

Institutional Animal Care and Use Committee		UNTHSC
Title: Enrichment for Laboratory Animals		
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A. PURPOSE

This Standard Operating Procedure (SOP) is to establish a program that ensures the psychological well-being of laboratory animals housed at UNTHSC.

B. RESPONSIBILITY

According to the Guide for the Care and Use of Laboratory Animals, Eighth Edition (pg. 53), “Enrichment programs should be reviewed by the IACUC, researchers, and veterinarian on a regular basis to ensure that they are beneficial to animal well-being and consistent with the goals of animal use.”

C. PROCEDURES

a. Special Considerations

- i. All animals will receive enrichment in accordance to this SOP. However, protocols may have special considerations regarding environmental enrichment, in which a justification will be required, and enrichment will be provided in accordance with the IACUC approved protocol, with approval from the Attending Veterinarian (AV).
- ii. Social enrichment is based on protocol requirements, species, veterinary concerns and compatibility of individuals. All animals will be housed with olfactory, visual, and auditory contact with conspecifics as well as positive human interaction unless specifically exempted by the IACUC or veterinarian.
- iii. The enrichment described within this SOP is to be a basis for enrichment in animals. Investigative staff are welcome to meet with DLAM staff to discuss the enrichment needs for their animals. DLAM Staff may provide guidance on enrichment that may exceed what is described within this SOP with taking into consideration the needs of the species and the protocol. All enrichment plans outside of this SOP are to be described within the IACUC Protocol, and approved by the veterinarian and the IACUC before being initiated.

b. Social Enrichment:

- i. **Porcine:** Swine from the same source, of the same sex and size will be socially housed unless there are IACUC approved scientific exceptions or veterinary-related concerns about animal well-being. Singly housed animals will be provided visual, auditory, olfactory and tactile contact with compatible conspecifics. If animals must be isolated, then increased enrichment will be provided by the animal health and husbandry staff, including: increased human interaction, bedding for rooting, toys, and treats.

- ii. **Rabbits:** Animals will be socially housed if socially housed at the vendor, of the same sex and size, socially compatible and when performance standard dictate unless there are IACUC approved scientific exceptions or veterinary-related concerns about animal well-being. Rabbits are housed in cage banks which allow them to hear, see, and smell other rabbits within the room. When more than one bank of cages is in a room, they are placed opposite of each other when possible. Singly housed rabbits will have visual, auditory, olfactory and sometimes tactile contact with conspecifics unless specifically exempted for protocol or veterinary reasons.
 - iii. **Rodents:** Mice, rats, hamsters, and guinea pigs will be group-housed in compatible groups when possible. All rodents are housed in clear polysulfone caging so that there is visual contact. Guinea Pigs are housed in groups of up to 4 per cage which allows for social and physical contact. Exceptions made for single-housing animals for scientific purposes, must be scientifically justified and stipulated in the corresponding IACUC approved protocol. Exceptions for singly housing animals due to social incompatibility, breeding purposes, or any other veterinary concerns made by the discretion of the veterinary, husbandry, or investigative staff, must be documented in the animal housing room.
- c. Environmental Enrichment:
- i. **Porcine:** Swine may be given Kong toys, Apple toys, or hanging chains, or other sensory toys..
 - ii. **Rabbits:** Toys are available for rabbits for expressing normal chewing behaviors. Examples of toys provided are: jingle bell balls, kongs, cat toys, plastic chains, and/or empty boxes for play.
 - iii. **Rodents:** Mice and rats are housed on contact bedding. All mice and rat cages will be provided nesting material (for example, paper or cotton nesting material) . PVC tubes or igloos may be added to caging to provide a mechanism for less dominant animals to find sanctuary. Nestlets©, Shepard Shacks©, and cardboard tunnels may be added to breeder cages to provide nest building material and create a productive activity for the animals. Mice may additionally be provided with exercise wheels and gnawing blocks. Hamsters and guinea pigs may be given PVC tubes for hiding. Other exceptions to the administration of environmental enrichment may be made based on scientific or veterinary needs.
- d. Food Enrichment:
- i. **Porcine:** Swine may be given daily, fruits, vegetables, cereal, apples, and/ or other treats deemed fit by the Attending Veterinarian and the PI.
 - ii. **Rabbits:** Rabbits may receive fruits, vegetables, and/ or other treats deemed fit by the Attending Veterinarian and the PI, for gnawing.
 - iii. **Rodents:** Rodents may receive sunflower seeds, and/ or other treats deemed fit by the Attending Veterinarian and the PI.

D. REFERNCES

- a. [Guide for the Care and Use of Laboratory Animals, Eighth Edition \(Page 52-53\)](#)