

Recommendations on group housing of male mice

Aggression in group housed male mice is a common problem in laboratory animal facilities. We have therefore compiled recommendations aimed at preventing and managing aggression and thus improving both animal welfare and the working environment. This also contributes to better research.

Five recommendations on how to care for the animals

House the mice in groups that go well together

If possible, it is preferable to house mice in groups with siblings. Mixed groups shall be formed as early as possible, preferably before sexual maturity. Avoid regrouping mice that are used to each other and thrive together. Develop procedures for how and when you assemble groups in the facility. If mice are transported to the facility, keep a dialogue with the breeder for example about housing siblings together during transport.

Transfer nesting material when changing cages

Transfer clean and dry nesting materials and other enrichment. Do not transfer material soiled by urine. Carry out the cage change in a way that minimizes disturbance and stress for the mice. Avoid too frequent changes and do spot cleaning of dirty cages to spread out the number of changes.

Avoid disturbances and handle the mice with care

Avoid disturbances in the animal room by minimizing all forms of interference, noise, light, odours, and unnecessary passage through the room. Also, minimize the number of people handling the mice and make sure they handle and lift the mice with care.

Use enrichment adapted to your conditions

Use environmental enrichment that works at your laboratory animal facility, adapted to the cage type, strain, and research area. Avoid enrichment that risks being monopolised and cause competition. Constantly evaluate how the mice are affected by the enrichment you use.

Choose a strain with a low level of aggression

Evaluate the relevant strains for your research in terms of aggressiveness and choose the least aggressive one. Aggressiveness varies between different strains and the behaviour differs between both different strains and between genetically modified mice and their wild type.

Two recommendations on procedures and cooperation in the workplace

Establish procedures in your organisation

Create routines for the selection of strains, ordering of animals, grouping, cage change, and rules in the animal room. Describe the measures to be used in the event of aggression. This may include using more environmental enrichment or separating the group by, for example, relocating the aggressive or injured mouse. Regularly follow up on and evaluate the procedures.

Promote collaboration and communication

Promote good cooperation and communication between animal facilities, researchers, and breeders. Support dedicated staff and raise the issue of aggression at all stages; when ordering animals, when breeding, when planning experiments, in experimental processes, when changing cages, and when handling animals. Cooperation between all those concerned makes it easier to group house male mice, which results in increased animal welfare and better research.

© Swedish 3Rs Center, 2021. These recommendations are compiled on behalf of the Swedish National Committee for the Protection of Animals used for Scientific Purposes. The knowledge base resides largely on gathered experiences of animal technicians, scientists and veterinarians in Swedish laboratory animal facilities, but also on a systematic review of scientific literature.

For further information on the recommendations, read the full report on our website www.jordbruksverket.se/3R. You can also contact us at 3Rcenter@jordbruksverket.se