

GUIDELINES FOR INVESTIGATORS WHO
MANAGE MOUSE BREEDING PROGRAMS

Revised and Re-approved: May 2007

These guidelines were established to assist investigators who manage mouse-breeding colonies. Approval for exceptions to these guidelines is possible but must be requested through the Animal Care and Use Committee (ACUC).

1. Animal overcrowding compromises humane animal care and represents a violation of animal welfare regulations. Per ACUC approved exceptions to the Guide for the Care and Use of Laboratory Animals up to five adult mice may be housed in a standard mouse cage (7" X 11") and up to 6 adult mice may be housed in a Tecniplast individually ventilated mouse cage (8" X 14").
2. The Office of Laboratory Animal Care (OLAC) staff monitors animal health daily but is not responsible for management of rodent breeding colonies. The investigator must check all breeding mouse cages at least three spaced times every seven days. An investigator may request assistance with breeding colony management from OLAC by contacting the facility Animal Resources Manager (ARM).
3. For breeding purposes the standard mouse cage (7 X 11 inches) is designed by size to accommodate one adult female mouse, one adult male mouse, and their litter.
4. Triad breeding (2 females and one male) is permitted with careful management. The two pregnant females must be separated before both females have delivered their litters. Only one litter is allowed in a cage at one time.

An exception may be made for strains of mice on C57BL/6 and 129 background ONLY. Investigators at this institution have observed that a great number of these strains of mice consistently produce no more than 5 pups per litter. Pups from these small litters tend to do better when their mothers are housed in pairs rather than housed separately. Triad breeding groups (2 females and one male) of these strains of mice (if females consistently produce no more than five pups per litter) and their litters may remain in the same cage until weaning at 21 days of age. Cages with two females and more than 11 pups will be considered overcrowded.

5. Weaning of litters must be performed by 21 days. The day of birth is counted as day zero. Weaning may be delayed up to 26 days for C57BL/6 background and 129 strains of mice in cages housing a single adult male/female pair with a litter. If a second litter is born into the cage it is considered overcrowded and the litters must be separated. Compliance with this exception may require daily observation of animals.

It is suggested that undersized litters not be weaned on Fridays or the day before a holiday. If a litter is 21 days old or less on a Friday weaning may be delayed until the next workday. These cages must be tagged and dated with a Delayed Weaning tag. It is essential that these cages be weaned promptly the next workday or they will be considered overcrowded.

Investigators may request delayed weaning or special arrangements for any individual cage of animals by contacting an Animal Health Technician (3-5255).

6. At the PI's request cage changing can be delayed when new litters are present on that day. Cages are changed at least (static microisolators and open-top cages) weekly, or (ventilated cages) every two weeks. Delayed cage-change can only be done on an individual cage-by-cage basis. Cages must be clearly tagged and dated. The lab is responsible to change the cage within three days.
7. The 10X19X6 inch cages allow for a maximum of 12 mice. The use of these cages is limited to synchronization of estrous for female mice and must be pre-approved in the PI's Animal Use Protocol (AUP) by the ACUC.
8. An e-mail report of overcrowding (greater than 5 adult mice per box) or weaning violations will be sent to the investigator and a designated laboratory contact. Cages that are overcrowded for any of

the reasons mentioned above will be tagged with an "O/C overcrowding" card indicating the nature of the problem. Overcrowded cages must be dealt with as soon as possible within 48 hours of being tagged. Example: If a cage is tagged on Monday morning the crowding must be corrected by 8:00 a.m. on Wednesday.

If the violation is not corrected within 48 hours, OLAC staff will separate animals into the appropriate number of clean cages. A per-cage charge will be levied for each cage set up. The ACUC will be notified. If violations are reported to the ACUC on three separate dates within a three-month period, the ACUC will review the circumstances and may levy a fine and/or suspend the investigator's approval to maintain a breeding colony.

OLAC reserves the right to separate immediately, or change the cage of, any animals when animal welfare concerns exist.

9. Investigators are responsible for maintaining appropriate cage card information on all rodent cages. This information includes, but is not limited to, the following:

Principal Investigator's name, department, and lab contact person
Cage identification number
Species and/or strain (especially important for B6 & 129)
Sex and number of adults per cage
Birth dates (or dates of arrival) of adults
Birth dates of litters
Source (name of vendor or "colony born")

10. As a condition of approval for Animal Use Protocols that involve mouse breeding, investigators must provide e-mail information for themselves and their designated laboratory contacts prior to beginning work. A lab contact email list that includes all members of the lab responsible for rodent care is recommended. Contact the UC Berkeley website "list.berkeley.edu" for instructions on establishing lab lists. Once the email address is established, the e-mail address should be sent to [vetstaff 'at' olac.berkeley.edu](mailto:vetstaff@olac.berkeley.edu). The investigator is responsible for keeping this list up-to-date.
11. For additional information please contact the facility ARM (LSA: 3-4032; NAF: 2-6603), or the Animal Health Technicians (3-5255).

Summary of Guidelines

1. Check all breeding cages 3 times in each 7-day period.
2. Triad breeding (2 females and 1 male) is permitted as long as pregnant females are separated after the birth of the first litter.
3. Litters must be weaned by 21 days. The birthday is counted as day zero.
4. Cage card information must be complete on each cage and include designation of a lab contact person.
5. Exceptions for C57BL/6 and 129 mice ONLY.

For singly housed females, and/or a single adult male/female pair, weaning may be delayed until 26 days as long as a second litter is not born into the cage.

Triad groups may be kept together until weaning at 21 days of age as long as there is no more than 11 pups total in the cage.

Use of these exceptions may necessitate additional cage monitoring.

6. A lab contact email list that includes all members of the lab responsible for rodent care must be sent to [vetstaff "at" olac.berkeley.edu](mailto:vetstaff@olac.berkeley.edu).
7. Special arrangements and/or requests for an individual cage of animals may be done by contacting an Animal Health Technician.