

CULATR Policy for the Social Housing of Social Species

Purpose

The purpose of this document is to describe requirements for the social housing of social animals.

A separate policy for the single housing of rabbits has been developed that details efforts to socially house rabbits. (See SOP for Single Housing of Rabbits)

Background

Social Housing and Social Experience (AAALAC FAQ)(Ref 1)

The 2011 *Guide for the Care and Use of Laboratory Animals* states that "Single housing of social species should be the exception....". (Ref 2)

The *Guide* states that "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." It is understood that research objectives, the health condition of the individual animal, and/or the challenges associated with the social behavior of some species, strains and/or sex of the animals may preclude social housing. Per the *Guide* "Not all members of a social species are necessarily socially compatible. Social housing of incompatible animals can induce chronic stress, injury, and even death. In some species, social incompatibility may be sex biased; for example, male mice are generally more prone to aggression than female mice, and female hamsters are generally more aggressive than male hamsters." For some species, such as rabbits of both sexes, developing and maintaining social hierarchy may entail antagonistic interactions between pair or group members resulting in superficial wounds or more serious injuries. The research and welfare benefits and consequences of both affiliative and aggressive species-typical natural social behavior must be considered. In cases where single housing is justified, the *Guide* states that "it should be limited to the minimum period necessary, and where possible, visual, auditory, olfactory, and tactile contact with compatible conspecifics should be provided. In the absence of other animals, enrichment should be offered such as positive interaction with animal care staff and additional enrichment items or addition of a companion animal in the room or housing area." In general, however, pair or group housing is recommended for social species (see AAALAC International's Position Statement on Social Housing, <https://www.aaalac.org/accreditation-program/position-statements/#social>).

AAALAC recognizes that there is a spectrum of social experience that can be made available to an animal based on the species, health, and use of the animal. These experiences are important because, when properly managed, they can significantly enhance the welfare of the animal. Full time social housing is the optimum manner to provide social experience. However, when full time housing with conspecifics is not possible, whether due to social incompatibility, veterinary concerns or scientific necessity, other social experiences should be considered such as part time access (e.g., overnight, when the animals are between studies, defined periods of time during the day, etc.) to full contact with conspecifics or protected contact that allows interaction through a mesh panel, grooming bars or other type of perforated barrier on either a part or full time basis. In this manner, the social experience of the animal occurs as a normal aspect of the animal's housing environment or as a separate activity that occurs outside of the primary enclosure, such as in a play yard, exercise cage, animal holding room aisle or facility corridor, etc. The staff responsible for the day-to-day management and oversight of the social experience of the research animals should be well versed in recognizing aggressive and affiliative behaviors of the various species in their care to provide for rapid identification and any necessary intervention.

The Institutional Animal Care and Use Committee (or comparable oversight body) and veterinarian should periodically review the strategies for providing social housing or other social experience to the animals at the institution to ensure conformance with the *Guide*.

Definition

For the purpose of this policy, social species include the following: pigs (excluding mature intact boars), goats (excluding mature intact billy goats), ferrets, rabbits (excluding male rabbits over 20 weeks of age), rodents (excluding stud male rodents and mature female hamsters), fish, xenopus and lovebirds. Social housing refers to housing animals in same sex, compatible pairs or groups in the animals' primary enclosure.

A separate policy for the single housing of rabbits has been developed that details efforts to socially house this species. (See SOP for Single Housing of Rabbits)

Policy

Social housing will be considered the default method of housing for social animals. Single housing for experimental reasons must be described and justified in the protocol and approved by CULATR. The reason(s) for singly housing social species should be documented on the blue "Single House" Cage Card.

Procedure

General Procedures:

- Social animals will be housed in compatible pairs or groups, rather than individually, unless a single housing exemption due to experimental necessity has been approved in the relevant protocol or social housing poses an undue risk to the animals in question due to social incompatibility or veterinary concern.
- Examples of experimental necessity include but are not limited to single housing of operated animals, animals in metabolic cages, retired breeders, animals needing separation due to treatment needs, breeders pending pairing or parturition.
- If the protocol-driven need for single housing is necessary only for a portion of the study, the animals should be socially housed before and after that time. The timeframe for single housing should be specified in the protocol.
- Single housing of social animals post-operatively must be for the minimum amount of time post-operatively necessary for recovery and/or healing as described in the animal care and use protocol.
- When social animals must be housed singly, conspecifics should be housed in visual, olfactory, and/or tactile range whenever possible.
- When animals are left singly housed due to attrition of cage mates on study, or uneven experimental group sizes, consideration should be given to re-housing with other conspecifics when possible, depending upon the expected duration of the study. When re-pairing is not possible without disrupting the study, singly housing is acceptable for the remainder of the study.
- When social animals must be housed singly, a minimum of one additional environmental and/or food enrichment, exercise/release into larger enclosures, and/or human interaction shall be provided unless scientifically contraindicated.
- Husbandry staff, veterinary staff, and the CULATR are expected to monitor for single housing instances and ensure that single housing is approved in the relevant protocol.
- This policy will be revised with the addition of new species to the census.

Breeding

- In many breeding arrangements pregnant females will be housed singly prior to birth. Female breeders may also have periods post weaning when they are singly housed prior to the next breeding. This does not need to be included in the CULATR protocol as an exemption as it is understood that this is a necessary part of maintaining a breeding colony.
- Male stud animals of most species are known to be socially incompatible with other males, so may be singly housed whenever necessary.
- If there are unbalanced litters e.g. 4 females and 1 male resulting in an animal not having an appropriate cage mate at weaning, attempts should be made to identify a cage mate. However if this is not possible e.g. due to risks of social incompatibility with single weaned males from different litters, a note should be made in the animal's record/cage card.

(Adapted from Ref. 3)

References

1. AAALAC International <https://www.aaalac.org/accreditation-program/faqs/#C6>
2. Guide for the Care and Use of Laboratory Animals, NRC, 2011
3. UC Davis Office of Research <https://research.ucdavis.edu/policiescompliance/animal-care-use/iacuc/social-housing-of-social-species/>