

Guidelines for reporting numbers of genetically-modified animals used

1. The Justification for Animal Numbers Requested.

A general statement, aimed at explaining the high numbers requested in protocols that include the breeding of genetically-modified animals, should be added to this section. PI's may either write their own statement or insert the following, generic one, drafted by the MNI ACC.

“Advances in genetic engineering now permit increasingly precise manipulation and control over the expression of genes. This has opened the door to dramatic improvements in animal models for the study of basic biological mechanisms and human disease. The nature of these genetic models requires complex crosses between different lines for temporal and positional control of gene expression or deletion. This may require the maintenance and breeding of a large colony of animals in order to obtain the appropriate combinations of genotypes for experimentation. This greater amount of breeding can be justified by the advances in scientific discovery and the human health benefits it will foster. Wherever possible efforts will be made to minimize the number of animals produced without compromising the quality of the medical research they support.”

2. Reporting of numbers.

For each strain of mice bred in house, investigators should list separately the number of animals generated by breeding and the number of animals used in experiments. Investigators should take into consideration the following standard number for mice generated through breeding: a single breeding couple will generate on average 72 pups per year (1 female x 12 litters x 6 pups/litter).

The investigator is responsible for estimating how many breeding couples will be necessary to obtain the experimental animals carrying the right genotype, while taking into account the complexity of the breeding scheme necessary to achieve the genotype needed.

Example of new reporting standards:

Mouse strain X:

Breeding: Three breeding couples will be maintained for this line. *Each breeding couple will generate 72 pups per year (3 couples x 72 + 6 breeding mice = 218 mice)*

Experimental: *Analysis of 3 different axonal projections in 6 wild-type and 6 mutant mice to perform statistical analysis on results (3 projections x 12 mice = 36 mice analyzed).*

Total number of mice requested is 218.