The DAR Insider
USC Department of Animal Resources
Fall Issue 2013

AAALAC Site Visit
Dr. Donald Casebolt

The USC animal care and use program will be site visited by the Association for Assessment and Accreditation for Laboratory Animal Care (AAALAC) on October 23rd, 24th, and 25th. The site visitors will be performing a comprehensive review of everything relating to animal care and use at USC. Below are some frequently asked questions about AAALAC.

What is AAALAC?

AAALAC International is a private, nonprofit organization that promotes the humane treatment of animals in science through voluntary accreditation and assessment programs.

More than 880 companies, universities, hospitals, government agencies and other research institutions in 37 countries have earned AAALAC accreditation, demonstrating their commitment to responsible animal care and use. These institutions volunteer to participate in AAALAC’s program, in addition to complying with the local, state and federal laws that regulate animal research.

How long has USC been AAALAC accredited?

USC was one of the first 20 institutions to become accredited in 1966, and has been continuously accredited since that time. USC is site visited every three years for re-accreditation. Our recent site visits have resulted in continued full accreditation of our program. Typically we have suggestions for improvement from the site visit team, which are used to continuously improve our program.

Will the site visitors come to my laboratory?

The site visitors will want to visit some laboratory areas where animals are used. We will try to give you some notice if a visit to your laboratory is requested. However, it may be relatively short notice since we will not know until that day which areas they may want to see.

Please be certain that all laboratory personnel are aware of the following for “self inspection” prior to the visit:

- All personnel involved in animal use must be aware of the procedures in IACUC protocols they are working on and know where copies of the IACUC approved protocols are located.
- Records of surgical procedures and other procedures in animals are complete and available.
- Drugs used in animals are not kept beyond their expiration dates.
- Controlled drugs are maintained with appropriate security and with complete records of use.
Why is AAALAC important?

For some, animal research is a controversial topic. But like others in the animal welfare arena, AAALAC endorses the use of animals to advance medicine and science when there are no non-animal alternatives, and when it is done in an ethical and humane way.

When animals are used, AAALAC works with institutions and researchers to serve as a bridge between progress and animal well-being. This is done through AAALAC's voluntary accreditation process in which research programs demonstrate that they meet the minimum standards required by law, and are also going the extra step to achieve excellence in animal care and use.

PAIR MATING IS THE RULE!

Dr. Aycock-Williams

Did you know that the standard cage size has 75 in² of floor space?

Did you also know that the minimum recommended space for housing a female mouse and her litter is 51 in.² in floor area (The Guide, 2011)?

This means that you can put one male and one female together for breeding without separation after parturition and still be in compliance with this guideline! Please be reminded that this has changed from the past where different breeding schemes such as Trio and Harems were allowed. This is no longer the case because the welfare of the pups may be compromised having those extra adults in the cage with the allotted cage space at USC.

If you have a breeding colony, check immediately to be sure that your schemes only have one male and one female in one cage. If not, please make the appropriate adjustments to meet the requirements. If you need help with this, do not be afraid to ask a USC veterinarian (2-1689) or take a look at the breeding policy below which gives helpful details.

http://dar.usc.edu/resources/

What if I have a special exception?

Any exceptions to the Pair Mating Rule at USC must be justified and approved by the IACUC. This includes having multiple breeding females in a cage with a male or having a litter and more than 2 adults in the cage.
The DAR Insider
USC Department of Animal Resources
Fall Issue 2013

Controlled Drugs
Dr. Donald Casebolt

USC is in the process of changing the way that controlled drugs will be supplied and maintained in investigator laboratories for animal research. A program is being developed by Environmental Health and Safety to supply and track all controlled substances in laboratories. In animal research, the most common items in this category are the drugs Ketamine, Sodium Pentobarbital (Nembutal) and Buprenorphine, which are commonly used for animal anesthesia and analgesia.

Although DAR will no longer supply controlled drugs, our program to provide veterinarian consultation and training on proper dosage and use of anesthetic and analgesic agents in animals will not change. Also, DAR will continue to provide other non-controlled drugs and materials to researchers.

If you currently maintain stocks of controlled substances in your laboratory under a DAR veterinarian license, you will be contacted to transfer those stocks to an EH&S license. After that, you will obtain new drugs from EH&S instead of DAR. More information and instructions on the new program should be available once the program is established.

If you have any questions about this, please contact a member of the DAR veterinary staff.

Fun Fact: Nude Guinea Pigs are also called “Skinny Pigs” and are different than Nude mice and Rats in that they are euthymic!
You will find the definitions to all words in the puzzle to the right. Know your word meanings to discover all 15 hidden words!

1) A condition in which fluid accumulates in the brain; animals appear with a dome shaped head
2) The loss of feeling or sensation
3) “good death”
4) Abnormal loss of hair
5) Intense itching sensation
6) Term for an organ that slips out of place
7) Difficulty giving birth
8) Medical abbreviation for treatment
9) Latin letters to designate “right eye”
10) Disease that can be transmitted from humans to animals or vice versa
11) Overgrowth of teeth in rodents resulting in poor alignment
12) Medical designation for “toward the rump/tail”
13) An inanimate object that provides a mechanical means of disease transmission
14) Living organisms that transmit disease
15) An organism containing a mixture of genetically different tissues

Answers to last issue’s puzzle. How did you do?!
**TIP:** Routinely check your rodent colonies daily to insure: **CAGES ARE NOT OVERCROWDED.**

Failure to check your colonies on a daily basis can cause overcrowding of animals in cages, injury to animals, and a charge to your PI. This charge will be automatically applied after 48 hours of cage noticed to be overcrowded. So, please take the time to check your animals and separate them to a maximum of **5 adult mice per cage** and **2-3 rats per cage**.

---

**Euthanasia: Why and How? FAQs**

The term Euthanasia is derived from Greek and means “good death”. Euthanasia is defined by *The Guide* as the act of humanely killing animals by methods that induce rapid unconsciousness of death without pain or distress. The primary goal of euthanasia is for the procurement of tissues or blood as part of one’s experimental design or if an animal is in pain or distress. It is import to be familiarized with the requirements of Euthanasia as this will insure your compliance with IACUC and AVMA (American Veterinary Medical Association). *The AVMA Guidelines for Euthanasia of Animals* is used as the basis for which animals are to be humanely euthanized. It states that the most commonly used method in laboratory rodents is CO₂ (Carbon dioxide) followed by a secondary method to confirm death. Other methods include decapitation, injectable barbiturates, thoracotomy, and other inhaled agents. All of these other methods are contingent upon the size and age of the animal. For mice, it is recommended to use CO₂ followed by cervical dislocation. At USC, for Rats it is recommended to use CO₂ followed by thoracotomy. For pups, CO₂ is not recommended over hypothermia followed by decapitation. Training of these methods is very important, so please contact us if you would like free training.

**FAQs:**

- **Do I have to use CO₂ or can I use something else?**
  - You should always use what is listed on your protocol, but there are different agents/methods available like Euthasol or an inhalant anesthetic accompanied by exsanguination. For more suggestions, feel free to contact our Clinical Veterinarians to help you with this decision.

- **Do I have to use cervical dislocation on my mice? If I used CO₂, they should already be euthanized.**
  - Yes, you should always use a physical secondary method to confirm euthanasia. Just because you used CO₂ does not mean your animal has been completely euthanized. They may recover from the CO₂ and wake up in a freezer and freeze to death; which would be an inhumane end-point for the animal.

- **Why can’t I do cervical dislocation on my rats?**
  - For larger animals such as rats, cervical dislocation is not recommended as this would be difficult to perform correctly and quickly. That is why a thoracotomy or other physical method is recommended; as this will prevent the lungs from expanding and thus confirming a secondary method of euthanasia.

- **When I use CO₂ to euthanize my pups, it doesn’t seem to work, why is that?**
  - Pups tend take a lot longer to absorb the CO₂ into their body system due to being in a low oxygen environment of the uterus. It could take up to 20 minutes for you to see the respiration stop. Therefore, lay your pups on a bed of ice or in ice water with their heads above the water to induce hypothermia. Once they are no longer moving (1:30 sec) then decapitate.

---

**Bottom Line:** Euthanasia is an important step in your study. Follow the procedures listed on your protocol for the euthanasia of your animals. When in doubt, contact DAR’s Veterinary Staff to help train you and/or further educate you on the proper techniques of Euthanasia.