

STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

SOP#: 101

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Page 1 of 3

TITLE:	Compatibility Testing of Rabbits
SCOPE:	Personnel with Regular Rabbit Contact
RESPONSIBILITY:	Facility Manager, Technical Staff, Veterinary Staff
PURPOSE:	To Outline Procedures of Testing Rabbits for Compatibility with the Goal of Social Housing of Compatible Animals

I. PURPOSE

1. **Group housing and interactions contribute to the well-being of social species.** Current regulations require facilities to develop a plan to address the social needs of the animals in their care (9 CFR, Subchapter A).
2. **Social housing is the default method of housing rabbits.** Every effort will be made to find compatible pairs in single-housed rabbits. If compatibility of a particular animal(s) cannot be established despite comprehensive attempts, alternative enrichment will be provided. Planning for pair-housing rabbits is made when placing animal orders. **Rabbits received together from extramural vendors will be pair-housed upon arrival**, since animals raised co-housed by vendors may proceed to tactile and social housing at a faster pace than animals single-housed for a period of time upon arrival.
3. **Exemptions to this SOP due to study restrictions must be justified** by the PI and approved by the Institutional Animal Care and Use Committee which has sole authority to grant exemptions. The attending or Clinical Veterinarian has the authority to restrict social housing for medical reasons. If this should be necessary, the case will be reviewed at least monthly and the requirement noted in the medical record, which will be made available to the IACUC for review during its semiannual review of facilities. Alternative enrichment will be provided whenever possible.

II. RESPONSIBILITY

1. The Veterinarians oversee all aspects of animal health, and are assisted by all program staff.
2. Facility Managers ensure implementation of all procedures.
3. Animal care staff is responsible for the realization of this program.

III. PROCEDURES

Note: Unless exempt from the socialization program, all rabbits will be tattooed according to ***Animal Identification SOP #015***.

1. **Every single-housed rabbit not exempt due to IACUC approved animal study restrictions will be involved in the compatibility testing program.** Two animals of the same sex will be placed in adjacent cages suitable for social housing (i.e., Tecniplast Interlinking System with sliding Plexiglas window-panel). In this system, each animal is housed in an adjacent primary enclosure visually linked through a sliding Plexiglas window-panel.
2. Any time two or more animals are allowed to interact there is the possibility of violent conflict. **Decisions of intervention must balance the welfare of the animal with the animals' need to establish social relationships for themselves.** In socially experienced animals, this can be achieved with a single exchange of gestures or postures, whereas socially inexperienced animals may have to learn to recognize submissive or dominant signals, respectively. **Measures of intervention must always consider the safety of the personnel first.**
3. **Initially, rabbit compatibility of single-housed rabbits is tested in two contiguous cages through the Plexiglas window, which allows visual contact.** Visual contact will support the establishment of a relationship between the two rabbits and allows personnel to assess the likelihood of an aggressive conflict prior to physical introduction.
4. Observations of each rabbit pairing are recorded daily in the ***Weekly Compatibility Testing for Socialized Housing of Rabbits Notes CMDC #188*** until either compatibility of a socially housed pair is documented, or alternatively until incompatibility of the pair has been documented.
5. Documentation of all pairings, along with the food treats and manipulanda provided are tracked on the monthly ***Environmental Enrichment Log – Compatibility Housing in Rabbits CMDC #189***. Entries must include, but are not limited to:
 - a. Identification of animals with visual contact
 - b. Signs of aggression between identified pair
 - c. Subordinate behavior between identified pair
6. Assessment of subordinate-dominant behavior may require some time. However, **if hostility or other signs of incompatibility persists for 7 or more days, animals can be considered incompatible** and new partners will be identified and tested.
7. **Animals that appear to be compatible after 3 days with no hostility will be permitted tactile contact** by removing the Plexiglas window-panel that divides them. Since tactile contact will enable animals to scratch and bite each other, **personnel must observe the animals carefully during the first tactile encounter.** If hostility is recognized, the Plexiglas window-panel should be closed and further attempts of tactile contact made at another time. If no obvious aggression is observed tactile contact may be allowed for longer intervals and while unattended (e.g., overnight).
8. **Animals are considered incompatible when repeated aggressive behavior is observed for a period of at least 7 days with no signs improvement.** New partners will be identified and tested for each animal of a documented incompatible pair.

9. **Animals that have demonstrated that they are compatible under conditions of tactile contact for increasing periods over the course of at least seven days will be permitted full physical contact by removal of the cage divider.** To minimize aggressive actions of one potential pair inciting aggression in another new pair, only one newly identified compatible pair is permitted to have full physical contact at a time.
10. Visual and tactile compatibility does not necessarily confer overall compatibility and may result in aggressive behavior. **A clinical veterinarian must be on the premises when full physical contact is allowed.** The animal care technician must remain in the room following the removal of the divider for a minimum of one hour. If aggressions are limited to non-contact antagonism, it may subside after mutual acceptance of their dominant/submissive status. The dominant animal may reinforce his/her superior role in the relationship by typical dominance activities and when these activities do not result in serious physical injury, the pair may be considered compatible.
11. If a pair has had at least 7 days of full contact with no aggression, they will no longer be considered a new pair, and compatibility testing will be considered completed, consequently entries need no longer be made to ***Weekly Compatibility Testing for Socialized Housing of Rabbits Notes CMDC #188***. The newly established compatible pair will continue to be tracked, along with the food treats and manipulanda provided, on the monthly ***Environmental Enrichment Log – Compatibility Housing in Rabbits CMDC #189***, as are all pairs.
12. **It is recognized that some wounding and minor injuries are normal during the process of pairing and social housing rabbits.** If a minor fight occurs during introduction, or even later in a stable social pair, it is important to attempt to let the socialization process continue unless serious wounding is encountered. Reconciliation is an important aspect of social behavior and if the fight is interrupted too early, the problems may not resolve. The clinical veterinarian, animal care staff, and research staff must cooperatively arrive at each decision either to continue or interrupt socialization. Techniques like cooperative feeding should be incorporated into management of those animals.
13. **Whenever violence is encountered by introducing both animals into one space, measures of interference must be considered.** Attempt to separate the animals physically from outside of the cage. **Always consider that personnel safety comes first in any circumstance.** Physical separation by closing the Plexiglas window-panel may be used only after other methods have failed and animals will not stop fighting. After the animals are restrained, a physical examination is performed. If injuries are detected the clinical veterinarian is informed immediately. Depending on the severity of the encountered aggression, reintroduction or separation must be considered by the clinical veterinarian and research staff. If the animals are deemed to be incompatible new partners will be identified and tested.
14. Whenever violence occurs, even among an established socially housed pair, details of all procedures and observations must be recorded in the ***Weekly Compatibility Testing for Socialized Housing of Rabbits Notes***.

15. Compatibility testing will continue until compatible pairs have been identified or incompatibility of one particular animal has been documented repeatedly by separate testing with at least four (4) different rabbits.
16. Pairing animals of the opposite sex may be attempted if amenable with the research objective, PI, and medical status of the animal or other factors to be considered. Measures of preventative birth control must be considered. Compatibility testing will follow the same steps as in same sex pairs.
17. To enhance interactions, manipulanda will be placed in both adjacent cages. Available items include rattles, shower curtain rings or bolts dangling from the top of cages, balls with hay for interactive enrichment, and stuffed animals.
18. Animals prepared for compatibility testing will be offered novel treats such as carrots or bunny sticks during visual, tactile and full physical contact.

Approved:

Date: