ANIMAL CARE & USE PROGRAM
UNIVERSITY OF MICHIGAN

Animal User Group Meeting – Fall 2016

Below are key summary points from the Animal User Group Meetings hosted by ULAM Faculty Veterinarians in September 2016. It is our practice not to share slides from these meetings. However, please feel free to share the information below, which highlights the main topics discussed, with your colleagues who could not attend the meeting.

If you have additional questions or concerns, please contact your ULAM Faculty Veterinarian directly. If you do not know your faculty veterinarian, please send an inquiry to ulam-questions@umich.edu and your question will be routed appropriately.

Ongoing news and information affecting the University of Michigan animal care and use community can be found in the monthly Animal Care & Use Newsletter and, as necessary, future email announcements. Animal User Group Meetings will be held on a quarterly basis, with the next meetings scheduled for early 2017. Stay tuned for more information.

Discussion Topics

Rodent Euthanasia Review

Summary:
Adhere to the practices outlined below to ensure that you are in compliance with your IACUC-approved protocol and maintaining the highest levels of animal welfare standards.

Key Talking Points:

- Consolidate animals appropriately:
  - Maximum 10 mice/small mouse box
  - Maximum 25 mice/large mouse box
  - Consolidate other rodents only to normal housing densities (http://bit.ly/cage-density)

- Monitor animals at all times during CO2 euthanasia; the process typically takes approx. 5 minutes

- A more active method is needed for neonates and/or pinkies less than 10 days old; they are resistant to CO2

- Use a secondary method for all animals to prevent unintended revival:
  - Bilateral pneumothorax is the most common
    - Contact the ULAM Training Core if you're unsure how to do this
  - Rigor mortis is NOT an acceptable secondary method

Available Resources:

- Step-by-Step Euthanasia Procedures posted within the Euthanasia Room
- IACUC Euthanasia Policies (http://bit.ly/iacuc-euth)
- Online SOP (http://bit.ly/rodent-euth)
- Training (email ulam-trainingcore@umich.edu)

Surgical Records Reminder

Summary:
A new requirement for Retention of Rodent Surgical Records went into effect earlier this year. Although everyone has been doing a great job turning in their records for veterinary faculty review, there is some room for improvement and common mistakes that should be addressed.

Key Talking Points:

- For animals covered by the Animal Welfare Act (any mammal that is NOT a rat or mouse bred specifically for research):
  - Submit all completed medical record components (including surgical and post-operative monitoring records) to the ULAM Veterinary Technician Team using the ATR drop boxes

- For animals NOT covered by the Animal Welfare Act (rats and mice bred specifically for research):
  - Deposit all completed surgical and post-operative records in the drop boxes throughout the vivarium
    - If you need a copy, make a copy

- Fill out all records completely and legibly, including:
  - Full names of drugs
  - All PI, protocol, and animal information
  - Document the post-operative pain assessment

- A new surgical record template is available to help with completing records:
  - This template includes more yes/no areas, a cleaner distinction for pre-operative medications, and a "shorthand" key for animal observations to reduce the amount of writing required for each record

Available Resources:

- Guidelines for the Performance of Surgery in Non-Rodent Mammals (http://bit.ly/surgery-non-rodent)
- Guidelines for the Performance of Surgery in Rodents (http://bit.ly/surgery-rodent)
- Anesthesia and Sedation Monitoring Guidelines (http://bit.ly/anesthesia-sop)
- Guidelines on Medical Records for Investigative Personnel (http://bit.ly/ulam-records)
- Species-specific Anesthesia and Analgesia Guidelines (http://bit.ly/ulam-anesthesia)

Re-combining Male Mice

Summary:
Adhere to the practices outlined below to ensure that you are maintaining the highest levels of animal welfare standards and avoiding any unnecessary animal distress/fighting.

Key Talking Points:

- Ideal Scenario: Male mice are only weaned into cages with their littermates

- Second Option: Co-house males from different litters
  - ONLY if it has been less than 1 week from weaning
  - Use a new, clean cage to reduce territorial behavior

- NEVER combine male mice greater than 5 weeks old

- If animals are fighting:
  - Separate the aggressor into his own cage (usually the one without any wounds)
  - If multiple aggressors (everyone has wounds), everyone gets their own cage
  - Notify the veterinary staff
  - NEVER re-combine male mice that have been separated for fighting

Available Resources:

- U-M Policy on Management of Fighting and Fight Wounds in Mice (http://bit.ly/fighting-mice)

Cage Densities for Breeding Mice

Summary:
The U-M Policy on Mouse and Rat Breeding and Cage Densities has been updated to come into alignment with *The Guide*. Additional information will be provided once the policy is approved by the IACUC, and workshops with Breeding Colony Staff will be held across campus in the coming months.

Key Talking Points:

- In breeding mouse cages, MAXIMUM density:
  - 2 adults
  - 1 litter of pups
  - Regardless of litter size

- Recommended breeding scheme: Monogamous pair

- Breeding trios (1 male, 2 females) or harem breeding (1 male, 3-4 females) is allowable in a "standard" mouse cage
  - All but 1 of the pregnant females MUST BE REMOVED by laboratory personnel from the cage prior to parturition (birth) such that only 1 litter of pups and 2 adults remain in the cage after pups are born

- If post-partum estrus is used in "standard" mouse cages, the 1st litter must be weaned by 21 days of age to prevent the presence of 2 litters in a cage
  - i.e., no extended weaning is allowed if post-partum estrus is used

- If animals are poor breeders, documentation to the IACUC must be presented for justification to trio breed (intentionally overcrowd a cage)

Available Resources:

- Contact your Faculty Veterinarian to discuss current rodent breeding strategies and steps for providing scientific justification
- Take available training in MLearning: *DS_ULAM-10125_Breeding Colony Management for Rats and Mice*
- Expanded Breeding Colony Services to provide additional management of colonies is a possible consideration

Housing of Animals Given Human-Derived Substances

Summary:
Animals administered human-derived substances (tissues, fluids, cells, or cell lines) must be housed under ABSL-2 housing. Additional details will be provided soon, and implementation will be gradual as new approvals come through the IBC and the IACUC.

Key Talking Points:

- Brings U-M into alignment with federal guidance (Biosafety in Microbiological and Biomedical Laboratories) and other peer institutions

- If lines are commercially available or have been passaged, they can be 'tested out' of ABSL-2 and be housed in ABSL-1 (normal SPF housing)
    - If a commercial line, QA sheets should be available from organizations (e.g., ATCC)
    - Testing for blood borne pathogens and other lines/fluids should include:
        - Human Immunodeficiency Virus 1-2 (HIV 1-2)
        - Hepatitis B (HBV)
        - Human Papillomavirus (HPV)
        - Epstein-Barr Virus (EBV)
        - Cytomegalovirus (CMV)
        - Additional testing for HTLV-1 and -2 as well as Hepatitis C is strongly encouraged