

	POLICY	Policy for Managing Overcrowded Mouse Cages
	Approved by:	CMRC IACUC Committee
	Date Issued: 06/16/08	Approved: 06/26/08
	Effective Date: 06/26/08	
	Date Last Revised: Initial Issue	Page 1 of 2

TITLE	:	Policy for Managing Overcrowded Mouse Cages
SCOPE	:	All CMRC animal users working with mice in research.
SOP OWNER	:	IACUC
PURPOSE	:	To describe criteria by which the IACUC will consider mouse cages to be overcrowded.
RELATED SOPS	:	SOP Managing Overcrowded Mouse Cages

I. General

Overcrowding in mouse cages can be detrimental to the animals' health due to elevated ammonia, carbon dioxide and humidity levels in the cage. Further, overcrowding in breeding cages can result in neonatal mortality from trampling and cannibalism.

Housing densities for mice are based on recommendations published in *The Guide for the Care and Use of Laboratory Animals (The Guide)*¹. All institutions that receive funds from the National Institutes of Health (NIH) and other Public Health Service Agencies (PHS) are required to follow the recommendations of *The Guide*. In addition to jeopardizing the animals' health and well being, housing mice at densities in excess of these guidelines is considered noncompliance with federal regulations.

II. Policy

Definition of Overcrowding

For standard static and ventilated micro-isolator cages housing mice of the same sex, the housing density is determined by the weight of the animals. Exceeding the following densities is considered overcrowding:

Weight of each mouse	Maximum animals per cage
≤25 grams	5
>25 grams	4

For breeding cages, the allowable number of animals is determined by considering the breeding system (i.e. the number of adults in the cage), the number of pups and the age of the pups. The following combinations of adults and pups are acceptable and exceeding these numbers is considered overcrowding:

- Pair breeding (1 male and 1 female) or a singly housed female – The cage may have one litter of pups up to 21 days of age
 - The birth of a second litter requires immediate separation
- Trio breeding (1 male and 2 females) or two females – The cage may have two litters of up to 16 pups total until the older litter is 21 days of age
 - The birth of a third litter requires immediate separation
 - If the total number of pups exceeds 16, one female and litter must be removed to a separate cage when the older litter is 7 days of age
- Harem breeding (1 male and 4 females or 2 males and 3 females) – These cages are considered overcrowded as soon as a female is visibly pregnant.
 - The pregnant females should be removed to a separate cage until a trio breeding density is reached

Resolution of Overcrowding

Cages that are determined to be overcrowded by the above standards will be labeled with a red overcrowded cage card and the investigator notified at least by e-mail. The investigator will have two full business days to resolve the overcrowding. If the overcrowding is not resolved by the morning after the second full business day, RSF staff will perform the separation and the investigator will again be notified and charged a fee.

In cases where the severity of the overcrowding represents an imminent threat to the animals' health or well-being (as determined by a veterinarian), the animals in the cage will be separated immediately.

Exceptions to the Policy

In some instances, investigators may wish to wean pups later than 21 days of age (e.g. C57BL/6 mice). To receive an exception from the above standards, the investigator must scientifically justify the need for delayed weaning in their Animal Study Protocol and receive approval from the Children's Memorial Research Center Animal Care and Use Committee.

References

1. National Research Council (1996) *Guide for the Care and Use of Laboratory Animals*. National Academy Press, Washington, D.C.