

## RAT CAGE DENSITY POLICY

Overcrowded rat cages represent a significant animal welfare concern. Such cages are noncompliant with Public Health Service (PHS) Policy and our Assurance to PHS. The *Guide for the Care and Use of Laboratory Animals* states the PHS recommendations for housing densities. In order to standardize housing densities and prevent or eliminate the possibility of overcrowding within cages, the University's Animal Resource has adopted the following UCAR-approved policy: **No more than two adult males or three adult female rats may be housed per standard rat plastic cage (10.5 in. X 19 in. X 8 in.). Pregnant females may only be housed in solid bottom plastic cages.**

The use of wire bottom cages is not permitted unless scientifically justified and approved by UCAR. A small wire bottom cage (11.5 in. X 7 in. X 8 in.) may accommodate one rat of any weight or two rats weighing less than 400 grams each. A large wire bottom cage (11.5 in. X 16.5 in. X 8 in.) may accommodate four rats each weighing less than 400 grams, or three rats each weighing between 400 and 500 grams.

### Breeding

- The two breeding schemes permitted are:
  1. Monogamous pairing (1 male: 1 female) – this method is preferred to prevent overcrowding.
  2. Trio grouping (1 male: 2 females) – females must be placed in individual cages prior to parturition.
- Male and female rats should be separated after pregnancy confirmation to avoid post-partum insemination. A post-partum estrus occurs within 48 hours of parturition.
- No more than two adult females and one litter of pups may be housed in a standard rat cage.
- The breeding strategy must be described in the UCAR protocol. This includes the breeding scheme, whether continuous or non-continuous breeding will occur and the weaning age of pups. Justification is required for any scheme other than monogamous and trio, for continuous breeding and/or for cage densities which exceed those described above.

### Weaning

Investigators who choose to manage their own breeding colonies are responsible for timely weaning. Rats are generally weaned at 21 days of age. At this age, the pups are placed on inventory by the vivarium staff and the PI is notified. At 23 days of age, the PI will be notified if litters have not been weaned. The following day, these rats will be weaned by DLAM for a \$50.00 fee. Delayed weaning protocols must be approved by UCAR with specification of actual weaning ages. Additionally, a special request must be submitted to the DLAM/Vivarium office identifying the group of rats approved for delayed weaning.

Where continuous breeding is approved, weaning of older litters between 17 and 20 days may be necessary. Should the presence of an older litter constitute a threat to a newborn litter, DLAM will notify the PI to remove the older litter immediately. In the absence of a prompt response by the investigator, DLAM will wean the older litter for a fee. The investigator will be informed.

The DLAM veterinary staff provides training in the management of rodent colonies for investigators and their staff. DLAM also offers colony management services to those PIs who choose this option.

### **Overcrowded Cages**

Overcrowded cages (more than two adult males or three adult females) will be reported to investigators. DLAM will remove rats from overcrowded cages if the investigator has not done so by the day following notification. There is a fee for this service.

### **Identification**

A completed cage card must be present on all rat cages. The information on the card should include: the investigator's name, the approved UCAR protocol number, an animal identification number (if applicable), the rat strain/stock and the account number. The use of individual animal identification such as ear punches, ear tags, tattoos or implantable transponders is encouraged, especially in cases in which animals are group housed and/or appear identical. All methods of identification must be described in the animal protocol and approved by UCAR.

The DLAM and vivarium staff are available to discuss any questions you may have regarding this policy. Please do not hesitate to contact the Animal Resource Office at X5-2651.