

Environmental Enrichment and Social Housing

Effective Date: February 2024



I. Purpose

This policy establishes general standards for the humane treatment of animals at UCSF regarding social housing and enrichment. This policy has been developed to ensure that UCSF complies with the Guide for the Care and Use of Animals, 8th Edition.

II. Regulatory or Accreditation Authority

The Guide for the Care and Use of Laboratory Animals, Eighth Edition, Environmental Enrichment - 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. (p. 53)

Behavioral and Social Management – Single housing of social species should be the exception and justified based on experimental requirements or veterinary-related concerns about animal well-being. In these cases, it should be limited to the minimum period necessary, and where possible, visual, auditory, olfactory, and tactile contact with compatible conspecifics should be provided. (p. 64)

Microenvironment – Social animals should be housed in stable pairs or groups of compatible individuals unless they must be housed alone for experimental reasons or because of social incompatibility. (p. 51)

9 C.F.R Chapter I, Subchapter A, Part 3, Subpart D - Specifications for the Humane Handling, Care, Treatment, and Transportation of Nonhuman Primates

(a) *Social grouping*. The environment enhancement plan must include specific provisions to address the social needs of nonhuman primates of species known to exist in social groups in nature.

(b) *Environmental enrichment*. The physical environment in the primary enclosures must be enriched by providing means of expressing non-injurious species-typical activities. Species differences should be considered when determining the type or methods of enrichment.

III. Scope

This policy applies to all animals cared for at UCSF, both in and outside of centralized LARC care space.

IV. Definitions

Environmental Enrichment: The delivery of husbandry practices and a physical environment that facilitates the expression of species-typical behaviors and promotes well-being through

physical exercise, manipulative activities, and/or cognitive challenges according to species-specific characteristics.

Social Housing: Group or pair-housing of compatible animals

V. Policy

A. Social Housing

For social animals, social housing is the standard husbandry practice. Individuals from these species that are not socially housed should be provided with additional enrichment. If single housing is necessitated by an exception, it should be limited to the minimum period necessary.

Single housing of social animals is an exception to standard IACUC housing standards, and may be justified by the following:

1. Experimental requirements included in the approved IACUC protocol;
2. Isolated animal in a cohort group such as the last animal, or an extra animal sent from vendor;
3. Breeding, such as a single pregnant female (until pups are born) or weaning litters;
4. Behavioral incompatibility;
5. Veterinary approval - veterinarian(s) may require social animals to be housed individually for veterinary medical and/or animal welfare concerns. Exemptions from single housing for veterinary care purposes are documented in the animal's health record and, for USDA regulated species, reviewed every 30 days unless the basis for the exemption is a permanent condition. IACUC approval is not required for veterinary care exemptions from social housing.
6. Quarantine prior to entering a facility or conditioned colony when not received in established pairs or groups;
7. Procedures Requiring Anesthesia –
 - a) Pre-operative animals: In cases where fasting is required prior to surgery or other procedures requiring sedation or anesthesia, animals may be singly housed for the period of time in which food is removed prior to the procedure.
 - b) Post-operative animals: Whenever possible, post-surgical animals should be group housed; however, it is acceptable to singly house animals post-operatively for up to 14 days for recovery, observation and incision healing. Post-operative single housing >14 days must be covered by either research- or clinically-related single housing described above.

B. Species-specific Housing Standards

LARC Veterinarians assess and determine social housing standards to ensure species-specific animal welfare needs are met. These are implemented through the LARC Environmental Enrichment Plan.

C. Isolation Housing

There may be research- or clinically-related reasons to house an animal within a room by itself, without visual, auditory, olfactory, or tactile access to conspecifics. The IACUC will review research-related requests for isolation housing as described above.

D. Environmental Enrichment

All animals should be provided with at least one form of species-appropriate enrichment. This enrichment may take the form of social housing, physical shelter, visual access, , manipulanda, foraging opportunities, or other biologically appropriate forms. Additional enrichment may be required based on species-specific needs. Singly housed rodents, including sentinel animals, must be supplied with at least two forms of enrichment (i.e. fulfilling two separate species-specific behaviors).

Enrichment materials or practices must be designed and applied in accordance with the *Guide for the Care and Use of Animals*, in order to enhance the opportunities for the animals to express species specific behavior. LARC provides enrichment through the [LARC Environmental Enrichment Plan](#). Examples are provided on the LARC website. PI's, researchers, and lab staff should coordinate with LARC for the implementation of appropriate environmental enrichment.

Any exemptions to the provision of enrichment must be part of an approved IACUC protocol or made by a LARC veterinarian if enrichment is determined to adversely affect animal welfare.