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**1. PURPOSE**

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The intent of this Standard Operating Procedure (SOP) is to describe an appropriate environmental enrichment program for mice.

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**2. RESPONSIBILITY**

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Facility Animal Care Committees (FACCs), principal investigators (PIs), animal care staff.

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**3. PROCEDURES**

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- 3.1. The purpose of environmental enrichment is to provide mice with opportunities to express basic behavior needs, to promote species-typical, non-injurious behavior and to promote physical and mental health thus enhancing animal welfare. The environmental enrichment should be biologically relevant (ie: hiding, socializing, searching) so that it does not lose its enriching value over time.
- 3.2. Social Contact:
  - 3.2.1. Pair or group house mice.
  - 3.2.2. Mice may be singly housed in some cases:
    - 3.2.2.1. Incompatibility.
    - 3.2.2.2. Medical reasons.
    - 3.2.2.3. Specific protocol approved by FACC.
- 3.3. Housing System:
  - 3.3.1. Animals should be housed with the goal of maximizing species-specific behaviors and minimizing stress-induced behaviors.
  - 3.3.2. House mice in solid-bottom cages with contact bedding, unless specifically described in a protocol and approved by the FACC.
  - 3.3.3. Housing system should exceed the minimal space recommendations for a standard mouse cage (~70 sq. inches):
    - 3.3.3.1. Trio-breeding: 2 females, 1 male, and up to two litters until weaning.
    - 3.3.3.2. After weaning: 8 mice if <10 g; 7 mice if 10–15 g; 5 mice if 15-25 g
- 3.4. Dietary Enrichment:
  - 3.4.1. No dietary enrichment is routinely provided.
  - 3.4.2. Provide mice with dietary supplementation as allowed by the PI for positive reinforcement (e.g. sunflower seeds).
- 3.5. Objects:
  - 3.5.1. Nesting material:
    - 3.5.1.1. Provide nesting material (e.g., loose paper strands such as Enviro-Dri®, NESTLET®, corn husk, shredded aspen) in every cage.
    - 3.5.1.2. Transfer the nest to the clean cage with the animals during cage change, add additional nesting material and provide a new shelter if necessary.
  - 3.5.2. Shelter:
    - 3.5.2.1. Provide a cellulose-based (preferable) or plastic shelter.
    - 3.5.2.2. Shelter should provide enough protected space for all cage occupants.
- 3.6. Exemption:
  - 3.6.1. Exemption from this environmental enrichment program must be justified and approved by the FACC, or prescribed for medical reasons.