# Rodent Enrichment Policy

Adopted by UCAR 7-16-14
Reviewed June 2021 by A. Rehrig
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**Background**

The primary aim of environmental enrichment is to:

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 the University of Rochester.

**Policy**

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

**Procedures**

**I. Basic structural and environmental components**

A. Cages with solid bottoms are the default to provide a comfortable resting and walking surface. Investigators must scientifically justify the use of novel housing, metabolic cages and wire-bottom cages. When approved by UCAR, rodents may be housed on wire-bottom cages for the minimum period required to achieve the scientific goals of the study.

When group housed rats exceed the minimum floor space requirements in standard rat cages, they are moved into larger cages to allow them to maintain social housing. Alternatively, UCAR may exempt animals from the minimum space requirements to allow social housing. In these cases, animals will be monitored, and changes in husbandry (i.e., frequency of cage changes), may be implemented to ensure the overall well-being of the animals.

B. All rodents are provided with bedding to allow for species-typical burrowing and nest building. Biofresh Performance bedding is the default, but investigators may request alternative beddings if necessary.

C. In addition to structural elements, all rodents will have at least one environmental enrichment item added to the cage. Environmental enrichment typically used for rodents includes nesting material (e.g., pads of compressed bedding, nesting sheets, long strands of crinkled paper, Enviropaks etc.), gnawing sticks/blocks, and/or polycarbonate shelters (Mouse house). Additional products may include Alpha-Dri Plus (pre-enriched bedding), Shepherd shacks, 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, rat lofts, Nylabones®, wood sticks/blocks may be provided to rats. Rats in metabolic cages receive marbles. They may also be provided with rest pads (e.g., commercially available products or pieces of cardboard) when it doesn't interfere with the research.

**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 (e.g., veggie relish, sunflower/pumpkin seeds, commercially available rodent treats, fresh produce etc.).

**III. Rodents Requiring Special Attention**

Occasionally, rodents exhibit behavior that suggests they may benefit from a more complex environment. If DCM determines that additional enrichment is required for any rodent (e.g. self-inflicted lesions, continuous wire gnawing, jumping, circling, tail-chasing, excessive food shredding), manipulanda such as Nylabones, manzanita gnaw sticks, wood blocks, cardboard tubes, mouse houses and/or tunnels will be provided.

**IV. Exemptions**

UCAR recognizes the following exemptions to the requirement for social housing:

Scientific Exemptions

a. Investigators must scientifically justify single housing in the Protocol, and UCAR must approve this exemption
b. UCAR will carefully examine the justification, and may require that animals on certain studies in a Protocol be socially housed while recognizing that other experiments within the same Protocol may require single housing
c. In all cases, single housing will be for the minimum period required to achieve the scientific goals

2. Veterinary Exemptions
    a. Injured, ill, or debilitated rodents may be single housed at the discretion of DCM
    b. Female rodents which barber subordinate animals to the point where they cause skin lesions in subordinates may also be exempted

3. Social Incompatibility
    a. Male mice are exempt from social housing requirements once they have been removed from the cage where they are first housed with other males
    b. Syrian hamsters are exempt from social housing requirements once they have been removed from the cage where they were first housed with others of their own gender
    c. Blind mole rats

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