light, noise, hygiene levels, and allergens will be discussed. The detection and potential impact of negative environmental factors, such as ultrasound, acoustic shock, vibration, and metabolic gases (CO<sub>2</sub> and ammonia) will be reviewed. Technical staff, supervisors, and facility managers will find this workshop particularly beneficial.

## ■ W-25 Jugular Blood Collection from the Unanesthetized Rat

Wednesday, October 5, 7:15 a.m.–12:30 p.m.

Offsite  
Leader: Carolyn M Dugan  
Faculty: Melissa L Boettcher, Andy J Attwood

In this hands-on workshop, participants will receive step-by-step instruction for jugular blood collection in unanesthetized rats. The target audience is technical staff. Previous handling experience is required and participants will be standing for the majority of the session.

## ■ W-26 Surgical Technique in the Mouse: Jugular Vein Catheterization and Ovariectomy

Wednesday, October 5, 7:15 a.m.–12:30 p.m.

Offsite  
Leader: Andree Lapierre  
Faculty: Michelle Crispo, Joseph C Gile

The Jackson Laboratory will conduct this hands-on workshop on two common surgical techniques in the mouse: jugular vein catheterization and ovariectomy. Regional mouse anatomy, catheter selection, lock solutions, and catheter maintenance will also be covered. Participants should have basic surgical knowledge and the ability to work under a dissecting microscope.

*This workshop sponsored in part by Harlan.*

## ■ W-27 Cage Wash 101: Equipment, Design, and Use

Wednesday, October 5, 8:00 a.m.–12:00 p.m.

Leader: Thea L Brabb  
Faculty: Steven L Leary, Josh Meyer, Andrew J Burich, Valerie A Hill, Chris R Katz  
Facilitator: TBN

This workshop will guide participants through the process of cage wash design, evaluation, and use. The workshop will begin with discussion on cage wash designs. Topics include equipment requirements depending on the size and complexity of the facility, work flow processes in the cage wash, chemical use in the cage wash, and integrating the cage wash into the animal facility. Following the presentations, participants will be divided into small groups and guided through the exhibit hall to examine cage wash equipment such as rack washers, tunnel washers, bedding dispensers, and robots. Attendees will receive short presentations by multiple vendors regarding how these pieces of equipment are manufactured, function, interact with each other, and are maintained. Participants should learn from the lecture portion what equipment requirements for an animal facility cage wash are depending on the size and complexity of the facility, work flow processes in the cage wash, and how a cage wash is integrated efficiently into the animal facility. From the hands-on portion, participants should also learn how to recognize each of these pieces of equipment, how these pieces of equipment function, what they are made of, how they are made, how different types are different, how they break, and what kind of maintenance is required. The target audience is laboratory animal veterinary residents, veterinarians new to the laboratory animal field, or others with minimal to no experience in an animal facility's cage wash.

## ■ W-28 Communicating with Students about the Use of Animals in Research

Wednesday, October 5, 8:00 a.m.–12:00 p.m.

Leader/Faculty: Joan Griswold  
Facilitator: TBN

Why do scientists use animals in research? Few topics elicit such a strong reaction as that of animal research, and many science professionals and teachers are hesitant to engage in the subject. Yet every vaccine, breast cancer treatment, heart surgery technique, and prescription drug developed has used animal models and subjects. How do ethical considerations influence the use of animals? What does the history of animal research tell us about current views and policies? Furthermore, how can we discuss this topic in a respectful manner? This workshop is targeted at professionals who are seeking tools, strategies, and lesson plans to help them better communicate with students and community groups about the use of animals in research. In this workshop, participants will actively experience a newly-developed, five-lesson high school curriculum that teaches how animal research is conducted, the numbers and types of animals used, rules and regulations involved, and the bioethical frameworks used by those in support of, and in opposition to, this research. Participants will also explore communication strategies for civil discourse. Though targeted at high school students, the lesson strategies and techniques used in the curriculum promote an understanding of the role of science in society and are applicable to the wider community. Workshop participants will receive the complete curriculum on CD. These materials were developed by the Northwest Association for Biomedical Research (NWABR) in conjunction with classroom teachers, scientists, and ethicists. Funding was provided by a NIH Science Education Partnership Award grant.

## ■ W-29 Employee Success Through Workplace Organization—The Lean Management Way

Wednesday, October 5, 8:00 a.m.–12:00 p.m.

Leader: Clifford Gibbons  
Faculty: Clifford Gibbons, Gerald M Cronin  
Facilitator: TBN

Would you like to establish a workplace where your employees can perform their husbandry, veterinary care, and research support tasks in a manner where you know they will be successful every time? Manage your animal and research

areas using simple, visual tools first developed in Toyota assembly plants and applied successfully in our lab animal care program. Through the use of simple colorful flags, tags, and signs, you can provide clear direction to anyone who enters the vivarium. The resultant reduction in confusion, interruptions, and rework can significantly improve both employee and customer satisfaction. With instruction from members of our management team, workshop participants will learn how to use the components of lean workplace organization, known as 5S (sort, straighten, shine, standardize, and sustain), so that anyone can enter the workspace and successfully complete all required tasks. The target audience is anyone involved in lab animal care, from program directors to facility supervisors to front-line animal care personnel.

*This workshop sponsored in part by Massachusetts General.*

### ■ W-30 Writing Standard Operating Procedures That Work

Wednesday, October 5, 8:00 a.m.–12:00 p.m.

Leader: Ann L Murray  
Faculty: James H Bell, Norman P Moreau  
Facilitator: TBN

This interactive workshop is designed for those who are responsible for developing and maintaining standard operating procedures (SOPs) at animal care facilities. The workshop begins with an overview of SOPs and why writing effective SOPs is more important today than ever before. A basic SOP writing cycle will be presented for managing an SOP development or upgrade effort. Techniques for interviewing and the use of mind mapping and process mapping as means of drafting SOPs will be discussed. Examples of 10 principles for writing SOP action steps that include use of action verbs, stating conditional steps, and emphasizing important information will be presented. The workshop concludes with an introduction to a framework for effectively managing SOPs. Participants will have a greater appreciation for how properly developed and written SOPs can be used to effectively and efficiently manage and operate their facilities. Each participant will receive an updated workbook that will serve as a desktop reference for writing and getting SOPs to work.

### ■ W-31A/B Assisted Reproductive Technology in Mice: Embryo Cryopreservation and New Advances in Embryo Transfer Using a Non-Surgical Technique

W-31A Wednesday, October 5; 12:15 p.m.–5:30 p.m.  
W-31B Thursday, October 6, 7:15 a.m.– 12:30 p.m.

Leader: Barbara A Stone  
Faculty: Philip Damiani, Barbara A Stone

The assisted reproductive technique of non-surgical embryo transfer and the process of embryo collection and preparation is the main focus of this workshop. The process of embryo cryopreservation, embryo thaw, and selection will be demonstrated and discussed. Participants will be guided through the process leading up to selection of embryos for transfer to a recipient mouse. The non-surgical embryo transfer technique will be discussed and a video demonstrating the procedure will be presented. Workshop participants will each be given an NSET device and training on its use. Participants will then be able to select embryos, practice inserting the device through the cervix on a live mouse, and deliver embryos to a pseudopregnant recipient. A question and answer session will follow. The workshop is targeted to researchers and technicians interested in cryopreservation of embryos and/or the use of non-surgical embryo transfer in mice.

*This workshop sponsored in part by Para Techs Corporation and Taconic Farms, Inc.*

### ■ W-32 Implantation Techniques for Osmotic Pumps

Wednesday, October 5, 12:15 p.m.–5:30 p.m.

Offsite

Leader: Peg A Murphy-Hackley, Jimmy Pham  
Faculty: Stacey Matsuoka, Paul A Johnson, Stacy Y Kanno, Mark R Pettus, Andree LaPierre, Andrew L Adler, James G McCabe

Osmotic pumps are used to continuously deliver a wide variety of agents over time. This workshop will give participants experience implanting osmotic pumps into laboratory animals. Pump demonstrations will include subcutaneous and intraperitoneal implantations, IV cannulations, and ICV and intrathecal cannulations. Due to time constraints and different skill levels, not all participants may perform all procedures, but are encouraged to observe those they do not attempt. Participants will learn the functionality of the pumps, the benefits of infusion over injection, pump implantation, and cannulation techniques in rats and mice.

### ■ W-33 Effective Lean Management-Based Problem-Solving Techniques

Wednesday, October 5, 1:00 p.m.–5:00 p.m.

Leader: Gerald M Cronin  
Faculty: Gerald M Cronin, John Rizzo  
Facilitator: TBN

Problems can occur on a daily, and even hourly, basis at all levels of an organization. However, successful problem-solving, defined as implementation of quantifiable and sustainable resolutions, is often elusive. Problems may return after solutions have been adopted or new problems can emerge that were neither predicted nor planned. This workshop will show participants a new approach to problem-solving that has been implemented by successful companies such as Toyota, Motorola, Starbucks, and others. Their success is based on a Plan-Do-Check-Act (PDCA) cycle so that assessment and validation of candidate solutions is automatically included after implementation. Participants will be asked to bring a problem that they face in the conduct of their current duties. Workshop faculty will walk participants through the steps of problem identification, root-cause analysis, consideration of possible countermeasures (putative solutions), and quantifiable selection of the “best solution” using lean management’s “A3” toolkit. The targeted audience is persons involved in management or supervision of all aspects of a laboratory animal program (husbandry, veterinary care, support services, IACUC, vendor relations), from program directors to front-line supervisors.

*This workshop sponsored in part by Massachusetts General.*

### ■ W-34 Primate Enrichment and Training

Wednesday, October 5, 1:00 p.m.–5:00 p.m.  
(continues Thursday, October 6, 8:00 a.m.–12:00 p.m.)

Leader: Steven J Schapiro  
Faculty: Steven J Schapiro, Mollie A Bloomsmith, Margaret Whittaker, Gail Laule  
Facilitator: TBN

The Primate Training and Enrichment (PET) workshop is an 8-hour workshop (spread over two days) that is designed to present those who have some experience in the care of nonhuman primates with an intermediate/advanced discussion of the topics of environmental enrichment and positive reinforcement training. The 2011 PET will strongly emphasize those aspects of behavioral management that address issues presented in the 8th Edition of the *Guide for the Care and Use of Laboratory Animals*. The three main goals of the workshop include: 1) presentation of the most recent advances in the application of environmental enrichment and positive reinforcement training to the behavioral management of captive primates; 2) provision of a comprehensive guide to resources concerning environmental enrichment and training for nonhuman primates; and 3) presentation of advanced techniques for solving difficult behavioral management problems using environmental enrichment (including socialization) and training techniques

as tools. The same faculty that teaches the Primate Training and Enrichment Workshop (PTEW) offered at the Michale E. Keeling Center for Comparative Medicine and Research of The University of Texas MD Anderson Cancer Center in Bastrop, TX will teach the PET workshop. Participants will learn the most recent advances in environmental enrichment and positive reinforcement training; how to gain access to many available resources for enrichment and training; strategies for solving difficult behavioral management problems using environmental enrichment, socialization, and training techniques as tools; how to report on significant progress in an enrichment and training program; and how implementation of behavioral management strategies addresses issues raised in the 8th Edition of the *Guide*. This workshop is designed for those with an intermediate amount of nonhuman primate experience, including caregivers, technicians, managers, veterinarians, and investigators. This workshop may be inappropriate for those just beginning their association with nonhuman primates and may be too basic for those with many years of primate experience.

*This workshop sponsored in part by Priority One Services, LabDiet, Bio-Serv, and Lomir.*

### ■ W-35 Training AALAS Members To Use Art to Educate Children About Scientific Research

Wednesday, October 5, 1:00 p.m.–5:00 p.m.

Leader: Julie A Walls-Honeycutt

Faculty: Julie A Walls-Honeycutt, Marsha Mohan

Facilitator: TBN

Kids love face and body painting. Pictures under a microscope are so pretty. The creation of face painting art out of DNA and several other microscopic pictures is the perfect tool to interest kids while teaching them at the same time. Kids have so much fun with the face painting that they listen and learn while you paint. They learn the parts of a cell or they learn that the eye of a fruit fly is black and gold and very pretty. Science makes some of the prettiest pictures that can teach children so much. This class is designed to teach scientists and animal research workers the skills of scientific face painting. Also in the class there will be a section on painting research animals, such as mice, rats, frogs, cats, and dogs. This workshop will be a beginning class with time devoted to learning the strokes that are necessary for good looking face and body painting. The second half of the workshop will be devoted to teaching designs participants can use at home in their own communities for community outreach and animal research awareness. No artistic ability is necessary. The faculty will teach easy tips and tricks that can make anyone a success at face and body painting.

### ■ W-36 Research Awareness Workshop

Thursday, October 6, 7:15 a.m.–12:30 p.m.

Offsite

Leader: Julie A Walls-Honeycutt

Faculty: Alexander Nash, Roger Mohan

This workshop is designed to teach scientists, researchers, lab managers, veterinarians, and lab technicians how to conduct workshops for 1st through 5th graders. The workshops include hands-on experience with real brains (sheep, rat, and human), training with live rats for children's workshops, exposure to educational scientific games and the technique of face and arm painting. The workshops are conducted with children from the community, as well as scientists that are going to go out into the schools and lead workshops with children.

*This workshop sponsored in part by Lab Etc, Harlan, and Charles River.*

### ■ W-37 Emotional Intelligence—Discover Your Natural Genius

Thursday, October 6, 8:00 a.m.–12:00 p.m.

Leader/Faculty: Cammie M Symonowicz

Facilitator: TBN

Emotional intelligence (EI) is the dimension of intelligence responsible for our ability to manage ourselves and our relationships with others. EI is an important part of an individual's ability to successfully cope with environmental demands. Because of a constantly changing environment, we often require more than just competencies or technical know-how to be successful. Individuals with a blend of skills, competencies, and interpersonal abilities have a better chance of succeeding when faced with challenges. In this workshop, we will explore the four areas of emotional intelligence: self awareness, self management, social awareness, and relationship management. We will explore opportunities for you to increase your EI in the workplace in order to succeed in any position.

### ■ W-38 Visual Standard Operating Procedures (SOPs)

Thursday, October 6, 8:00 a.m.–12:00 p.m.

Leader/Faculty: Clifford M Gibbons

Facilitator: TBN

Are your SOPs actually read by anyone? Can your staff easily refer back to them when they need to? Does your SOP user get a clear picture of the critical steps quickly? You can increase the effectiveness of your SOPs by creating simple, visual, attractive tools that easily reflect the actual work being done, using fewer words and more visual aides. This workshop will show participants how to develop visual SOPs that meet this goal. These leaner SOPs are usually condensed down to one or two pages, contain photographs or diagrams, and can be posted in the workplace for easy reference. The benefits of this kind of visual insurance include increased standardization, improved training, and decreased errors. The targeted audience is anyone involved in lab animal care, from program directors to facility supervisors to front-line animal care personnel.