

Purpose

Guidelines for the establishment and maintenance of rodent breeding colonies at the University of Saskatchewan.

Responsibility

- i. The Facility Veterinarian to oversee all aspects of animal health.
- ii. The Facility Manager to ensure that all breeding colonies are approved by the UACC Animal Research Ethics Board (AREB); and that animal care staff are adequately trained in animal health, husbandry and breeding procedures.
- iii. The principal investigator to scientifically justify the need to establish and maintain a breeding colony.
- iv. The principal investigator and the animal care staff to carefully maintain colonies to generate the number of animals required and to reduce the number of surplus animals generated.

Procedures

In accordance with the Canadian Council on Animal Care (CCAC) guidelines “Procurement of animals used in science, 2007” http://www.ccac.ca/en/_standards/guidelines

Guideline 10: Animals should be obtained from reputable suppliers. ...It is almost always preferable to obtain standard laboratory species from an established breeder or supplier.

Guideline 11: In-house animal breeding colonies should only be established when absolutely necessary.The decision to establish a breeding colony program in a research institution is one that the investigator and ACC should always study carefully in terms of the nature of the project.

- a. Establishment of a breeding colony must be scientifically justified; cost savings alone is not a valid justification.
- b. Breeding colonies may be established for genetically-engineered animal lines that are obtained from other research or academic institutions and are not commercially available.
- c. Breeding colonies may be established for genetically-engineered animal lines that are not easily obtained through commercial suppliers.
<http://jaxmice.jax.org/orders/levels.html>
- d. Breeding colonies for strains that are readily available may be established if justified and approved by the UACC Animal Research Ethics Board. Examples: treatment of sire/dam prior to or during gestation, timed pregnancy required in early stages of gestation.

- e. Long term maintenance of unnecessary breeding colonies increases the risk of genetic drift of inbred lines, results in the production and culling of excessive animals, and reduces the availability of housing space for other necessary breeding colonies. At the time of Animal Use Protocol renewal, investigators must provide valid justification to continue maintaining colonies in which experimental animals have not been used in the past 12 months. The University has a continued focus on advancing the 3Rs and as part of that the reduction of unusable animals is an important facet to be taken into consideration when alternatives such as cryopreservation or donation of genetic lines exists. Investigators maintaining colonies simply to preserve a genetic line of rodents must consider other conservation strategies such as donation or cryopreservation of ova, sperm, and embryos.

Approved by the UACC, 11 June 2021