TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER (TTUHSC)  
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)  
POLICY [# 3]  

BREEDING COLONIES

The purpose of a breeding colony protocol is to generate animals for use in approved experimental protocols. Breeding colony protocols must be submitted separately from experimental protocols.

Principal investigators (PIs) wishing to establish a breeding colony at any TTUHSC campus facility must submit a breeding protocol application to the IACUC. The application form is available at: http://www.ttuhsc.edu/research/hrpo/acuc/.

Prior to submission of a breeding protocol, a PI must contact the staff at the corresponding Laboratory Animal Resource Center (LARC at Lubbock, Abilene, Amarillo, El Paso) regarding space availability and housing requirements. Once the breeding colony has been established, an animal use record must be maintained by the PI. This record will include the number and disposition of all animals produced. The staff at the LARC can advise investigators about the required colony records though the ultimate responsibility remains with the PI.

Counting of animals

In counting animals for breeding protocols, the PI must include every animal, male and female, and not count “breeding pairs.” In preparing the breeding protocol, the PI must also estimate the number of animals needed to perform the breeding, not the number of animals required for the experimental protocol (although knowledge of the number of animals required for the experimental protocol may be necessary in estimating the number of breeding animals needed).

It is recognized that animals will enter and exit the breeding program over the life of a breeding protocol. However, every animal used as a breeder in a breeding colony must be accounted for. Animal numbers in the application should reflect the total number of animals anticipated to be used as breeders over the three-year period for which the protocol is approved, not the number of active animals at any given time. Further, it is the responsibility of the PI to work with the appropriate LARC staff to determine how many breeding animals the LARC can accommodate at any given time. The LARC will have control over the number of breeding animals that can be actively housed as breeders.

Breeding must be conducted in accordance with LARC Policy MOUSE HOUSING DENSITY AND BREEDING SCHEMES. Any deviation from this policy must be approved by the institutional veterinarian (IVET) and IACUC. PIs are expected to work with the veterinarians and their staffs to ensure follow current LARC policy, which is based on current Federal Guidelines.

Weaning Procedures

Timing

All weaning must take place no later than day 21 unless an exception is granted by the IACUC. To clarify how to count days: the date of an animal’s birth is DAY 1, therefore DAY 21 is 21 days from the date of its birth. For difficult breeding colonies (i.e., animals are frequently below an appropriate weaning weight of 8–10 g), an extension to wean up to day 28 may be granted by permission of the IVET. If such extensions are anticipated, the PI must include the contingency in his/her IACUC-approved protocol.
Tail Biopsy (“Snipping”) and Genetic Testing
Genetic testing of pups will be done via tail biopsy, ear punches, or other means approved by the IACUC. As outlined in IACUC Policy 16, tail biopsies should be done on or prior to day 21 to avoid undue pain and distress to tested animals. For tail biopsies of mice older than 21 days, specific justification and approval from the IACUC must be obtained. In these cases, appropriate local analgesia or general anesthetics must be used (see Policy 16).

At weaning, all pups must either be counted as new breeding animals or research animals and the cage cards must reflect the appropriate approved IACUC protocol number.

Investigators must avoid waste of animals. Government Policy III (found at http://grants.nih.gov/grants/olaw/references/phspol.htm#USGovPrinciples) states: The animals selected for a procedure should be of an appropriate species and quality and the minimum number required to obtain valid results. Methods such as mathematical models, computer simulation, and in vitro biological systems should be considered. For example, there may occur periods of time when experimental protocols do not require a continued production of animals, yet the need for the breeding colony will recur in the future. The IACUC suggests that temporary measures, such as reduction in active breeding to the minimum number necessary to maintain the desired genotype/colony, be implemented during such periods of time.

NOTES:

Outbred Stocks – Any breeding protocol that intends to produce outbred mice or rats are discouraged except when scientifically justified in an IACUC-approved breeding protocol. To do this properly, one must maintain a minimum of 26-32 separate unrelated breeding pairs. Outbred mice/rats should normally be purchased.

Common inbred strains – Common inbred strains like C57BL/6, 129, etc., should normally NOT be bred in-house as it’s far cheaper to purchase these mice from common vendors.