

Animal Care and Use Program Policy

Rodent Environmental Enrichment

Version 1.0

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Background

The primary aim of environmental enrichment is:

- I. enhance animal well-being by providing animals with sensory and motor stimulation, through structures and resources;
- II. facilitate the expression of species-typical behaviors; and
- III. promote psychological well-being through physical exercise, manipulative activities, and cognitive challenges according to species-specific characteristics.

Scope

This policy applies to all rodents housed at OHSU.

Policy

Each animal should be provided with the opportunity to exhibit species typical behavior. Primary enclosures should be continually evaluated by the Department of Comparative Medicine (DCM-C) and Division of Comparative Medicine (DCM-W) to provide laboratory rodents with an appropriate environment that enhances their well-being. Social housing will be considered as the default method of housing unless otherwise justified based on social incompatibility resulting from inappropriate behavior, veterinary concerns regarding animal well-being, or scientific necessity approved by the IACUC.

Procedures

- I. Basic structural and environmental components
 - A. Housing should be made of solid bottom to provide for a comfortable resting and walking surface.
 - B. Bedding should be selected that allows for species-typical behavior such as burrowing and nest building.
 - C. Environmental enrichment typically used for rodents includes pads of compressed bedding (Nestlets®), long strands of crinkled paper (EnviroDri®), and/or polycarbonate shelters (Mouse house). Additional products may include Alpha-Dri Plus (pre-enriched bedding), Shepherd shack, plastic huts or houses, and/or plastic pipes. These products block ambient light and encourage nest building activities, provide sheltered areas, or control temperature within the primary enclosure.
 - D. Polycarbonate tubes for tunneling and gnawing (Nylabones®) may also be provided to rats.
- II. Nutritional Enrichment

The use of species appropriate diet or dietary supplement items may be used as a means of enrichment. Food treats may be provided to rodents providing they do not significantly reduce the consumption of the normal diet (ex. Veggie Relish; LabDiet, 5LRV, irradiated).

Authority

Guide for the Care and Use of Laboratory Animals, 8th edition, 2011. P.52-54
Environmental Enrichment
PHS Policy IV. A,1

References

Guide for the Care and Use of Laboratory Animals (The Guide), 8th edition, NRC, 2011.
Benefiel, Dong, and Greenough. 2005. Mandatory "Enriched" Housing of Laboratory
Animals: The Need for Evidence-Based Evaluation. ILAR Journal 46(2):95-105.