

Institutional Animal Care Program (IACP)	
Title: Animal Enrichment	
Policy number IACP 014	Date in Effect: 03/17/09
Revision 4	Revision Date: 02/13/26
In Effect <input checked="" type="checkbox"/> Rescinded <input type="checkbox"/>	Date Rescinded:

A) RESPONSIBILITIES

Research and Laboratory Animal Resources Center (LARC) staff will abide by the institution's policy.

B) BACKGROUND

The Animal Welfare Act and The Guide for the Care and Use of Laboratory Animals (*Guide*) detail basic behavioral management expectations in the broad areas of structural and social environment, and activity. General laboratory animal expectations assume that animals that are relaxed and comfortable, and able to express species-specific behaviors are more stable research subjects and provide more accurate research data.

C) APPLICATION

Animals housed at UT San Antonio will be provided with species-appropriate enrichment and opportunities to express species-specific behaviors that meet or exceed regulatory requirements.

D) EXEMPTIONS

1) RESEARCH EXEMPTIONS: Exemptions based upon justified research needs must be considered and approved by the Institutional Animal Care and Use Committee (IACUC). The consideration of the exemption requires Full Committee review.



- 2) **POST SURGICAL CARE:** The default post-operative housing is social housing unless it is justified and approved in the protocol.
 - 3) **CLINICAL VETERINARY CARE:** Exemptions **MAY BE GRANTED** by the University Veterinarian (UV) or designee for issues based on animal health, animal condition, or animal well-being. This clinical veterinary care exemption is limited to periods up to 30 days. Exemptions longer than 30 days require IACUC review and approval. Additional or other forms of enrichment described in this policy may be implemented on the professional judgment of the UV. Such changes may be based (but not exclusively) on clinical, behavioral, species and physiological needs.
 - 4) **ATTRITION:** When a cage of compatible socially housed animals are used and only one animal is left in the cage, and placing this last animal with other animals creates a potential animal welfare issue, this last animal may continue to be singly housed.
 - 5) **BREEDING:** When a female is detected pregnant, this animal may be singly housed to avoid overcrowding and animal welfare issues in the post-partum period.
 - 6) **ADDITIONAL ENRICHMENT:** When social animals are singly housed, they will receive additional enrichment. The exception will be when the investigator requests precluding the extra enrichment justified and approved in the protocol.
- E) PROCEDURES**
- 1) Mice, rats, voles and gerbils (not including guinea pigs)
 - a) Rodents that exhibit species-specific behaviors such as nesting or burrowing are provided with suitable substrate in addition to the regular bedding if the regular bedding is not conducive to these behaviors.



- b) Rodents will be socially housed unless prior protocol exemption has been approved or it has been well-established that the species is non-social by nature or certain individuals have been determined by the UV or designee as not being socially compatible.
- c) LARC personnel as well as approved research personnel may provide time for human interaction as enrichment. Consultation with the Principal Investigator (PI) is necessary prior to modifying the existing care or interaction with the research animal to prevent any untoward effects upon the research outcomes.
- d) LARC personnel as well as approved research personnel may provide species- and health-appropriate novel treat items as enrichment if not contraindicated by research goals. As noted above, consultation with the PI is necessary prior to modifying the existing care or interaction with the research animal, to prevent any untoward effects upon the research outcomes. In addition, the use of these treat items should be discussed with the UV or designee prior to their introduction to ensure they do not pose a risk to the health or well-being of the animals receiving them.
- e) Housing items and manipulanda may be provided if space allows. These items should be made of materials that are easily sanitized or be disposed of and replaced during cage changes.
- f) Rodents identified as exhibiting aggressive behavior may be singly housed with inanimate enrichment (e.g. EnviroDri, Twist’N Rich, Nestlets, crawl tubes, tunnels, exploratory manipulanda, etc.). This single housing is an exception to *The Guide* but is approved under this policy for the well-being of the animal.



- g) Rodents may be held in a cage as single pregnant females for the last 1/3 of gestation (approximately 1 week prior to parturition when the animal's gravid abdomen is observable in mice and rats) to prevent cage-mate trauma and overcrowding. The IACUC considers single housing of late pregnancy females a positive animal welfare activity, for the benefit of the pregnant female and her offspring.
- 2) Guinea pigs
- a) Guinea pigs will be socially housed when space is available, animals are compatible, and research aims do not limit that type of housing.
 - b) Housing devices (huts/tubes) will be placed in each cage.
 - c) LARC personnel as well as approved research personnel may provide time for human interaction as enrichment. Consultation with the PI is necessary prior to modifying the existing care or interaction with the research animal, to prevent any untoward effects upon the research outcomes.
 - d) LARC personnel as well as approved research personnel may provide novel treat items as enrichment if not contraindicated by research goals. Consultation with the PI is necessary prior to modifying the existing care or interaction with the research animal, to prevent any untoward effects upon the research outcomes. In addition, the use of these treat items should be discussed with the UV or designee prior to their introduction to ensure they do not pose a risk to the health or well-being of the animals receiving them.
 - e) Food enrichment may be provided at least twice per week.
 - f) Guinea pigs may be held in a cage as single pregnant sows for the last 1/3 of gestation (approximately 3 weeks) to prevent cage-mate trauma and overcrowding. This specific housing is considered a positive animal welfare activity, for the benefit of the pregnant sow.



3) Hamsters

- a) Hamsters will be socially housed whenever possible. However, hamsters frequently display aggressive behavior towards their cage mate and often social housing ends up in severe injuries among conspecifics. Therefore, the default housing with hamsters will be single housing.
- b) Housing items and manipulanda may be provided if space allows.
- c) Hamsters may be housed with inanimate enrichment (e.g. crawl tubes, tunnels, exploratory manipulanda).

4) Aquatic species

- a) Schooling fish (ex: zebrafish) should be group-housed and/or provided with visual barriers to offer hiding places when space is available, animals are compatible, and research aims do not limit that type of housing.
- b) Non-schooling fish (ex: flounder, betas, ghost knife fish) should be provided with visual barriers from other animals when such barriers are appropriate for the species.
- c) Amphibians should be socially housed when space is available, animals are compatible, and research aims do not limit that type of housing.
- d) Amphibians will be provided with hiding places.
- e) For wild-caught animals and fish or non-traditional experimental subject studies, captive care should always try to replicate the natural habitats in which the animals live. Captive habitats should match natural habitats as closely as possible in temperature range, day length, physical structures, hiding places, and cohabitation by compatible species unless otherwise specified in the protocol. Thus, each investigator should be prepared to define how the holding facility accommodates each species need for a natural environment. Where such conditions cannot be accommodated due to



experimental constraints the PI must defend that lack of accommodation and define what mitigation measures will be taken.

5) Avian species

- a) Avian species will be socially housed when space is available, animals are compatible, and research aims do not limit that type of housing.
- b) Avian species will be provided with various species-specific manipulanda.
- c) Male birds (e.g. zebra finch) identified as exhibiting aggressive behavior may be singly housed with species-specific enrichment.

6) Rabbits

- a) Rabbits will be socially housed where possible. However, rabbits frequently display aggressive behavior towards their cage mate(s) and often social housing ends up in severe injuries among conspecifics. Therefore, the default housing with rabbits will be single housing.
- b) All rabbits will have at least one item of species-specific manipulanda in their cage.
- c) Rabbits may be brushed to provide human interaction and reduce fur ingestion if necessary.
- d) LARC personnel as well as approved research personnel may provide time for human interaction as enrichment. Consultation with the PI is necessary prior to modifying the existing care or interaction with the research animal, to prevent any untoward effects upon the research outcomes.
- e) LARC personnel as well as approved research personnel may provide novel treat items as enrichment if not contra-indicated by research goals. Consultation with the PI is necessary prior to modifying the existing care or interaction with the research animal, to prevent any untoward effects upon the research outcomes. In addition, the use of these treat items should be



discussed with the UV prior to their introduction to ensure they do not pose a risk to the health or well-being of the animals receiving them.

f) Food enrichment may be provided at least twice per week.

7) Ferrets

a) Ferrets will be grouped housed when animals are compatible, and research aims do not limit that type of housing.

b) All ferrets will have at least one item of species specific manipulanda in their cage, such as:

(1) Sanitizable toys

(2) Plastic jingle balls

(3) Tunnels

(4) Nylabone toys

(5) Hammock

c) Ferrets may be handled to provide human interaction or receive playtime in a designated play cage. LARC personnel (husbandry and vet staff) as well as approved research personnel may provide time for human interaction as enrichment. Consultation with the PI is necessary prior to modifying the existing care or interaction with the research animal, to prevent any untoward effects upon the research outcomes.

d) LARC personnel (husbandry and vet staff) as well as approved research personnel may provide novel treat items as enrichment if not contraindicated by research goals. Consultation with the PI is necessary prior to modifying the existing care or interaction with the research animal, to prevent any untoward effects on the research outcome. In turn, PI will consult with LARC prior to providing novel treat items.



e) Food enrichment will be provided Mondays, Wednesdays and Fridays or more often if indicated by Veterinary Services staff. Examples of food enrichment are:

- (1) Bio-Serv Beefy Bites
- (2) Bio-Serv Bacon Yummies
- (3) Other determined by Veterinary Services