

GUIDANCE ON EXCEPTIONS REGARDING HOUSING OR HUSBANDRY OF LABORATORY ANIMALS

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Background

The Animal Welfare Regulations require laboratory rodents be housed and managed according to standards outlined in the *Guide for the Care and Use of Laboratory Animals (Guide)*. The *Guide* lists specific standards for cage size requirements, cage change frequency and physical separation of species. This guideline outlines institutionally accepted housing and husbandry exceptions to the *Guide* for mice and rats¹.

For information on housing and husbandry of breeding mice, please see the ACUC Guidelines for Investigators Who Manage Mouse Breeding Programs.

Common, Institutionally Accepted Exceptions to the *Guide*

Rodent Cages

1. Number of mice per cage
 - a. *Guide* recommendations – A floor area of at least 15 inch² per mouse for mice weighing more than 25 grams (Chapter 3; Table 3.2).
 - b. Cages currently provided by the Office of Laboratory Animal Care (OLAC) allows for 5.5 adult mice to be housed per individually ventilated cage. The ACUC rounds up, so 6 mice can be housed per individually ventilated Tecniplast blue line cage. Adverse effects on the health or wellbeing of mice housed in these groupings have not been observed by researchers, animal care staff or veterinarians.
2. Cage change schedules
 - a. *Guide* recommendations – Cage change intervals of one week for rodents housed in solid bottom cages with the caveat that “some types of caging

¹ NOTE: The Office for Laboratory Animal care (OLAC) routinely accepts the exceptions outlined in this guidance document. Requests for housing and husbandry exceptions absent from this document or for other non-*Mus* or *Rattus* rodents must be described in the Principal Investigator’s Animal Use Protocol and approved by the ACUC.

might require less frequent cleaning or disinfection; such housing may include...ventilated caging” (Chapter 3; page 70).

- b. OLAC changes bedding in individually ventilated cages at least once every two weeks. As is standard practice with conventional cages, daily spot-checking will occur; cages that are exceptionally dirty – as may occur with breeding cages or a water bottle/pack leak – will be changed immediately.
3. Cage top sanitation schedules
 - a. *Guide* recommendations – “In general, enclosures and accessories, such as tops should be sanitized every two weeks” (Chapter 3; page 70).
 - b. OLAC rodent cage lids and food hoppers are changed during every other cage change or every two weeks. Using every other cage-change interval, cage tops and lids may be changed every 4 weeks. Cage lids and food hoppers contained a similar number of bacterial colonies after 2 weeks of use compared to 120 days. Bi-weekly sanitation of laboratory rodent cage lids and wire-bar food hoppers is therefore not justified, according to the authors (Schondelmayer et al., 2006).
 4. If, at any time, OLAC or the investigators have evidence that any of the exceptions to the *Guide* outlined above negatively impact animal health or welfare, concerns should be reported to ACUC. Modifications to this guideline may be made to reflect those concerns.

Physical Separation of Animals by Species

1. *Guide* recommendations – Physical separation of animals by species (Chapter 4; pages 111-2).
2. Different species are usually housed in separate rooms; however, OLAC veterinarians may determine that behaviorally compatible animals with a similar pathogen status can be housed in the same room, but in separate cages or ventilated racks.

References

- Institute of Laboratory Animal Research (ILAR) (2011). *Guide for the Care and Use of Laboratory Animals* (8th ed.). Washington, D.C.: The National Academies Press.
- Pritchett-Corning, K.R., Chang, F.T., & Festing, M.F.W. (2009). Breeding and Housing Laboratory Rats and Mice in the Same Room Does Not Affect the Growth or Reproduction of Either Species. *Journal of the American Association of Laboratory Animal Science*, 48(5), 492-98.
- Schondelmayer, C.W., Dillehay, D.A.L., Webb, S.K., Huerkamp, M.J., Mook, D.M., & Pullium, J.K. (2006). Investigation of appropriate sanitation frequency for rodent caging accessories: Evidence supporting less frequent cleaning. *Journal of the American Association of Laboratory Animal Science*, 45(5), 40-3.