GUIDELINES FOR ENVIRONMENTAL ENRICHMENT OF LABORATORY ANIMALS

Environmental Enrichment

The *Guide for the Care and Use of Laboratory Animals* recommends the use of environmental enrichment to enhance physical and psychological well-being and to promote species-typical behavior in all laboratory animals. Public Health Service (PHS) Policy II; IV, A, 1 requires that institutions comply with the *Guide*.

Enrichment is an important part of animal well-being and husbandry. It must be conducted in such a way as not to interfere with research results and is required for all vertebrate animals unless scientifically justified.

LAMS provides enrichment to all animals according to the Table 1: LAMS Allowed/Recommended Standard Environment Enrichment

Withholding Environmental Enrichment
If research precludes the use of environmental enrichment, the following steps are required:

**Step 1: Paper Protocol Template:**

Complete and submit Addendum A: Withholding Enrichment or Single Housing to the IACUC. The form must be approved by the IACUC and state the following:

- The scientific justification for withholding enrichment
- The period(s) in which enrichment is withheld

**RAP Protocol Template:**

Complete “Q11.Identify Husbandry Exceptions” under Experimental Section of the RAP Protocol.

**Step 2:** Notify LAMS Management prior to withholding enrichment:

- Upon IACUC approval, submit a LAMS Husbandry Service Request [http://rap.uc.edu/aops](http://rap.uc.edu/aops) indicating animals cannot have enrichment.
- LAMS Management verifies and approves service request for withholding enrichment

**Step 3:** Identify cages: Research staff must label applicable cages "NO ENRICHMENT". Shelving unit can be labeled if it includes all animals on the rack.

Requesting Specific Environmental Enrichment Item(s)
Specific enrichment is based upon availability and there may be an additional cost. If you require specific enrichment (e.g. trapeze but not crinkle paper), the following steps are required:

1. Notify LAMS Management:
   - Submit a LAMS Husbandry Service Request [http://rap.uc.edu/aops](http://rap.uc.edu/aops) indicating animals require specific enrichment and type of enrichment requested
• Items not listed in Appendix A: LAMS Approved Enrichment require prior approval by LAMS veterinary staff. Submit a LAMS Veterinary Service Request [http://rap.uc.edu/aops](http://rap.uc.edu/aops) for approval. In most cases, items must be disposable or sanitizable and species-appropriate.

2. Identify cages:
   • Research staff must label applicable cages "SPECIFIC ENRICHMENT".
   • Compliance with IACUC Policy #030 (Environmental Enrichment and Social Housing of Laboratory Animals) is the responsibility of research staff.

Note: LAMS may discontinue use of any enrichment device/method deemed not suitable/appropriate to animal(s), research study, or animal facility.

### Table 1: Allowed/Recommended Standard Environmental Enrichment

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>EXAMPLES OF ALLOWED/RECOMMENDED ENVIRONMENTAL ENRICHMENT</th>
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</thead>
</table>
| Amphibian | • Plastic hiding hut/tube/etc.  
             • Floating ping pong balls  
             • Plastic lily pads |
| Cat      | • Non-edible toy  
             • Resting board  
             • Scratching post  
             • Hide box  
             • Bedding and cushion  
             • Auditory - Soft radio music  
             • Food treats |
| Dog      | • Non-edible toy  
             • Rubber mats  
             • Plastic beds  
             • Bedding and cushion  
             • Auditory - Soft radio music  
             • Food treats |
| Gerbil   | • Non-edible toy  
             • Disposable hut  
             • Nesting material (crinkle paper)  
             • Dust bath |
| Guinea Pig | • Non-edible toy  
              • Plastic hut/tube/etc.  
              • Nesting material (crinkle paper)  
              • Dietary – Fresh vegetables, lettuce, timothy or alfalfa hay (autoclaved) |
| Mouse    | • Non-edible toy  
             • Plastic huts/tunnel  
             • Disposable hut  
             • Nesting material (Nestlets, crinkle paper) |
<table>
<thead>
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<th>SPECIES</th>
<th>EXAMPLES OF ALLOWED/RECOMMENDED ENVIRONMENTAL ENRICHMENT</th>
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<tbody>
<tr>
<td>Pig</td>
<td>• Non-edible toy (stainless steel rattle, ball, dumb bell)</td>
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<tr>
<td></td>
<td>• Mirror</td>
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<td></td>
<td>• Food treats – fresh vegetables, fruits, yogurt, marshmallow, Twinkies etc.</td>
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<tr>
<td>Rabbit</td>
<td>• Non-edible toy (stainless steel rattle, ball, dumb bell)</td>
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<tr>
<td></td>
<td>• Plastic tunnel</td>
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<tr>
<td></td>
<td>• Dietary – Fresh fruits or vegetables (e.g., carrots, lettuce, apples, pineapple), timothy or alfalfa hay (autoclaved)</td>
</tr>
<tr>
<td>Rat</td>
<td>• Non-edible toy</td>
</tr>
<tr>
<td></td>
<td>• Disposable hut</td>
</tr>
<tr>
<td></td>
<td>• Nesting material (crinkle paper)</td>
</tr>
<tr>
<td>Reptile</td>
<td>• Plastic hut/tube/etc.</td>
</tr>
<tr>
<td></td>
<td>• Natural tree branches</td>
</tr>
</tbody>
</table>

**Additional Guidance Regarding Food Treats**

Food treats, in general, are not considered enrichment and may affect research studies. Therefore, use of food treats is reserved for LAMS staff (e.g. positive reinforcement for training, delivery of prescribed treatment, etc.).

**Additional Guidance Regarding Positive Human Interaction**

For larger species that are single housed (e.g., client-owned cats or dogs, pigs, rabbit,): enhanced positive human interaction (e.g., petting, grooming, hand feeding veggies/treats, talking to them directly) is provided.