



SUBJECT: Social Housing and Environmental Enrichment	Effective Date: 5/26/2017	Policy Number: 10.4.17
	Supersedes: N/A	Page Of 1 4
	Responsible Authorities: Principal Investigator Director, Research Integrity Director, Comparative Medicine Institutional Animal Care and Use Committee	

- I. Background
 The Guide for the Care and Use of Laboratory Animals states that single housing of social species should be the exception, not the standard for housing. Furthermore, the Guide specifies that environmental enrichment programs should be regularly reviewed by the IACUC, researchers and veterinarian to ensure its benefit to animal well-being and consistency with the goals of the research or teaching with animals. The AWR (9 CFR, Chapter I) addresses social housing and environmental enrichment as well, stating that primary enclosures must be enriched by providing means of expressing non-injurious species-typical activities.

- II. Purpose
 Florida Atlantic University's Institutional Animal Care and Use Committee (IACUC) has adopted the following policy to clarify the procedures for social housing and the provision of environmental enrichment for all vertebrate animals housed as part of research, teaching or testing activities at FAU.

- III. General Statement
 The primary aim of environmental enrichment is to enhance animal well-being by providing animals with sensory and motor stimulation, through structures and resources that facilitate the expression of species-specific behaviors and promote psychological well-being through physical exercise, manipulative activities and cognitive challenges according to species specific characteristics. Environmental enrichment can provide animals with choices allowing some degree of control over their environment which leads to better coping mechanisms with stressors. Pair or group housing is one of the best enrichments for social species.

IV. Policy

- A. All animals housed for use in research, teaching or testing activities at FAU must be housed in a Comparative Medicine (CM) managed animal facility or PI managed satellite facility approved by the IACUC.
- B. Animals will be housed separated by species and/or health status unless otherwise approved by the Attending Veterinarian (AV) or scientifically justified by PI(s).
- C. Social housing in stable pairs or groups of animals will be considered by the IACUC as the default method of housing unless otherwise justified based on social incompatibility, veterinary concerns regarding animal health and well-being, or scientific necessity.
- D. Scientific justification or known social incompatibility must be described in the IACUC protocol, and must be reviewed and approved by the IACUC prior to implementation. Social species include all mice, rats, most marine mammals, some bird species and fish species showing schooling and aggregation behavior.
- E. Common exceptions to social housing include and are accepted by the IACUC as reasons for single housing:
 1. An animal that has demonstrated aggression/fighting behavior or animals known to have a propensity for fighting (e.g. male mice etc.).
 2. A companion animal is not available; e.g. for female breeders not currently bred.
 3. Animals in the immediate post-surgical period (e.g. when sutures are present). This is dependent on the surgery performed and will be reviewed on a case by case basis. If single housed post-operatively animals must be returned to social housing following suture removal.
 4. Veterinary approval due to health reasons.
 5. Scientific necessity as reviewed and approved by the IACUC.
- F. To provide for the physical and social needs of research animals the IACUC requires that appropriate environmental enrichment be provided to all species as a part of standard animal housing unless there is scientific justification, approved by the IACUC that precludes the use of environmental enrichment materials or practices.
- G. Enrichment materials or practices should not significantly alter the species-appropriate standards for husbandry, nutrient requirements or housing as described in the Guide.
- H. Changes to the standard environmental enrichment are not permitted except under the following circumstances:
 1. Changes are described in the animal use protocol and approved by the FAU IACUC.
 2. Changes are prescribed by the AV and/or her designee for animal health or welfare reasons.

V. Definitions

Standard housing: the type(s) of housing approved by the IACUC and provided by CM in centralized vivaria or by PI in satellite (i.e. PI managed) facilities (varies by species).

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Environmental Enrichment: refers to an animal's environment with which it can interact. The goal is to allow animals to express a range of species-specific behaviors which may enhance their well-being.

VI. Accountability

The Principal Investigator (PI) will be responsible for:

- Assuring that procedures are performed as described in the corresponding IACUC protocol and if necessary submitting an amendment to the protocol and awaiting approval before new method(s) is introduced.

The IACUC will be responsible for:

- Reviewing and approving, requiring modifications in (to secure approval) or withholding approval of IACUC protocols and/or amendments.
- Providing oversight for all animal procedures conducted including proper housing and environmental enrichment of animals to observe animal welfare and high quality involving animal research models.
- Reviewing environmental enrichment program regularly and adjusting as necessary to assess benefits to animal welfare and consistency with research goals.

The Research Integrity office will be responsible for:

- Administrative support of the IACUC members to facilitate their regulatory function.
- Maintaining policy and assure regular review and update as necessary by the IACUC.

The Attending Veterinarian (AV) and her/his designee will be responsible for:

- Providing Investigators with appropriate consultation in the development of their proposed studies to adhere to this policy.
- Develop and implement an environmental enrichment SOP for all species housed in centralized (i.e. Comparative Medicine managed) facilities.
- Consult with PIs regarding social housing and environmental enrichment for species housed in satellite (i.e. PI managed) facilities.

VII. Procedures

- A. Standard housing is provided by CM on a recharge basis unless the IACUC has approved that housing can be provided and maintained by the individual research group (e.g. at a PI managed satellite facility). For certain species that are not currently or routinely housed at FAU, PI's may be responsible for set-up costs to provide for specialized equipment for maintaining animals according to this policy.
- B. During the creation of a new IACUC protocol the PI needs to answer the relevant questions regarding social housing and environmental enrichment and justify any

exceptions from this policy within the IACUC protocol form. If changes to social housing or environmental enrichment become necessary later into the study an amendment has to be submitted to the IACUC and the changes being approved before implementation.

- C. CM is responsible for providing environmental enrichment within centralized (i.e. CM managed) facilities per SOP, which is available on the CM website. A list of environmental enrichment devices or items is posted as well at <http://www.fau.edu/research/comparative-medicine/environmental-enrichment.php>
- D. Laboratory animals housed in CM facilities are provided with different enrichment devices/items on a rotational basis usually at the time of regular cage change.
- E. New enrichment devices/items might become available and be included in the SOP and Environmental Enrichment list. PIs will be informed of those new items before implementation and have the choice to opt out if those items interfere with their research objectives.
- F. Environmental Enrichment in satellite facilities is the responsibility of the PI. Devices/items chosen must be species-specific and enhance well-being of the species. Environmental Enrichment needs to be described in the PI Lab SOPs.
- G. Examples for environmental enrichment include:
 1. Providing animals with means of control over their environment (e.g. nest-building materials, hiding places)
 2. Novel items (e.g. toys, special food treats)
 3. Opportunity for exercise (e.g. running wheels, climbing structures)

VIII. Policy Renewal Date
5/26/2020

IX. References
U.S. Code, Title 9, Subchapter A, Parts 1, 2, 3
Guide for the Care and Use of Laboratory Animals, 8th edition, 2011

POLICY APPROVAL

Initiating Authority

Signature: _____

Date: _____

Name: Daniel C. Flynn, Ph.D., Vice President for Research

Executed signature pages are available in the Initiating Authority Office(s)