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## **POLICY ON WEANING OF RATS AND MICE AND NUMBERS OF LITTERS PER CAGE**

Federal regulations establish the level of caging population density permitted in rodent breeding colonies. Adult rats and mice and their litters can occupy considerable cage space, produce large amounts of fecal and urinary material, increase cage temperature, humidity, and ammonia levels, which can create sub-optimal health conditions. This is particularly noticeable near the time of weaning and in harem breeding schemes. When litters of two different ages are present in the same box, the younger litter often receives insufficient nursing due to the older, more competitive, suckling pups.

The following standards describe weaning of litters and numbers of litters allowed per rodent box. Exceptions to these standards are recognized as necessary in certain circumstances, such as with weanlings of low birth weight and slow growth rates, or poor maternal behavior requiring multiple mothers in one cage to assist in nursing. Requests for exceptions should be submitted through revision of your animal use protocol, in the Main Procedure section under a heading "Request for Exception to the Weaning and Litter Numbers Policy", for review by the ACUC at the next meeting. Exceptions must be justified by provision to the ACUC of specific published citations or a data from a pilot experiment. Reasons for exemption include: 1) Experimental design (e.g. studying psychological imprinting of pups); 2) Need to extend suckling in strains that fail to thrive; 3) Need to prevent loss of litters.

### **Breeding Cages:**

**One male x one female:** Mouse and rat litters should be weaned by day 23 after birth or before birth of the next litter. This may be sooner than day 23. Animal care technicians will wean for the investigator if not performed by postpartum day 25 or if a new litter is born. Investigators will be charged for this service.

**One male x two females:** Both females must be presented to the male at the same time. This avoids large differences in ages between litters and prevents large pups nursing to the detriment of neonates. No more than two litters are permitted in one box at any time. Litters must be weaned promptly by day 21 BEFORE arrival of the next litters. Animal care technicians will wean if this is not done on time, and investigators will be charged. If particular strains of mice consistently deliver litters of 7 pups or more, it is recommended that the above breeding scheme (single female with male) be used instead. Similarly, if one female delivers and the other female does not deliver within 7 days of the first, the latter female should be removed to her own cage (with or without the male).

**One male x three or more females:** If more than two females are housed with a male for breeding, obviously pregnant females (10-15 days post-mating) must be separated into boxes containing no more than two pregnant females before delivery. If you are unsure how to determine if a female is pregnant, ask the vivarium staff to show you.

**Exception for non-thriving litters:** Even with wild-type mice, occasional litters (or individuals in a litter) do not thrive. If you do not feel a litter of normal weaning age as defined above is ready to be weaned, consult the supervisor of the vivarium where the animals are housed. These individuals will inform the veterinary staff who will formally write one-time exceptions to weaning age to accommodate non-thriving litters. Permission for continuing exceptions must be obtained from the ACUC by submitting a protocol modification request.