

# Animal Research Review Panel Guideline 27-K

## Research Animal Rehoming Guideline – Mice

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### Introduction

This guide is designed to support the implementation of the Research Animal Rehoming Guidelines and can be used by everyone involved in the use of mice for recognised research purposes. It provides specific guidance on the assessment of research mice for rehoming. This guide aims to:

- assist in the assessment of whether the physiological condition and behavioural attributes of the mice indicate that they can be rehomed with only minimal, transient impact on their wellbeing
  - prioritise the welfare of the mice and the safety and satisfaction of the public
  - ensure mice being rehomed are fit for their intended purpose, healthy and up to date on all standard preventative care
  - ensure rehoming conforms to national, state, and local legislation and regulations.
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### Approach to rehoming

Research establishments may institute their own rehoming program, or they may partner with one or more external rehoming groups. Before assessing animals for rehoming, it is essential to decide on the avenues for rehoming, taking into consideration:

- internal resources to manage the rehoming of the animal
- agreements in place with external rehoming groups
- availability of a suitable owner or responsible organisation to:
  - maintain the animals
  - provide routine husbandry procedures
  - assist with special needs of individual animals
- the capacity (number of animals) that can be rehomed via the research establishment's own rehoming program and via external rehoming groups.

Establishing good communication with rehoming groups can be beneficial as they can provide advice on:

- the likely success of rehoming
  - best methods of rehoming (such as pairing or bonding animals)
  - preparing the animals before they are released from the research establishment
  - identification of special cases and care strategies where an animal may need assistance to transition from the research environment
  - information/animal profiles needed to assist in rehoming.
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## Eligibility for rehoming

If an animal is healthy or has manageable health or behavioural issues it should be considered for rehoming.

Where animals are eligible for rehoming, assessment for rehoming should consider:

- the animal's age and life expectancy. These are not usually primary determining factors
- the animal's general and physical health and wellbeing
- the procedures the animal has been involved with and any ongoing sensitivities that may have resulted with respect to animal handling, feeding and general care. Appropriate consideration of these may include behaviour modification to improve the animal's response and/or notifying the new owners of the animal's specific sensitivities
- whether the rehoming process is likely to have minimal, transient impact on their wellbeing.

Mice are commonly kept and thus suitable food, care information and veterinary services are available.

There are situations where rehoming of an animal is not an available or appropriate option. These situations should be identified in your accredited research establishment's rehoming policy.

Some of these situations will be clear before research commences, for example:

- the AEC has approved the reuse of the animal for research
- the AEC has approved the humane killing of animals for essential sample collection or testing
- laws and regulations that prohibit rehoming, for reasons such as risk to public health, biosecurity and the environment. For example, there may be restrictions on releasing animals that are genetically modified or that have been treated with certain substances (e.g. drugs, chemicals, infectious agents) and devices.

Other situations may only become apparent during the research project, or at its conclusion, for example:

- the AEC and institutional designated staff responsible for rehoming have good reason to believe that rehoming would not be in an animal's best interests, with consideration given to the quality of life, and life expectancy of the animal, including instances where the cumulative impact from use could have negative welfare outcomes for an animal
- when the behaviour of an animal indicates that it may pose a risk to public safety.

It is recommended that the research institution, rehoming organisation and prospective owner review the relevant legislation prior to any mice being rehomed. Current NSW animal welfare legislation is available at the NSW DPI [Animal welfare regulation](#) webpage.

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## During the research project

Planning for the eventual rehoming of animals involved in research should be integrated into the animals' care plan from the beginning of their involvement in any study. The rehoming coordinator should ensure that appropriate monitoring of the programs of habituation and environmental enrichment are occurring during the research project to increase the chance of successful rehoming. These programs should be outlined in the accredited research establishment's procedure for the preparation of animals for rehoming. The rehoming coordinator should ensure early remedial action is taken, if possible, where an animal is deviating from the desired outcomes of those programs.

Periodic behavioural assessments should be carried out and recorded by animal care staff during the research project. There may be benefits for team morale in involving staff in the rehoming process – e.g. by forming a small rehoming committee. Staff should record individual animal behavioural observations, to be used when assessing the suitability of animals for rehoming. Where these observations reveal animals are stressed, efforts should be made to remove or reduce the stressors if possible.

Mice should receive all applicable routine prophylactic treatments.

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## Following conclusion of use

If animals are to be desexed and this has not occurred prior to the commencement of, or during, the research project, then determination of whether this is required should occur at the conclusion of the research project.

A final assessment of animals should not be undertaken until the animals have been given time to recover in a suitable environment that provides for normal species-specific behaviours.

Prior to making a final assessment, efforts should also be made to rehabilitate animals with known problem behaviours or health conditions that temporarily make them unsuitable for rehoming. It should be noted that rehoming organisations may be prepared to take on or assist in rehabilitating such animals.

## Physical assessment of mice

Mice should be assessed by a veterinarian as being physically healthy before rehoming. A physical assessment should consider:

- general demeanour
- movement and mobility: should walk with normal mobility and range of movement
- neurological soundness: general reflexes (sight, hearing), not ataxic (uncoordinated)
- body condition score, for example, a score out of 5:
  1. Emaciated – ribs, spine and hip bones obviously visible
  2. Thin – ribs, hip bones and top of vertebrae visible; no palpable fat on rib cage
  3. Ideal – well-proportioned muscle and fat over the ribs, spine and hip bones which are palpable
  4. Overweight – ribs, spine and pelvis palpable with difficulty; fat obvious on spine and base of tail
  5. Obese – ribs, spine and hip bones difficult to feel under fat; obvious belly
- coat and skin: look for signs for alopecia, ectoparasites, inflammation, lumps, growths, signs of infection, lesions, trauma and abnormal grooming
- respiratory tract: sneezing, sniffles, nasal discharge
- eyes: should be clear, have symmetrical and normal pupil response, and be free of discharge
- eyelids and gums: pink colour rather than pale or grey
- porphyrin (red) staining of eyelids or nostrils: should not be present
- dentition: no obvious issues with teeth, bite or chewing, including excessive overgrowth of teeth
- ears: should have no discharge, inflammation or foul odour
- general heart and lungs field auscultation/exams: no issues (heart auscultation can be difficult to perform on mice)

- limbs and feet: no obvious lameness, swelling or pain on palpation. Footpads are normal
- nails: no issues
- faeces: pelleted rather than too hard or too loose
- any history of abnormal faeces, coughing, sneezing, inappetence or unusual drinking or urination
- any other abnormality.

The significance and appropriate management of any abnormal findings must be determined with veterinary advice. Base rehoming decisions on the expected impact on the mouse's long-term quality of life.

## Behavioural assessment of mice

Mice assessed as physically sound should be behaviourally assessed prior to rehoming, to gauge their likelihood of adapting to post-research life.

It is important to consider the context in which this behavioural assessment takes place. For an animal that has little experience of novel environments and unfamiliar people it would be reasonable to expect it will find many environments unsettling. If it recovers quickly and is actively engaged with its normal behaviour towards humans and their environment, it may be more resilient and therefore more suitable for rehoming.

Where possible, conduct behavioural assessments on animals that are not stressed to better understand their suitability for rehoming.

This assessment should be undertaken by people that are familiar with species-typical behaviour (usually a suitably qualified animal care staff member and a veterinarian). It should take into account the history of behavioural assessments carried out and recorded over time by animal care staff since the commencement of the research project.

Reasons for conducting behavioural assessments include:

- assessing animals for rehoming
- assessing what kind of environments may be suitable for the animal (e.g. homes where they can be separated from small children or other animals)
- understanding the temperament and needs of the animal
- exploring whether the animal displays any behaviours that have bearing on their rehoming.

A behavioural assessment should consider whether the mouse:

- interacts positively with a variety of people who are familiar and unfamiliar
- is confident in being handled
- approaches your hand
- allows you to pick it up
- sits on your lap (and may groom) for several minutes without attempting to escape
- eats food from your hand
- is timid
- attempts to bite or vocalises strongly when being picked up or handled
- tolerates other mice (mice should ordinarily be housed communally)
- has a history of positive interactions with other mice in the animal research establishment
- is bonded to a companion or group
- can be rehomed with that bonded companion or group.

Presence or absence of one of these behavioural characteristics should not by itself ordinarily preclude rehoming. Potential recipients who are aware that an animal does not possess preferred behavioural characteristics may still wish to rehome it.

It is the responsibility of the establishment to decide on the applicability of specific temperament assessment tools to its situation.

The response of an animal is best recorded as a description of behaviour (e.g. bites or vocalises), rather than an interpretation of the behaviour or emotion (e.g. angry, scared, excessively reactive or aggressive) so that the animal is judged as objectively as possible.

A mouse with undesirable behaviours can often be rehomed satisfactorily when the recipient has been informed and is prepared to accept such behaviours. Experienced recipients often have the capacity to improve such behaviours.

Fear of humans can be reduced if mice have regular positive interactions with animal carers.

Behaviour can change dramatically after rehoming. Stressors tend to be reduced living outside of a research establishment - mostly due to the fact that animals can usually exhibit a greater range of natural behaviours in the rehoming environment and housing.

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