

Subject: Enrichment of Animals

Source: Office of Laboratory Animal Resources
Effective Date: 12/09/24
Replaces: 09/11/23
Applies to: All species housed in CU Denver facilities
Reference: Animal Welfare Act; PHS Policy on Humane Care & Use of Laboratory Animals; Guide for the Care & Use of Laboratory Animals

Introduction

The Animal Welfare Regulations and Guide for the Care and Use of Laboratory Animals state that species appropriate environmental enrichment should be provided to animals unless there is a scientific justification or an animal welfare concern evaluated by a veterinarian. Environmental enrichment can take many forms and may include social housing for social species, nesting materials for nesting species, toys, music, cage furniture, novel food, etc. It is the goal of the Animal Care and Use program at the University of Colorado Denver | Anschutz Medical Campus (CU Denver | Anschutz) to provide an enriched environment to all animals that is beneficial to animal well-being and consistent with the goals of animal use.

Policy Statement

All animals housed in CU Denver | Anschutz AAALAC accredited housing sites will be provided with species appropriate environmental enrichment. Any additional enrichment that would be provided by the animal facility, beyond the minimum, will only be provided after approval by the Principal Investigator.

- Cage Furniture or Toy Enrichment:
 - Additional enrichment is available in the enrichment containers within the facility or the Principal Investigator may provide it following review and approval by the Facility Manager.
 - Rodents: cage enrichment must be sterilized or irradiated prior to use, unless prior approval has been granted by the Director or Associate Director of OLAR.
 - Non-Rodents: additional cage enrichment should be sanitizable or able to be disposed of after use.
- Food Enrichment:
 - Rodents:
 - Stored in vermin proof container
 - Purchased sterilized (autoclaving/irradiated) prior to entering the facility
 - Labeled with the “best by” or expiration on any new container
 - Obtained through an enrichment vendor (i.e. Bio-serv) and certified sterile. If not available, grocery items can be purchased if stored and labeled as above.
 - Should not be prepared (i.e. mixed or cooked) outside of the facility
 - Non-Rodents:
 - At minimum should be purchased as human food grade or acceptable for livestock
 - Fresh vegetables and fruits for herbivores and some omnivores must be rinsed prior to processing for distribution
 - Food enrichment disposal: Independent of source, discard any food enrichment after the expiration date, the “best by” date, or if the item becomes contaminated or is visibly spoiled.
- OLAR provided food enrichment may be available for use, depending on the room and species.
 - Any other food enrichment provided by researchers must be described in their IACUC protocol.

Exemptions: Scientific justification is required for exemption of any species from the minimum enrichment provided. If requesting an exemption from the minimum enrichment, within the IACUC protocol an investigator must address each aspect of the program and provide a scientific justification as to why this aspect is not able to be used. Requests must be reviewed and approved by the IACUC prior to receiving exemptions from the enrichment program. Investigators with exemptions from the enrichment program must work with the respective animal Facility Manager to ensure that the cages are appropriately labeled.

Procedures

The following is a list of minimum enrichment provided to animals, along with additional enrichment that may be used:

- Social Housing for social species is required per the IACUC policy – Social Housing for Social Species
 - Sheep - animals will not be housed in isolation (auditory or visual sight of another animal), animals in carts pushed together to foster herding behavior.
 - Hamsters and ground squirrels are not considered social species
- Rodents – (mice, rats, gerbils, hamsters)
 - Required – nesting material (eg. Nestlet, brown shredded paper, papertowels, etc) and/or cage furniture
 - Additional enrichment includes but is not limited to: food treats not normally part of the diet, manipulanda, toilet paper rolls, running wheels, chew sticks, nylabones, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice).
- Chinchillas
 - Required - cage furniture and dust baths.
 - Additional enrichment includes but is not limited to: food treats not normally part of the diet, manipulanda, human contact, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice)
- Rabbits and Guinea Pigs
 - Required - cage furniture, manipulanda, and/or toys.
 - Additional enrichment includes but is not limited to: human contact, playpen access, food treats not normally part of the diet, nylabones, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice)
- Pigs
 - Required – toys and/or manipulanda
 - Additional enrichment includes but is not limited to: human contact, food treats not normally part of the diet, large balls, scratching mats, nylabones, chew sticks, Kongs, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice)
- Sheep
 - Additional enrichment includes but is not limited to: food treats not normally part of the diet, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice)
- Calves
 - Additional enrichment includes but is not limited to: human contact, food treats not normally part of the diet, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice)
- Cats
 - Required - toys, raised platforms, human contact.
 - Additional enrichment includes but is not limited to: food treats not normally part of the diet, scratching posts, hammocks, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice)
- Ferrets
 - Required - cage furniture, manipulanda, and/or toys.
 - Additional enrichment includes but is not limited to: human contact, playpen access, resting boards, hammocks, food treats not normally part of the diet, nylabones, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice)
- Frogs
 - Required - cage furniture.
 - Additional enrichment includes but is not limited to plastic plants, gravel and rocks, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice).

- Fish
 - Additional enrichment includes but is not limited to plastic plants, images of gravel or rocks, and a radio/music (set to a low decibel level i.e. normal conversation can be conducted without raising your voice).

- Lizards
 - Geckos -Required - hut and nesting box -nothing additional
 - Anoles – Required - nesting box, perches, and floor substrate
 - Additional enrichment may include – plastic /artificial plants

Per regulatory requirements, failure to comply with this policy may result in notification of your funding agency (e.g. NIH) and regulatory agencies (e.g. USDA) that your research has violated federal and/or local policies regarding the humane use of animals. This notification may affect continuous funding of your animal-related research. Further, depending on the violation, you may be required to take additional training and/or your privilege to conduct animal research at CU Denver | Anschutz might be temporarily suspended or even completely revoked.