

## Standard Operating Procedure

SOP Number: **02-18-5012**

Service: **Research**

Operating Section: **Administration**

Unit: **Comparative Medicine Facility (CMF)**

Title: **Policies for Investigator-Managed Mouse Breeding**

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### **Purpose:**

To ensure that mouse breeding is conducted efficiently and that the Public Health Service Policy and federal regulations governing housing requirements are met. This SOP does not apply to CMF breeding.

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### **Procedure:**

- 1) The Principal Investigator must have an approved IACUC protocol describing the breeding project and its relationship to other research projects.
- 2) Rodent breeding is only allowed in specific, breeding rooms within the CMF and the Cancer Center. Breeding is only allowed in experimental rooms if animals in the gestational process are necessary for a study. Experimental procedures on animals housed in breeding rooms is limited to ear tagging/punching and tail snipping.
- 3) The research staff is responsible for management of mouse breeding colonies. They must check all breeding cages for wellness, social compatibility, pregnancy, births, pup size and quantity (recommended minimum of 3 times per week during breeding).
- 4) To request that CMF carry out your breeding colony tasks, complete a CMF Breeding Services Request Form and submit to the CMF. The CMF houses breeding mice in a locked room with limited investigator access. No experimental procedures can be performed on animals housed in the locked CMF breeding rooms (aside from animal identification and tissue collection for genotyping).
- 5) The standard mouse cage will accommodate one adult female mouse, one adult male mouse, and their litter. Harem breeding (one male and up to three females) is permitted with careful management. Pregnant females must be separated before they have delivered their litters. Only one litter is allowed in a cage at one time. Exceptions must be justified in the IACUC approved ACORP, Breeding and Weaning Appendix.
- 6) If males and females are housed separately, it is recommended to put the female in the male's cage for breeding. Female mice can become territorial which may become a barrier to successful mating.
- 7) Male mice that were placed with females for breeding must not be put back into a cage with other males. They must be single housed to avoid fighting.

- 8) On the day of weaning the research staff are responsible for updating the purple breeder card with the weaned date, sex, and number of animals and completing the on-line Animals Weaned Form. This form is used to account for animals in the IACUC approved protocol and to create bar coded cage cards. This includes accounting for animals that are euthanized and not used for experiments (including wrong genotypes).
- 9) Substitute or hand-written cards cannot be used in place of standard barcoded cage cards. Cage cards must not be reused. If you separate your breeders and individual animal cards are not present, complete an online Animal Separation Request and white cage cards with barcodes will be generated and placed in the animal housing room. Place a blue temporary card on the new cage and write in date weaned, DOB, and suspected strain (or parental strains). If the blue cards remain on the cage for more than 10 business days, a \$ 6.00 fee, per IACUC, per room will be levied against your account. It is your responsibility to check the accuracy of the new cage card and to place it on the correct cage.
- 10) CMF staff will place a red "overcrowded cage" card on cages that are overcrowded. Cages must be separated by the research staff within 3 days of the date written on the card. If the PI does not correct the situation CMF staff will separate the animals and a fee will be charged along with the wean service charges. CMF has the right to separate animals immediately if animal welfare concerns exist.
- 11) Weanlings are considered adults at 21 days (28 days for select slow-growing strains, as approved by the IACUC) and thus cages with animals not yet separated at 22 days (29 days for the aforementioned slow-growing strains) are also overcrowded.
- 12) If a particular strain is desired, genotyping is mandatory prior to weaning so appropriate cage cards can be generated and so that the animal numbers are deducted from the appropriate strain and pain category on the approved protocol. CMF staff is available to assist with weaning, sample collection and identification for a nominal fee.
- 13) Accurate and complete records with standard nomenclature is critical for successful colony management.
  - a) The CMF recommends marking breeders and using one card for each breeder animal, indicating the markings on the cards so that the card can follow the animal as it's put in and removed from a harem/pairing.
  - b) Each breeder cage (currently housing a male with one or more females) should be fronted by a breeder cage card to denote the cage is actively breeding.
  - c) The individual cards should be fronted as animals are separated (and put behind when put together).
  - d) Under no circumstances should individual cards be reused.
  - e) Each dam must have their own purple card to accurately reflect her breeding history. Purple cards must never be reused for other females.

**OFFICE USE ONLY:**

**APPROVALS**

<b>Responsible Official Signature</b>	<i>Jeffrey P. O'Neil</i>	<b>Date</b>	<i>3/18/24</i>
<b>QA Signature</b>	<i>[Signature]</i>	<b>Date</b>	<i>03/18/2024</i>
<b>Version #5</b>	<b>Effective Date</b>	<b>Supersedes #4</b>	<b>Original Date 10/28/10</b>