

*University of Louisville*  
Institutional Animal Care and Use Committee  
*Policies and Procedures*

## Housing of Mice and Rats

**Policy:** Mice and rats will be kept in densities not to exceed the floor-space options listed in this policy. If studies require alternative housing for scientific necessity, including configurations of less space than the options listed below, these housing configurations must be listed and approved in the IACUC *Proposal*. All mice and rats must be housed in cages provided by the Research Resources Facilities<sup>1</sup> (RRF) unless alternative housing is specifically requested and approved in the IACUC *Proposal*. If animals are identified in housing scenarios exceeding the below requirements, laboratory staff will be notified by RRF husbandry staff and allowed 24 hours to correct the housing. If not corrected within 24 hours by the laboratory, the RRF will intervene to the extent necessary for compliance with this policy. Note that in the case of double litters from the same dam, RRF husbandry staff will intervene immediately and without notice to separate animals due to the welfare concerns of newborn litters. All colony management including timely weaning and adherence to cage densities remains the responsibility of the Principal Investigator.

Related IACUC Policies: Social Housing of Animals; Rodent Breeding Colonies

**Rationale:** The *Guide for the Care and Use of Laboratory Animals*<sup>2</sup> (*Guide*) states that “all animals should be housed under conditions that provide sufficient space as well as supplementary structures and resources required to meet physical, physiologic, and behavioral needs.” Overcrowding may impact performance criteria of the microenvironment and overall animal welfare. The housing options listed below are in accordance with the eighth edition of the *Guide* or reflect current best practices.

### **Procedures, Guidelines, and Exceptions:**

#### 1. **Mice:**

##### a. General Comments

- i. Mice should be weaned into same-sex groups at the age of weaning. Male mice should never be housed with other males that they were not weaned with, as this may lead to fighting.
- ii. Harem breeding should never include more than 1 male. Well-organized planning and separation is required to keep harem breeding cages compliant with this policy (see IACUC Policy “Rodent Breeding Colonies” for further details).

##### b. Types of mouse caging provided by the RRF:

- i. Supermouse 750 (Lab Products, ventilated)
- ii. Flex-Air (Alternative Design, ventilated)
- iii. Sealsafe & IsoCage (Tecniplast, ventilated)

<b>Mouse Caging</b>		
<b>Caging Type:</b>	<b>Adult (weaned) mice:</b>	<b>Breeding scenario(s)</b>
Supermouse 750	5	1 female + 1 litter And 1 adult
Flex-Air	5	1 female + 1 litter

**Original Approval:** 16 April 2020

**Revised:** 1 July 2020

**Last Approval:** 16 July 2020

		And 1 adult
SealSafe & Isocage	5	1 female + 1 litter And 1 adult

2. **Rats:**

a. General Comments:

- i. Rats can be weaned into groups by weight as detailed below. Frequent weighing should occur until rats are >500g (approximately 4 months of age for males).
- ii. Rats are very socially compliant and, unlike mice, can be repaired or grouped at any age. Though rare, recently grouped animals should be checked frequently to monitor for signs of fighting.
- iii. Obese rats may require single housing if their cage cannot allow two animals to make normal postural adjustments. The RRF will work with investigators to offer other housing options if this arises.
- iv. Due to their highly social nature, rats should be housed in pairs or groups whenever possible (see IACUC Policy “Social Housing of Animals”).

b. Types of rat caging provided by RRF:

- i. One Cage 2100 (Lab Products, ventilated)
- ii. Grommetted (AnCare, static)

<b>Rat Caging</b>					
<b>Caging Type:</b>	<b>Adults below 300g</b>	<b>Adults between 300-500g</b>	<b>Adults &gt;500g</b>	<b>Breeding Scenario(s)</b>	<b>Notes:</b>
One Cage 2100	7	3	2	1 female + 1 litter and 1 adult.	
Grommetted	4	2	2*	1 female + 1 litter	*larger animals may require more space to meet performance standards

**References:**

1. RRF Caging Guide (v4, 2019).
2. National Research Council, Guide for the Care and Use of Laboratory Animals, 8th Ed., National Academies Press, Revised 2011.

**Original Approval:** 16 April 2020

**Revised:** 1 July 2020

**Last Approval:** 16 July 2020