I. Purpose

To define the minimum standards for housing rats and mice based on the standards of practice and standards of performance outlined in The Guide for the Care and Use of Laboratory Animals.

II. Procedures

A. Mouse Housing Policies

   i. CMU Mouse Cage Density Guidelines:

      1. Mice >25 g (>15 sq. in/mouse) can be housed at 5 mice per cage.
      2. Mice 15-25 g (12 sq. in/mouse) can be housed at 6 mice per cage.
      3. Mice 10-15 g (8 sq. in/mouse) can be housed at up to 9 mice per cage.
      4. Mice <10 g (6 sq. in/mouse) can be housed at up to 12 mice per cage.
      5. Female with litter (51 sq. in/group) can be housed with an adult male per cage.
      6. 2 Females with litters of up to a total of 15 pups can be housed per cage.
      7. If more than 15 pups, must separate one female with pups when the oldest pups are 10 days old.
      8. With IACUC approval, 2 females with litters of up to a total of 9 pups plus male can be housed per cage (if more than 9 pups, must separate one female with pups when the oldest pups are 10 days old).

   ii. Breeding Guidelines:

      1. Monogamous pairing (1 male, 1 female) is the preferred density to prevent overcrowding.
      2. If breeding is difficult with the particular mouse strain (example transgenic mice), the investigator can request an exception to the monogamous pairing guideline. If IACUC grants this exception, two females, with litters, and a male can be housed in one cage, according to the cage densities described above. However, second litters from a given female cannot be in the same cage, so the first litter must be removed before the second litter is born.

   iii. Weaning Guidelines:

      1. Mice should be weaned at 21 days of age. The PI will be notified via e-mail if litters have not been weaned by that time. If the PI does not
separate the mice, at 48 hrs. after the notification, the litters will be weaned by vivarium staff and separated by sex, males from females into different cages, using the above housing density guidelines.

2. Requests for delayed weaning protocols must be pre-approved by the IACUC with specification of the actual weaning ages. Additionally, cages should be properly labeled by the PI to identify the group of mice approved for delayed weaning, with the approved weaning age stated on the label.

iv. Policy Implementation:

1. Requests for exceptions to these policies should be scientifically justified and submitted for IACUC consideration, either at the time of the original protocol review or as a protocol revision. IACUC will determine whether the exception is reasonable and consistent with provisions of the Guide for the Care and Use of Laboratory Animals and AAALAC standards.

2. If an overcrowded cage is noted, an “Overcrowded Cage” card will be placed on the front of the cage. The PIs will be notified and the PI will have 48 hrs. to separate the animals or the vivarium staff will do so.

3. Overcrowding is defined as needing to be separated either because the population exceeds the cage capacity guidelines or because the pups in that cage have reached the 21-day weaning age.

4. PI/Vivarium staff will separate animals by sex, males from females into different cages, using the above housing density guidelines.

5. Failure to comply with this policy will be reported to the IACUC for their consideration.

B. Rat Housing Policies a

i. CMU Rat Cage Density Guidelines: The following animal densities are approved.

1. Rats >500 g (70 sq. in/rat) can be housed at 2 rats per cage.
2. Rats 400-500 g (60 sq. in/ rat) can be housed at 2 rats per cage.
3. Rats 300-400 g (40 sq. in/rat) can be housed at up to 3 rats per cage.
4. Rats 200-300 g (29 sq. in/rat) can be housed at up to 5 rats per cage.
5. Rats 100-200 g (23 sq. in/rat) can be housed at up to 6 rats per cage.
6. Rats <100 g (17 sq. in/rat) can be housed at up to 9 rats per cage.

ii. Breeding Guidelines:

1. Monogamous pairing (1 male, 1 female) is the preferred density to prevent overcrowding.
2. A litter of rats should be housed only with the mother. No other adult rats should be present. The female rat and her litter should have at least 124 square inches of cage space.
3. If breeding is difficult with the particular rat strain (example transgenic rats), the investigator can request an exception to the monogamous pairing guideline. If this exception granted by IACUC, two females and
a male can be housed in one cage, according to the cage densities described above. Pregnant females should be placed in separate boxes before they give birth.

iii. Weaning Guidelines:
1. Rats should be weaned at 21 days of age. The PI will be notified via e-mail if litters have not been weaned by that time. If the PI does not separate the mice, at 48 hrs. after the notification, the litters will be weaned by vivarium staff and separated by sex, males from females into different cages, using the above housing density guidelines.
2. Requests for delayed weaning protocols must be pre-approved by the IACUC with specification of the actual weaning ages. Additionally, cages should be properly labeled by the PI to identify the group of rats approved for delayed weaning, with the approved weaning age stated on the label.

iv. Policy Implementation:
1. Since rats are social animals, they should be housed in pairs or groups whenever possible. Individually house rats must be given some form of enrichment, unless an exception to enrichment is scientifically justified and pre-approved by the IACUC.
2. Requests for exceptions to these policies should be scientifically justified and submitted for IACUC consideration, either at the time of the original protocol review or as a protocol revision. IACUC will determine whether the exception is reasonable and consistent with provisions of the Guide for the Care and Use of Laboratory Animals and AAALAC standards.
3. When an overcrowded cage is noted, an “Overcrowded Cage” card will be placed on the front of the cage. The PIs will be notified and the PI will have 48 hours to separate the animals or the vivarium staff will do so.
4. Overcrowding is defined as needing to be separated either because the population exceeds the cage capacity guidelines or because the pups in that cage have reached the 21-day weaning age.
5. PI/Vivarium staff will separate animals by sex, males from females into different cages, using the above housing density guidelines.
6. Failure to comply with this policy will be reported to the IACUC for their consideration.

Adapted from the University of Texas Medical Branch Rodent Housing Policy, University of Texas Health Science Center Rodent Housing Policy and consistent with the Guide for the Care and Use of Laboratory Animal.