

**STANDARD OPERATING PROCEDURES**  
DIVISION OF COMPARATIVE MEDICINE  
UNIVERSITY OF SOUTH FLORIDA

SOP#: 456

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**TITLE:** **Naked Mole Rat (*Heterocephalus glaber*) Breeding and Colony Management**  
**SCOPE:** Animal Care Personnel  
**RESPONSIBILITY:** Facility Manager, Technical Staff, Veterinary Staff  
**PURPOSE:** To Outline the Proper Procedures for Breeding Colony Management of *Heterocephalus glaber*

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**I. PURPOSE**

1. To ensure the highest quality of animal health and preclude the development of spontaneous diseases or disorders, which could compromise the integrity of studies and the interpretation of results.
2. To ensure personnel breeding USDA covered naked mole rats perform their duties in a manner that complies with all current governing laws, regulations and guidelines.

- II. R1. The Veterinarians oversee all aspects of animal health and are assisted by all program staff.**
- 2. Facility Managers ensure implementation of all procedures.**

**III. GENERAL CHARACTERISTICS**

1. NMR's are hairless rats with small hairs arranged across the body. They have a poor ability to regulate temperature, poor vision and have very large incisors used to digging which may need to be trimmed occasionally.
2. Their systems include toilet, breeding and food compartments.
3. NMR's are eusocial, like to live in colonies, and **must not** be separated from their colony groups or combined with other colonies, as they will become extremely aggressive. They are **extremely sensitive to changes in the environment such as housing, smell, vibration and noise.**
  - a. Each colony is composed of 1 queen female and 1-3 dedicated males for breeding.
  - b. **The average gestation period is between 70d**
    1. **NMR can give birth 2-4x per year**
    2. **Average litter size is 7-13 pups**

#### **IV. PROCEDURES**

1. Pre-partum (prior to birth)
  - a. Mark the cage of a pregnant female.
  - b. Cages should be kept clean by cages changes shortly before expected delivery date to avoid cleaning during the period after birth as described below.