MOUSE BREEDING POLICY

Overview/Purpose

The purpose of this policy is to ensure compliance with the Guide regarding space requirements for mice utilized for breeding activities in an approved IACUC protocol.

Definitions

1. **Adult mouse** – Any mouse that is 21 days or older and able to eat and drink on its own.
2. **Weaning extension** – The IACUC expects pups to be weaned at 21 days of age. If pup development is delayed, weaning may be delayed, but the weaning extension must be noted on the cage card and pups must be assessed regularly and weaned promptly once they are able to eat and drink on their own.

Requirements:

1. Breeding must be listed as an animal source in the IACUC protocol. Weaning should occur at 21 days of age for normally developing pups.

   Acceptable breeding schemes:
   a. Monogamous pairs: One female/one male. Required scheme if delayed weaning is necessary due to delayed maturation of pups. Pups should be weaned as soon as they are able to eat/drink on their own. Anticipated weaning age must be noted on the green breeding card if not standard.
   b. Trio breeding: Two females/one male. Pups should be weaned at 21 days of age and prior to the arrival of a third litter. This scheme is not appropriate for animals needing a weaning extension or for strains with large litters/pups.
   c. Harem breeding: Up to four females/one male. Pregnant females must be moved into another cage before parturition with no more than two pregnant females per cage.

2. Colony management (setting up breeding cages, documenting date of birth for litters on breeding cards and weaning) is the responsibility of the Principal Investigator/research team. Weaned mice must be removed at appropriate times to prevent overcrowding that could impact performance and animal welfare.

3. Pups that are present in the breeding cage 3 days past the standard weaning age will be weaned by ULAR staff and the PI charged a technical service fee. The research team will not be contacted or reminded of weaning dates.

4. Cages with litters of significantly different ages (i.e. newborn pups and weanlings) including animals that are at least 21 days of age and of adequate size to eat and drink on their own must be separated immediately.

5. **If pup development is delayed**, a weaning extension (up to 28 days) must be noted on the breeding card. Individual pups should be assessed regularly once they reach 21 days of age and weaned promptly once they are able to eat and drink on their own. Normal sized pups within the litter should be weaned at 21 days of age.
Applicable Regulations

- Health Research Extension Act of 1985 and Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals

Additional Information/Guidance

1. The Guide recommends $51\text{in}^2$ for a female plus litter with a comment that “other breeding configurations will depend upon considerations.” Current IVC (individually ventilated) mouse caging provides 77.5 square inches of floor space [http://www.allentowninc.com/rodent-housing/nexgen/]. The IACUC recognizes that trio breeding may be an exception based on The Guide recommendations for floor space. Performance criteria including ammonia levels, pre- and post-weaning mortality, soiling of bedding, the difference in age of pups of different litters, and growth rate have been evaluated and the use of IVC cages for trio breeding of mice is acceptable when pups are weaned at approximately 3 weeks of age.

History of Revisions

007-00 - New policy approved. 11/18/2005
007-01 – Standard breeding cage was defined. Instructions on breeding cage cards deleted. Approved 02/20/2009
007-02 – Cage size added. Weaning set at 21 days. Required justification for weaning added. Instructions for PI's regarding administrative items deleted. Approved 04/22/2011
007-04 – Reformatted into new template. Condensed purpose, expanded adult mouse definition, removed reference to green acetates and minor wording changes throughout. Removed the requirement for weaning extension to be approved by the IACUC. Approved 03/27/2015
007-05 – Revisions reflect definition changes, clarifying each breeding schemes, and the requirement that weaning extensions must be noted on the breeding card. Approved 01/20/17
007-06 – Revisions reflect definition changes and the requirement that weaning should occur at 21 days of age. Approved 02/21/2020
007-07 – Revision to trio breeding scheme adding to definition of what is not appropriate. Approved 05/15/2020