



REGULATORY ROUND TABLE: AAALAC CONFERENCE UPDATE

By Damon Duquaine

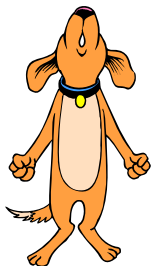
Regulatory Compliance Associate, UCUCA

Just when you thought that you could breathe a sigh of relief and pat yourself on the back, AAALAC rears its regulatory head to humble you once again. The reality is that accreditation is a continuous process that does not stop when the AAALAC site visit ends.

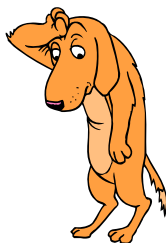
In order to provide assurance to federal granting agencies that we are compliant with federal regulations and nationally accepted standards, the University of Michigan's Animal Care and Use Program voluntarily submits to be evaluated by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International. AAALAC accreditation is a widely accepted standard to which the most well-respected institutions aspire. The University of Michigan has been accredited with AAALAC since 1971.

Every four years, AAALAC holds a conference to present and discuss trends in animal care and use as well as expectations the organization has for future accreditation visits. The conference was held on May 19-20, 2003 in Reston, Virginia. Several of the topics presented are worthy of mentioning to animal care and use personnel both in and out of the laboratory. It is the responsibility of all animal care and use personnel to comply with nationally accepted policies and standards. Listed on the next page are areas of concern that AAALAC will examine when it returns to the University in the first quarter of 2005.

Continued on next page...



Nooo! Not another site visit!



Phew, it's just a conference.



Now I can rest easy!

inside...

Choose Your Rodent Anesthesia!
Avoid Drifting Into Non-Compliance!
Meet Dr. Lesley Colby and Valerie Hamlin!

REGULATORY ROUND TABLE: AAALAC CONFERENCE UPDATE

...Continued from front cover

Protocol Submission (Form 8225)

- ⊕ Protocol design should give serious consideration to the alleviation of pain and distress by anesthesia or analgesia. Exceptions must be thoroughly scientifically justified.
- ⊕ Strong statistical and/or scientific justification must be provided when requesting an increase in animal numbers.
- ⊕ All exceptions to standard husbandry practices must be reviewed and approved by the UCUCA.

Occupational Health and Safety

- ⊕ All personnel must be aware of and familiar with hazardous agents being used in the laboratory or animal housing rooms.
- ⊕ Use of all hazardous materials must be reviewed and approved by the UCUCA.
- ⊕ All personnel are required to don the appropriate personal protective equipment (PPE) outlined on the animal housing room door before working with the animals in the room.
- ⊕ All animal care and use personnel must participate in the University of Michigan's Occupational Health and Safety (OHS) program by submitting to periodic evaluation by the appropriate medical staff.

Laboratory Animal Health and Welfare

- ⊕ Animals should be given the opportunity to interact with members of their own species unless such interaction is constrained by the research protocol.
- ⊕ Animals should not be overcrowded or housed in enclosures smaller than those recommended by the *Guide for the Care and Use of Laboratory Animals*. Exceptions to this policy must be approved by the UCUCA.
- ⊕ The identification of animals by toe clipping should no longer be performed unless scientifically justified and UCUCA approved.
- ⊕ The use of cervical dislocation should be accompanied with anesthesia unless scientifically justified and UCUCA approved.
- ⊕ The use of CO₂ generated by dry ice for euthanasia is not acceptable and is thereby prohibited.
- ⊕ Animals being anesthetized or euthanized should be kept at a visual and olfactory distance from other animals.

While the University of Michigan has earned the distinction of being fully accredited by AAALAC for many years, it is only through constant vigilance and attention to detail that our status as a leading research institution will continue.



CORRECTION TO PREVIOUS ISSUE OF *THE BACKBONE*

Dr. C. Gardner Childs [sic - his last name was spelled "Child," without the "s"] was [not] the first chair of the department of surgery. The first Chair was Moses Gunn, in the 1870s. (from James Knol, via Email)

THE CALM WITHIN THE STORM: VALERIE HAMLIN, NEW HUSBANDRY MANAGER!

By Linda Stegmeyer
Contributing Editor, ULAM

composure: a calmness or repose esp. of mind, bearing, or appearance : SELF-POSSESSION **syn** Valerie Hamlin

Although a great fan of Mr. Webster, I don't usually like to use his dictionary definitions in my writing. It makes me feel that I can't think of the right words myself, and the writer in me holds out for inspiration. However, while studying my bedroom ceiling last night, I had to capitulate. Composure was the best word to describe Valerie Hamlin, and Mr. Webster said it best. Like the eye of the hurricane, Valerie is able to stay calm even when surrounded by chaos. It's a trait she learned early, and one that will serve her well as the new Manager of Husbandry Operation Services. Read on.

As the youngest of five children, Valerie learned how to survive in the push and shove of a large family. During her early school years she became even tougher as she participated in volleyball and soccer, and at MSU, Valerie played one year of big 10 volleyball. Without knowing it, she was becoming trained in the skills that create a manager: leadership, organization, vision, purpose, determination, and teamwork.

At MSU Valerie obtained her BS in general zoology, and set her eyes on veterinary school as the next step in her career path. But she wanted to work before returning to school, which is what brought her to ULAM in 1998. From the very beginning, Valerie's rise within the organization can only be called meteoric: in under five years she has gone from working as an animal care technician to managing the husbandry staff. In that time, Valerie also discovered that her career path had changed under her feet. While she'll always care for animals and be interested in veterinary medicine, Valerie has found that her true calling is in leading people. Which is what brings us back to *composure*.

The last year has thrown some colossal chaos at Valerie Hamlin, and it is because of this that her most outstanding quality, well, stands out. After planning an October 2002 wedding, Valerie and her fiancé, Eric, learned that his US Army Reserve Unit, the 785th Military Police Battalion, was going to be sending him to Guantanamo Bay, Cuba. The date of departure was always imminent but not known. Not, that is, until two weeks before the wedding. Two days after returning from their honeymoon, Eric was on his way to Cuba and Valerie was left to carry on, comforted by their two dogs, Baxter and Chopper, family, and friends.

Valerie also took comfort in her job, where she could not only lose herself to her work, but where she found herself lifted up and supported by the ULAM staff and UM researchers who know and appreciate her. As the assistant manager of husbandry, she worked closely with long-time manager, mentor, and friend, Scott Bechaz, and for a short while things were almost *business as usual*. But in December 2002, Scott left ULAM to run an animal facility for Novartis Pharmaceutical in Boston, leaving Valerie to fill yet another void, and to lead the staff through the sense of instability and uncertainty left by his departure. It was at this time, when she was under the greatest amount of pressure but without the daily support provided by her two biggest confidants, that Valerie "settled." It was as if the hurricane had reached such proportions that to not move to the center would mean annihilation, so that's where she moved. It is where she received her incredible composure. And Valerie has stayed there even as the winds have died down, even as she's moved into the manager's position, and even as some of her biggest challenges are gathering on the horizon.

...Continued on page 6

ANIMAL CARE TIPS: RODENT ANESTHESIA RECOMMENDATIONS

*By Douglas K. Taylor, DVM
Clinical Resident, ULAM*

“Which anesthetic should I use for this surgical procedure?” This is one of the more common questions that the ULAM veterinary staff receives, and the species to be anesthetized is typically a mouse or rat (as they are the most frequently used species). While there are many anesthetic agents from which to choose, there are only a few that are highly recommended for most procedures. The intent of this short article is to highlight the agents that the ULAM veterinary staff **typically** recommends, however one should keep in mind that there are other agents that might be more suitable for a particular application. The following could be considered the “Top 3” agents to use for most procedures.

Isoflurane

Isoflurane is a wonderful gas anesthetic that should be considered as the agent of choice whenever possible. The biggest advantage of using isoflurane is that it produces an adequate plane of anesthesia very rapidly (often within minutes) and recovery is likewise rapid. Animals are often awake and walking in a few minutes, which benefits the animals and minimizes the time required for post anesthetic monitoring.

Isoflurane can be administered either in a jar using an “open-drop technique” for mice, or via a vaporizer, induction chamber, and nose cone for mice and rats.

For the open-drop technique, 300 ml of isoflurane is put on a cotton ball, which is then placed in a 500 ml jar. The volumes are important when using isoflurane because liberal use of the anesthetic agent can result in over-anesthesia and inadvertent euthanasia of the animals. The mouse is then placed in the jar, but should be prevented from touching the cotton ball, either by enclosing the soaked cotton in a plastic tissue cassette or by using dividers within the jar. Once the animal is anesthetized, it can be removed from the jar and the procedure can be performed. This technique is most suitable for short procedures because the animal will recover fairly quickly following removal from the jar.

For longer procedures, we recommend the use of a precision vaporizer. ULAM has several vaporizers available that may be rented by investigators, and we are happy to train personnel on the proper use of such equipment. Induction of anesthesia is accomplished by delivering isoflurane into an “induction box” at a concentration of 4-5%. The animal is then removed from the chamber and switched to a nose cone with an isoflurane concentration of 1-2% for long-term maintenance. Procedures of virtually any duration can be performed using these methods.

Ketamine and Xylazine

Ketamine and xylazine are two injectable agents that, when used in combination, provide anesthesia suitable for many procedures. This combination also provides some degree of analgesia. The two agents can be combined in one syringe and injected into the subcutaneous tissue space or peritoneal cavity of rats and mice. Due to the small muscle mass in rodents, the ULAM veterinary staff does not recommend intramuscular injection in these animals. An adequate plane of anesthesia is usually reached in about 5 minutes (longer for subcutaneous administration), and the duration of anesthesia is rather variable, ranging from 30-90 minutes.

Continued on next page...

ANIMAL CARE TIPS: RODENT ANESTHESIA RECOMMENDATIONS

...Continued from previous page

Ketamine and Xylazine (continued)

For the *mouse*, the dosage of ketamine is 80-120 mg/kg and the dosage of xylazine is 5-10 mg/kg. For the *rat*, the dosage of ketamine is 40-90 mg/kg and the dosage of xylazine is 5-15 mg/kg. It is important to note that a second dose of ketamine given at 1/3 of the original dose may be administered to prolong anesthesia. However, a second dose of xylazine should NEVER be given, as excess amounts of this agent can cause very low blood pressure.

Pentobarbital

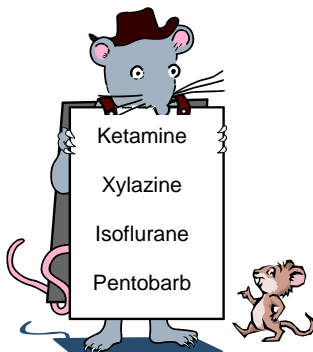
Pentobarbital is an injectable barbiturate anesthetic. It should be injected into the peritoneal cavity or intravenously. An adequate plane of anesthesia is usually reached in about 5 minutes, but the duration of anesthesia is extremely variable, ranging from 10 minutes to several hours in mice, and 80-95 minutes in rats. The problems with pentobarbital are that it does not provide much analgesia, and can cause significant respiratory depression. The dosage of pentobarbital is 40-60 mg/kg in both rats and mice.

Please note that for procedures with prolonged anesthesia, the animal's hydration status and body temperature need to be maintained at appropriate levels (see the documents on the UCUCA website noted below for specifics).

A Quick Note on the Use of Analgesics

There is always some debate on when and for how long one should administer analgesics to rodents following surgical procedures. The traditionally accepted guideline is that if a procedure causes pain in humans, it probably causes pain in animals. Although this is a sound guideline, there is no doubt that animals perceive pain differently than humans. Most rodents begin to ambulate, eat, and drink within hours following major surgical procedures. With this in mind, experience with a particular procedure will often dictate the extent to which analgesics will be needed. Agents such as buprenorphine seem to be very effective analgesics in rodents, and should be used as needed. When in doubt, providing analgesia is always a good idea.

For more detailed notes on anesthetic and analgesic agents, refer to documents on the UCUCA website (http://www.ulam.umich.edu/UCUCA_doc.html). Also, always feel free to call the veterinary faculty or residents with questions. We can provide guidance in choosing the best agents for your situation and hopefully eliminate some headaches in the application review process. 🐾



ARE YOU IN COMPLIANCE? MANAGE YOUR MODS!

By Jessica Kanitz


Regulatory Compliance Associate, UCUCA

What is compliance? Do you know if you are compliant with all Federal and University regulations, policies, and standards? Non-compliance can happen in many ways, including changes in protocol, or “drift”, or by simply not informing the UCUCA of administrative changes.

Protocol “drift” can happen when experiments do not proceed as originally planned and modifications or adjustments are made in order to continue the research or in an attempt to acquire the intended results. Modifications, such as changes in anesthetic or analgesic agents, dosages, or the route of administration, are all important changes that need to be documented in your approved protocol. Additional alterations to your protocol, including method of euthanasia, endpoints, or increases in the number of animals used (i.e., from breeding), are all significant changes that need to be reviewed and approved by the UCUCA.

Other changes, such as those that involve paperwork, can very easily slip through the compliance cracks. For example, did you know that failure to inform the UCUCA of changes in personnel could be considered non-compliant? Additionally, not filling out forms, such as the UM Form 8225-D (Non-Traditional Procurement of Research Animals), can also be an issue of non-compliance. Although this type of information may seem minor or insignificant, it is required that this information be provided to the UCUCA.

From the simple changes to the extreme experimental overhauls, the UCUCA is responsible for knowing exactly how each laboratory is running. If you are not sure if a modification or amendment should be submitted for your protocol...ask! The UCUCA office staff are always willing to clarify any concerns that you may have about compliance and your responsibility. It is our goal to ensure compliance by working with investigators, not against them.

You can contact the UCUCA office by calling (734) 763-8028 or emailing UCUCA.office@umich.edu. 




www.ulam.umich.edu/UCUCA



Valerie Hamlin...Continued from page 3

Today, Valerie Hamlin is still surrounded by chaos, but this time it's under control. Her personal life is on hold as she awaits Eric's return; her professional life is just gathering speed. As the new Manager of Husbandry Services Operations, Valerie will bring all her leadership skills into play as she hires an assistant manager, prepares her management team and husbandry staff for their roles in the upcoming Life Sciences Institute, and then commissions that building. At the same time, she will continue to keep current facilities (some of them running at capacity) inspection ready, and continue to nurture and build relationships with the research community. And you can be sure she'll do all of this with a grace and style that reflect her core composure. We're privileged to have her leading us.

NOTE: Valerie Hamlin would like to thank all of you who have provided her with such tremendous and affirming support during the past year. Your kindness is deeply appreciated. 

A WALK ON THE WILD SIDE: MEET LESLEY COLBY DVM, MS!

By Astrid Haakonstad
Contributing Editor, UCUCA


Dr. Lesley Colby is not your average veterinarian. She always wanted to be a vet, but not necessarily in the traditional sense of working in a clinic. Her love of the outdoors and interest in researching drew her into pursuing university studies involving wildlife. Lesley completed her undergraduate studies at Virginia Tech with a major in Animal Science with an emphasis on Wildlife Management. Then it was on to the Virginia-Maryland Regional College of Veterinary Medicine at Virginia Tech, where she completed her DVM and MS studies in parallel. She selected the Government/Corporate option for her DVM studies, which is a course of study that focuses on veterinary medicine in unconventional arenas, such as in corporations, institutions, and the wild. She earned her MS studying the immune response of elk to the bacteria *Brucella abortus*.

After completing school, Lesley worked with a diverse array of species, including exotics, in private practice in Montana. While in Montana she discovered the field of laboratory animal medicine, which is a perfect marriage between medicine and research. Deciding to follow this path, Lesley returned to Virginia Tech to complete a 2 1/2-year residency before coming to ULAM.

Lesley joined the ULAM veterinary team in July of 2002. Her position at ULAM seems to have been tailor-made to fit her; not only does she get to care for a variety of species, she also contributes to significant research to improve the lives of animals and human beings. She takes great pride in her work and in the knowledge that she and her colleagues are able to provide the research animals with excellent care and treatment.

As a veterinarian and clinical assistant professor, Lesley's days are filled to the brim with enough work for three people. Far from feeling overwhelmed, though, she actually seems more energized by it. She juggles multiple responsibilities, all of which place great demands on her time, with energy and enthusiasm. These responsibilities can be summarized into three main categories: service, instruction, and research. She serves ULAM by reviewing protocol applications and biohazard use, and she provides advice and answers to questions involving the health and welfare of the research animals. Lesley also works with populations of mice and rats, ferrets, guinea pigs, swine, and sheep, providing them with care and treatment. She and the rest of the clinical faculty veterinarians together oversee the teaching of two clinical veterinary residents. And, in addition to her own research, she collaborates with other investigators in designing their studies. She loves working with all kinds of animals, and she would love to pursue research in non-invasive imaging techniques or to work with wildlife.

Lesley's love for the outdoors is evident in her personal life as well. She enjoys many outdoor activities such as biking, hiking, camping, and cross-country skiing, and given the time, would also love to resume SCUBA diving and caving. She loves spending time with her husband and two small children, as well as their two pet Dalmatians.

NOTE: Questions and concerns about animal use, care, and welfare are always welcome. No matter how busy they are, Lesley and the rest of the ULAM veterinary staff are always available to help and answer questions. You can contact Lesley at 615-7179 or lacolby@umich.edu. 



The Backbone

- Add my name to your mailing list.
 Send me _____ additional copies of *The Backbone* _____ (Month/Year).

Please complete and return to the University Committee on Use and Care of Animals (UCUCA).

Name _____ Department _____

Telephone _____ Fax _____ Address _____

Principal Investigator _____

E-mail Address _____

Topics/areas of interest you would like to see explored in future issues: _____

University of Michigan
University Committee on Use and Care of Animals (UCUCA)
3502 ARF 0614
763-8028 (Telephone) 936-3234 (FAX)
ucuca.office@umich.edu (e-mail)

The Backbone

University of Michigan
University Committee on Use and Care of Animals (UCUCA)
3502 ARF 0614

Editors:
Kate Wiklanski
Astrid Haakonstad

