Cotton rat

Hsd:Cotton Rat

Their habitat extends from Central America to Southern North America.

Developed by the National Institutes of Health, Bethesda, Maryland, and Virion Systems, Inc. In 1996, Harlan Laboratories obtained a breeding nucleus from Virion Systems, Inc. Harlan became Envigo in 2015, then Envigo was acquired by Inotiv in 2021.

CHARACTERISTICS

The Cotton Rat (*Sigmodon spp.*) belongs to the family Cricetide. For over half a century the Cotton Rat has served and is still being used as a model for the study of an extensive list of human and rodent pathogens. Currently, its use is most important in advance studies of:

- Human respiratory syncytial virus (RSV) – the primary cause of infant pneumonia (Prince *et al*., 1979);
- Parainfluenza (PI3) (Murphy *et al*., 1981; Porter *et al*, 1991);
- Adenovirus (Pacini DL *et al*., 1984);
- Other experiments: Pineal gland study; Environmental toxicology; Human genetic therapy using Adenovirus vector.

Reproduction

Females are monogamous. Animals for breeding should be paired at time of weaning (three-four weeks), as pairing at older ages results in increased fighting. The gestation period is about 27 days with a litter size of about five-six. Cotton rats are good foster mothers: they will readily accept foster infants, even if of a different age than their own litter.

Handling

Cotton Rats are not aggressive. However, they will attempt to bite when they are picked up. Further more, since they move very fast and can jump vertically over 30 cm, they are difficult to handle. Using a tin as environmental enrichment, the animal is hiding in the tin and one can move the tin with the cotton rat to a clean cage.

REFERENCES

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