



Naked Mole-Rat Queens Prevent Rival Reproduction

Description

Naked mole-rat queens release a special chemical. This chemical stops other females in their group from having babies. A new study tells us how this works. It was published today in the journal *Nature*.

The study shows that the chemical changes hormones in other female mole-rats. This change stops them from reproducing. A scientist from Canada, Melissa Holmes, says this study is important. It answers the question of why only one female can have babies in a naked mole-rat colony.

Naked mole-rats live in groups. They are unique because their social structure is rare among mammals. The queen has all the babies. Other females help care for the young and find food. All females can become queens, but most cannot because their bodies are not ready.

In the study, scientists found a chemical called isopropyl myristate in queen mole-rats. This chemical was not found in other females. When other females smelled this chemical, it stopped them from reproducing. This shows how the queen keeps her position.

Vocabulary List:

1. **chemical** /'kɛmɪkəl/ (noun): a substance used in science or industry
2. **hormones** /'hɔːrmənz/ (noun): small natural substances that change body functions
3. **reproducing** /,riːprə'duːsɪŋ/ (verb): having babies or producing young animals
4. **colony** /'kɒləni/ (noun): a group of animals or plants living together
5. **social** /'səʊʃəl/ (adjective): relating to how people or animals live together
6. **structure** /'strʌktʃər/ (noun): the way parts are organized or arranged

Comprehension Questions

Multiple Choice

1. What does the chemical released by naked mole-rat queens do?

Option: Stops all males from reproducing

Option: Stops other females from having babies

Option: Increases the size of the colony



Option: Makes the queen stronger

2. In which journal was the study about naked mole-rats published?

Option: Science

Option: Nature

Option: Journal of Mammalogy

Option: Animal Behavior

3. Who conducted the study on naked mole-rats?

Option: Melissa Holmes from Canada

Option: John Smith from the USA

Option: Anna Lee from Australia

Option: David Brown from the UK

4. What is unique about the social structure of naked mole-rats?

Option: They are solitary animals

Option: Only one female reproduces

Option: They form large nomadic groups

Option: Males care for the young

5. What chemical was found in queen mole-rats?

Option: Isopropyl myristate

Option: Estrogen

Option: Progesterone

Option: Testosterone

6. What role do other females have in the naked mole-rat colony?

Option: They become queens immediately

Option: They compete with the queen

Option: They help care for the young and find food

Option: They leave the colony

True-False

7. Naked mole-rat queens can reproduce at any time.

8. All females in a naked mole-rat group can become queens.



9. The chemical in queen mole-rats was found in other females.
10. The study confirms that the queen keeps her position through a chemical mechanism.
11. Naked mole-rats live a solitary lifestyle.
12. Other females stop reproducing when they smell the queen's chemical.

Gap-Fill

13. The chemical released by naked mole-rat queens stops other females from having babies and changes their _____ hormones.
14. The study reveals why only one female can have babies in a naked mole-rat _____.
15. Other females assist in caring for the young and _____ food.
16. The chemical isopropyl myristate was found in queen mole-rats but _____ in other females.
17. A scientist named Melissa Holmes states that this study is _____ because it answers important questions.
18. Naked mole-rat queens maintain their _____ through the release of a special chemical.

Answer

Multiple Choice: 1. Stops other females from having babies 2. Nature 3. Melissa Holmes from Canada 4. Only one female reproduces 5. Isopropyl myristate 6. They help care for the young and find food

True-False: 7. False 8. True 9. False 10. True 11. False 12. True

Gap-Fill: 13. hormones 14. colony 15. find 16. not found 17. important 18. position

CATEGORY

1. Sci/Tech - LEVEL1



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