

G.P.PORAWAL ARTS, COMMERCE AND V.V.SALIMATH
SCIENCE COLLEGE
SINDAGI-586128



ACADEMIC YEAR 2022-23
DEPARTMENT OF ZOOLOGY
PROJECT REPORT

NAME: Bhagyashree Hattaraki

CLASS: B.Sc VI sem

REG.NO : S2032430

SUBJECT: Zoology - I

TOPIC : Visit to Animal House to Study Breeding Technique

STAFF IN CHARGE

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SUBMITTED TO
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CERTIFICATE

Paper- I

This is to certify that kumari Bhagyashree H.
of class B.sc VI semister has satisfactorily completed the Project
Report In Zoology under my supervision as laid in the regulation
of Rani Channamma.University Belagavi.



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Date :

Staff Incharge

ANIMAL HOUSING : RAT

Introduction

- Good laboratory practice for animal facilities is intended to assure qualities maintenance and safety of animals used in laboratory studies while conducting biomedical and behavioral research and testing of products.

Key components

- Animal holding rooms
- Procedure rooms
- Washing rooms
- Storage
- Waste area
- Animal watering system

ANIMAL HOUSING DESIGN

- **Animal Holding Rooms :-**
- **Building materials** – Moisture proof, Fire resistant, Seamless materials are most desirable for interior surfaces.
- **Corridor** – It should be wide enough to facilitate the movement of personal as well as equipments and should be kept clean.
- **Floor** – Floors should be smooth, moisture proof and skid proof.
- **Storage area** – Separate storage area should be designed for feed, bedding, cages and materials not in use. Refrigerated storage is essential for storage of dead animal shelter and animal tissue waste.
- **Animal room doors** – Doors should be rust, vermin and dust proof, They should fit properly within their frames provided with an observation window. Rodent barrier can be provided in the doors of the small animal facilities.



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Animal House Designing :



- Walls should be free of cracks.
- Lighting system should be installed that provides adequate illumination while people are working in the animal rooms and a lowered intensity of light for the animals.
- Emergency power should be available in the event of power failure.
- Noise control is an important in consideration in designing an animal facility.
- Concrete walls are more effective than metal or plaster walls containing noise because their density reduces sound transmission.


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ANIMAL FACILITIES :



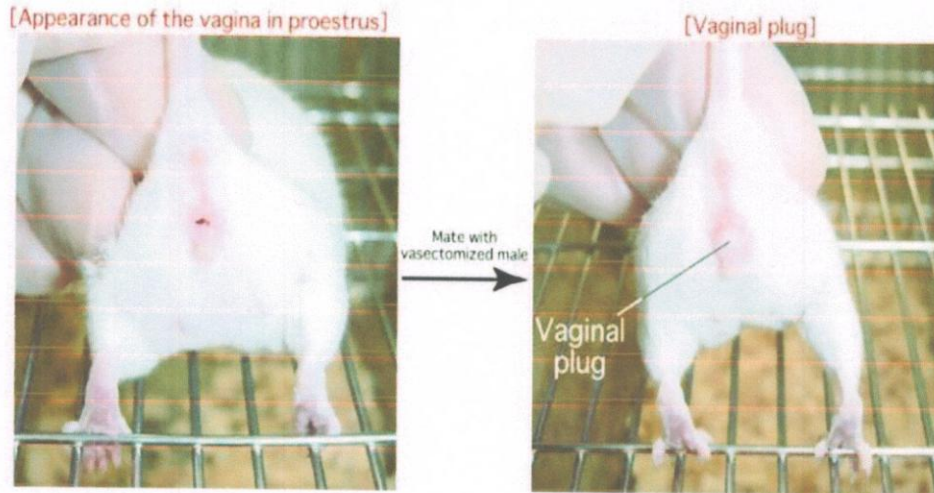
- Physical separation of animals by species is recommended to prevent inter-species disease transmission and to eliminate anxiety and possible physiological and behavioral changes due to inter-species conflict.
- Animal facilities should have animal house plan.
- Name and address of staff.
- Health record of staff.
- Training record of staff involved in animal Care and procedures.
- Animal stock procurement and supply register.
- Experimental records.
- Clinical record of sick animal and any treatment administered.


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Breeding technique :



Pair-house animals (same sex) for 1 week to habituate to the colony. Place the female rat(s) into the home cage of the male rat, with food and water available ad libitum. The exposure of the females to the male's dirty bedding (specifically, pheromones in the urine), can induce estrous in the females. Write the date the male is added with the females on each breeding cage card (and in a separate log book if required), and identities of the animals.

Presence of a copulatory plug ~12hr after pairing the couple is indicative of mating; however this does not ensure success (although in most cases a plug does result in a viable pregnancy) Additionally, absence of a plug does not indicate non-pregnancy, as the plug may have been absorbed or may be deeper in the rat's vaginal canal. Gentle probing with a dissection probe will assist in visualizing.

During the breeding period, clean cages as per standard cage cleaning procedures and monitor animals daily for grooming, appearance, posture, activity, and food and water intake.

At the end of the breeding period, remove the male and house individually in the main colony. Females may remain pair-housed until approximately 1 week before the expected date of parturition, at which time they are separated into individual cages (the dams may be given supplemental hydrogel on the veterinarian's recommendation).

Females may be weighed daily to monitor for weight gain in order to diagnose pregnancy.

Monitor dams once daily during pregnancy.

For a minimum of 24-48 hours following birth, mothers are not to be disturbed as even minor disruption can alter pup growth.

Following this period, pups and mom should be checked twice daily for grooming, appearance, activity, food and water intake. They should be minimally handled unless problems arise including (but not limited to): cannibalism, inability of a pup/s to nurse, death of the mother or rejection of the litter by the mother.

VETERINARY CARE



- Animals should be observed regularly and problems of animal health and behavior recorded and addressed.
- Diseased animals should be isolated from healthy ones.
- Personal hygiene and training of staff.
- Initial in-house training should be imparted to the staff associated with animal facility.
- Appreciate and protective gears.
- Personal should have periodic medical check-up to ensure their health status.


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