

<b>Document:</b>	<b>Policy for Social Housing</b>		
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### **Purposes**

SEMC and Singhealth IACUC has developed the following policy to clarify and define standards regarding social housing of laboratory animals housed in Academia, Duke-NUS, Sembawang Animal Husbandry and Hospital (NLARF) and the National Cancer Centre Singapore (NCCS).

All 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 (Guide, p. 51). All exemptions to this policy for experimental reasons must be scientifically justified and approved by the Singhealth IACUC. Social incompatibility of animals will be a decision made by the Attending Veterinarian and/or his designees (SEMC Veterinarians) in consultation and collaboration with the Principal Investigator (PI) and his research staff. Single housing of an animal for clinical reasons will be a decision made by the Attending Veterinarian (AV) and/or his designees and coordinated with the PI and his research staff.

It may not be possible to socially house all animals in all scenarios. When necessary, single housing of social animals should be limited to the minimum period necessary and, where possible, visual, auditory, olfactory and, depending on the species, protected tactile contact with compatible conspecifics should be provided. In the absence of other animals, additional enrichment should be offered, such as safe and positive interaction with the animal care staff, as appropriate to the species of concern; periodic release into larger enclosures; supplemental enrichment items; and/or the addition of a companion animal in the room or housing area (AAALAC position statements).

This policy clarifies and defines standards for social housing laboratory animals.

### **Procedure**

**MICE, RATS and GUINEA PIGS** should always be housed in compatible pairs or groups unless research aims limit social housing. If social housing is not possible, environmental enrichment such as, providing shelters, hiding tubes, nesting material, should be provided unless withheld for research reasons approved by the IACUC or clinical reasons authorized by the AV or his designees.

**RABBITS** Intact males are single housed based on literature recommendations and known aggressive tendencies exhibited between intact males when co-housed. Females and neutered males are part time social housed (2-3 x a week) unless exempted for research reasons as approved by the IACUC or for clinical reasons authorized by the Attending Veterinarian or his designees. Rabbits would be socialized at an enclosed area with padding or bedding on the floor to avoid leg injuries (design to be finalized). Animals will be socialized in the morning to allow adequate observation and supervision by the veterinary staff in order to provide immediate intervention or separation in case of fighting between animals.

**NON-HUMAN PRIMATES** should be housed in compatible pairs or groups whenever possible unless otherwise exempted for research reasons as approved by the IACUC or clinical reasons authorized by the Attending Veterinarian or his designees. If social housing is not possible, extra environment enrichment should be provided to solitary animals. Individually housed NHPs are provided a combination of visual, auditory, olfactory and/or tactile contact of conspecifics, in addition to environmental enrichment.

**PIGS, SHEEP AND GOATS** are housed in compatible pairs or groups and species specific minimum floor space requirements of the primary enclosure and should be based on the Guide and/or Ag Guide. Animals are exempted from social housing for research reasons approved by the IACUC or for clinical reasons approved by the Attending Veterinarian and/or his designees. If social housing is not possible, then additional environmental enrichment should be provided. If a solitary animal (room by itself with no auditory, tactile or olfactory contact with conspecifics), it should be provided with additional enrichment, such as safe and positive interaction with animal care staff, release into a larger enclosure and/or supplemental enrichment items, etc.

**DOGS** - Social housing shall be the default method of housing dogs. Dogs should have daily positive human interaction and be allowed the opportunity to exercise regularly by providing twice the size of the minimum square feet of floor space required for each dog if housed individually, or providing 100 percent of the required space for each dog housed in groups. Justification for exemptions for social housing and minimum space requirements for housing dogs must be scientifically justified and approved by the IACUC and reviewed regularly by the Attending veterinarian and/or his designees. If individually-housed, dogs should have visual, auditory, and olfactory contact with other dogs and receive additional enrichment. The objective of enrichment is to provide dogs the opportunity to play and prevent illness due to absence of social contacts affecting their behavioral and physiological needs.

## **EXEMPTIONS**

Exemptions from social housing require scientific justification outlined in the animal care and use protocol approved by the IACUC. Protocol related exemptions must be reviewed and approved by the IACUC on a regular basis. Protocol related exemptions must also be identified on the semi-annual report submitted to the Institutional Official.

The following are IACUC approved program wide social housing exemptions:

- 1) Single housing intact male rabbits, adult breeder pigs and due to aggressive behaviors commonly observed when pair or group housed.
- 2) Standard practices in breeding colony management that result in the need to periodically single house animals, including
  - a) single housing breeder males between mating with females or during timed mating
  - b) single housing pre-parturient females
  - c) single housing animals of either sex at weaning while waiting for the genotype results and when the litter makeup contains a single male and/or a single female at the time of weaning.
- 3) Standard practices in managing surgery, post-operative recovery or other invasive procedures including
  - a) single housing animals for fasting prior to surgery or other procedures that require general anesthesia,

- b) single housing animals for up to 14 days for post-operative recovery and observation. The need to single house animals for more than 14 days post-operatively must be outlined in the protocol and must be approved by the IACUC.
- 4) The unavailability of another socially compatible animal due to
  - a) aggression or incompatibility
  - b) research attrition
- 5) Terminal or short term protocols that will be housing animals for a period of up to 1 month may request for an exemption for social housing as stipulated and justified in their protocol and approved by the IACUC.