



TITLE: Guinea Pig Environmental Enrichment

SOP Category: Enrichment

CMR SOP #: 6.04

Page: 1 of 3

Effective Date: 9/3/2024

Approval: *Roseann Kehoe*

Revisions: 5/9/2018, 5/1/2022, 9/3/2024

SCOPE:

This document describes the procedures to be followed when providing enrichment to guinea pigs. This SOP applies to all Animal Care Staff (ACS), ACS Supervisors (ACSS), Veterinary Staff (VS), and Research Staff members (RS) at the Rutgers University facilities.

OBJECTIVE:

The objective is to summarize guinea pig environmental enrichment. This SOP is concordant with the Rutgers Environmental Enrichment Program, which states that all laboratory animal species used at Rutgers **must** be provided with species-specific environmental enrichment unless scientifically justified.

DEFINITIONS:

Natural Behavior: The domestic guinea pig (*Cavia porcellus*) is a descendant of the wild cavy, a common rodent in South America. It is a nonburrowing, herbivorous, crepuscular, histricomorph rodent with a stocky body, short neck and limbs. Guinea pigs are social animals, and they actively seek contact with one another, even in close quarters. Separation from bonded individuals may cause anxiety. Guinea pigs are shy, docile animals that are easily stressed, and their responses to danger and new environments involve freezing and stampeding. Guinea pigs are neophobic and acclimation to novel settings should be performed. Guinea pigs spend considerable amounts of time gnawing and chewing. Common normal behaviors of guinea pigs involve nose touching, nudging, head butting, stretching, digging, and licking.

Abnormal Behavior:

Abnormal behaviors in guinea pigs include:

1. Barbering/plucking
2. Excessive vocalization
3. Aggression
4. Bar biting

When these behaviors are observed, VS will evaluate the need for additional environmental enrichment.

TITLE: Guinea Pig Environmental Enrichment

SOP #: 6.04

Page 2 of 3

PROCEDURES:

1. Social Grouping

- Social housing must be performed whenever possible, as social isolation is a serious disturbance for this species.

2. Physical Enrichment

- Shelters must be placed in each primary enclosure. Shelters that are large enough to provide refuge for more than one guinea pig are preferable.
- Toys such as plastic hollow balls stuffed with hay, balls with bells inside, and PVC tubes may be used to provide extra physical enrichment.

3. Opportunities for Gnawing

- One gnawing item (chew stick, wood block, etc.) for each guinea pig must be placed in the primary enclosure.

4. Food Treats

- Hay must be available at all times.
 - i. Guinea pigs not only eat hay but also use it as a substrate for hiding and nesting.
 - ii. Hay may be offered in paper bags for foraging opportunities.
- Fruit, vegetables, treats
 - i. One serving of fruit, vegetables, and/or treats should be offered 3 times per week.
 - ii. If bedding is present, sprinkling or burying food treats can encourage foraging behavior. Treats can be offered inside paper bags to encourage foraging as well.

Considerations:

- Cost, availability of materials, safety issues for the animals and the staff, study constraints, and sanitation requirements must be evaluated for each idea.
- For novel devices or strategies, a group of animals may be selected for a pilot study to evaluate any behavioral changes, extra time needed in animal rooms, and additional steps necessary for sanitation of the devices.
- ACS assist in the environmental enrichment program by placing environmental enrichment devices in cages as directed by supervisor, investigators and veterinary staff. ACS are responsible for removing and replacing damaged or soiled devices and sanitizing or disposing of devices as appropriate.

Records:

The Animal Care Staff will log provision of enrichment according to their facility specific documentation records.

TITLE: Guinea Pig Environmental Enrichment

SOP #: 6.04

Page 3 of 3

REFERENCES:

National Research Council, Guide for the Care and Use of Laboratory Animals, ed 8 available at <http://grants.nih.gov/grants/olaw/Guide-for-the-Care-and-Use-ofLaboratory-Animals.pdf>

Quesenberry, Katherine E., and James W. Carpenter. *Ferrets, rabbits, and rodents: clinical medicine and surgery*. USA, 2020.

Wagner, Joseph E., ed. *The biology of the guinea pig*. Academic Press, 2014.

Suckow, Mark A, Karla A Stevens, and Ronald P Wilson. *The Laboratory Rabbit, Guinea Pig, Hamster, and Other Rodents*. 1st ed. Amsterdam; Elsevier Academic Press, 2012.